

BROCK UNIVERSITY LIBRARY



3 9157 00907808 3

STATE OF NEW YORK

IN SENATE

January 10, 1907

REPORT

OF THE

COMMISSIONERS OF THE LAND OFFICE

FOR THE YEAR

1906

ALBANY:

1907

PRINTED BY THE

UNIVERSITY OF THE STATE OF NEW YORK

ALBANY

1907

BY THE

UNIVERSITY OF THE STATE OF NEW YORK

ALBANY

1907

Wm. L. Angell

ALBANY

Bridging the Gap Between Post-Secondary Students with DisAbilities and Faculty
Members with their Perceptions of Access and Accommodation

Krystine A. Donato, BA (Honours)

Department of Child and Youth Studies

A thesis submitted in partial fulfillment of the requirements for the degree

Master of Arts

**JAMES A GIBSON LIBRARY
BROCK UNIVERSITY
ST. CATHARINES ON**

Faculty of Social Sciences, Brock University

St. Catharines, Ontario

© June, 2008

Abstract

The purpose of this study was to identify factors related to successful university course completion for students with disAbilities including the knowledge that faculty members and students with disAbilities have about accommodation issues; the accommodations that students with disAbilities and faculty use and find effective in the university setting; faculty members' perceptions of and attitudes toward students with disAbilities; and the attitudes that students with disAbilities have toward faculty. Fifty-seven participants were involved in the research, eight students with disabilities and forty-nine faculty members.

The main objective of the research was to describe how the skills, knowledge, and attitudes of students and faculty members, and organizational supports interact to support students' academic success. The utilization and effectiveness of accommodations to overcome barriers associated with disAbility in a post-secondary setting are described in relation to students' and faculty members' perceptions of academic success.

Acknowledgements

It is a pleasure to thank the many people who made this thesis possible.

I would like to thank my thesis advisor Dr. Frances Owen. Her enthusiasm and dedication for this important project was greatly appreciated.

I would also like to thank my thesis committee, Dr. Dorothy Griffith, Dr. Maureen Connolly and Dr. Carol Sales.

Thank-you to my research assistant and friend, Lianne Fisher who's work with me over the past few years was greatly appreciated.

Thank-you to my colleagues in Child & Youth Studies for all the positive encouragement they gave me.

Special thanks to my good friends, Monique Somma and Virginia Lightheart. Your endless support and help over the last number of years has been awesome, words can not express how grateful I am to both of you.

Finally, I would like to thank my wonderful family for their constant support of my educational endeavors.

Table of Contents

Abstract	1
Acknowledgements	2
List of Tables	5
Social Location of the Researcher	6
Study Problem	11
Literature Review	
Brief History of Disability Legislation and Advocacy Movements	16
Definitions	18
Barriers to Post-Secondary Education – Students with Disabilities	20
Institutional Policies	20
Faculty Members’ Knowledge, Skills, and Attitudes	26
Students’ with Disabilities Knowledge, Skills, and Attitudes	30
The Role of Expectancy Theory in the Present Study	32
Research Focus	36
Methodology	
Study Design	42
Research Questions	41
Measures	44
Participants and Recruitment	45
Qualitative Analysis	48
Quantitative Analysis	49
Consent Process	49
Results	
Reliability	51
Knowledge	51
Skills	61
Attitudes	72
Barriers	74
Successful and Unsuccessful Experiences	84
Discussion	
Knowledge	89
Skills	91
Attitudes	91
Barriers and Facilitating Factors	92
Successful and Unsuccessful Accommodation Experiences	94
Limitations of the Present Research	96
Implications and Future Directions	97
References	99
Appendix A	108
Table 1: Skills that students noticed faculty members having that were effective in accommodating their needs	109
Table 2: Classroom accommodations identified by students	110
Table 3: Information that would help faculty members better understand students with disabilities	112

Table 4: Barriers that faculty members see students with disabilities facing within University	113
Table 5: Successful accommodation experiences that students have had	114
Table 6: Unsuccessful accommodation experiences that faculty members have dealt with students	115
Appendix B: Interview questions (students)	116
Appendix C: Interview questions (faculty members)	117
Appendix D: Student Questionnaire	118
Appendix E: Faculty Questionnaire	125
Appendix F: Letter of Information and Informed Consent Form (Student)	132
Appendix G: Letter of Information and Informed Consent Form (Faculty)	134
Appendix H: Certificate of Approval: Research Ethics Board	137

List of Tables

Table 1 - What faculty members have done to accommodate students with disAbilities	55
Table 2 – Faculty members’ responses to accommodation requests	58
Table 3 - Accommodations that have been useful for students with disAbilities	61
Table 4 - Accommodations that have been useful for students with disabilities	66
Table 5 - Information that would help faculty members better understand students with disabilities	68
Table 6 - Barriers that faculty members see students with disAbilities facing within University	76

Social location of the researcher

I recently found letters and documents that my mother kept from my struggles through the educational system. I chose to use some of these papers as part of my Masters thesis as I believe they are a great example as to why I did my thesis on access and accommodations of students with disabilities. One important point that I noted in my mother's writings when she spoke to the Royal Commission on Learning in 1993, was that she knew that any recommendations that she or the commission made would not impact me directly. She spoke out more to help future students with disabilities to try to ensure many of the struggles and barriers would be rectified so that they would not have to go through the same hardships that I went through.

When talking with some of my committee members about how I could apply my own personal experiences to this thesis, the concept of semiotics was suggested. Semiotics is the study of sign and symbols and includes the study of how meaning is constructed and understood (Mutua, 2001). Using a semiotics approach to documents from my past and my own daily experiences as an individual with a disability will allow the reader to have a better understanding of the importance of this research not only through the data reported but also through my reflection on some of my personal experiences that I have incorporated throughout this thesis.

Background: Social location of the researcher.

I believe my role is that of a researcher, a student with a disability and a professional. The researcher within me wants to bring issues such as the ones addressed here to the forefront, making recommendations for changes to the current system for students with disabilities. As a student with a disability who has struggled through

various systems, I want students with disAbilities following me to experience fewer barriers in their effort to achieve success. As a professional, having worked with students with disAbilities, I believe that I have an understanding of the type of changes needed to the current system.

When considering why this research is of importance to me, one should understand the many educational experiences that I have had. Ontario's Education Bill of 1980, was implemented when I had just started my education as a young child. Though the Bill itself was seen as a positive stride for the education system, there were few to no accommodations available for students or for teachers who were often left on their own to deal with whatever problems arose. Most teachers did not have much training about disAbilities in general and even less about teaching student with disAbilities. Any accommodations I received were as a result of my parents fighting the system for what I now understand to be my right to education.

As I write about my social location, my immediate reaction is to suggest to the reader that I am not looking for pity. One discourse of disAbility is that individuals with disAbilities are either looking for pity or are to be pitied. My goal in recounting my experiences is to outline the challenges that my family and I have faced as I have navigated the educational system. Overcoming adversity – *"I am still here and I am still fighting"* -- is another frequent discourse of disAbility. Education and disAbility should not be about overcoming obstacles, or whether or not individuals have had the *ability* to survive a system that does not level the playing field – the issue regarding education and disAbility is about leveling the playing field. Individual experiences speak to those barriers that must be removed to achieve equal access for everyone. Focusing on whether

or not a person has *managed to survive* an adverse system places the responsibility on the individual not on the institution that maintained inequalities.

When I entered high school, I was advised to take general-level courses because the teachers did not feel that I would be successful if I took advanced courses. When the time came to apply for post-secondary schools, I was only able to apply to colleges as I did not have the courses necessary for University. I applied and was accepted into two different programs, one was a computer program and the other was Early Childhood Education (ECE). I chose ECE and as a result of my high school teachers disagreeing with my decision, no support was given to me in transitioning to college.

As I have undertaken this research, I asked my Mother to show me some of the documentation that she kept, such as letters she wrote on my behalf to the school. I remember having little help in school, since my disAbility was not designated severe enough to be granted extensive accommodations. It is the gaps, lapses, and lack of information about my disAbility that contributed to my sense of receiving insufficient help in school. For example, the increased time and resultant fatigue I experienced in completing homework that included 20 math problems was ignored but seen as my *matching* or maintaining fairness with the work expected of other students. So, once again, the responsibility for fairness and equity was placed on the individual with a disAbility, not on the system.

My mother wrote a note in my 'documentation file' about recounting a story to the Royal Commission on Learning (Ontario Government) in 1993. In 1983, the Chair of a school board "*could not understand when he saw Krystine's notebook why she had to*

do the entire assignment. If she could answer two or three that was enough for him. That was not put into practice” (H. Donato, personal communication, Spring 1993).

The theme of *not getting put into practice*, i.e., the knowledge and insights we have gained regarding education and students with disAbilities, is still a theme in the education system. For myself, I received the most help in a particular post-secondary institution, but for example being able to access my scooter, has been an on-going source emotional stress and time waster. My scooter is housed behind a door that is close to my parking spot, a wonderful and time saving accommodation. The only problem is that, depending on the weather, I cannot open the door while ‘able-bodied’ persons have no difficulty.

As part of the application process into the ECE program, one of the requirements was to write a paper explaining why the applicant (a) wanted to be a early childhood educator and (b) why they should be selected. In this letter I disclosed that I had Cerebral Palsy which affects my fine and gross motor skills and also that my speech is dysarthric (speech impediment). I was granted accommodations for the class portion of the program, but when it came to the placement in Daycare and/or preschool settings, I was told that accommodations were not allowed outside of the classroom setting and I was expected to complete all of the requirements just as the other students and that no assistance would be given. I was evaluated as not fulfilling the requirements of my first placement and I *failed* the program. I needed to seek legal assistance to appeal the decision. After I was successful in my appeal, I passed my next two placements and received my diploma.

Accommodations were provided in the classroom but no discussion surrounded what may be appropriate accommodations that would allow me to participate in the child-

care setting, the setting in which I planned to work. My inability to prepare food for the children (e.g., cutting up apples) was seen as a barrier to a successful placement, but no accommodations were offered.

Upon completing my college education, I realized I wanted to continue my post-secondary education and attempt to earn my degree. Through my own educational experiences, I have developed more of a passion for assisting students with disAbilities at the post-secondary level. I believe this stems from the lack of help I received at the college level and observing how difficult it can be for students to not only ask for help, but also to receive it. Throughout my undergraduate work I experienced mostly positive experiences, support and encouragement. This has given me the drive to pursue my Masters degree in hopes of helping other students to attain the success I have achieved.

When I started my thesis, I had worked three summers in the Student Development Centre and thought I had a good understanding of students with disAbilities. I felt that my own disAbility helped me to understand the needs of the students. Although I did not work directly with the students, it was through my conversations with staff, research projects I was involved in and professional development sessions that I was fortunate to be a part of, that I realized that I wanted to do research exploring issues faced by students with disAbilities. After reading some of the literature on students with disAbilities I decided that there was not only a need to capture the student voices but also to capture the voices of faculty members.

My bias when I started doing my research was that many faculty members are not concerned with assisting students with disAbilities, and only do the bare minimum to assist students. I think this was due to my past educational experiences, in that a number

of teachers and faculty members in both my formal education and in some of the post-secondary experiences have not always been positive. I thought students would be more interested in participating in research given that this was an opportunity for them to express their perspectives on accommodations they receive and also to have a say in what may or may not be needed to assist in accommodating their needs. Neither of these assumptions proved to be the case in this research. More faculty members than students volunteered to participate and faculty members expressed clear concerns about the issues students with disAbilities face. Working in the Student Development Centre (SDC) could also be seen as a bias, as I understood what the staff did in accommodating the students. My bias came in to play when I was coding the interviews and selecting quotes to be included in the results. Where the SDC was noted, either positively or negatively I had to put my opinions aside and, in a sense, ignore what I knew about the operations of the SDC.

Overall, I feel that this research is not only very important to me personally but also to other students with disAbilities and the faculty members who teach them.

Study Problem.

DisAbilities should not be a limiting factor in a student's access to post-secondary education or successful academic experiences. The provision of accommodations is one way in which accessibility and positive educational experiences are supported. Post-secondary institutions are required to provide services, benefits and programs to students with disAbilities based on their qualifications, without discrimination to facilitate successful educational experiences. Education has been identified as an important determinant to an individual's employment - especially well-paid, flexible, employment

(Jung, 2002; Shapiro, 1993). The increase in the number of students with disAbilities attending post-secondary institutions in Canada (Cox & Walsh, 1998; Hill, 1996) demands that counsellors and educational personnel be familiar with the issues (e.g., barriers) that students with disAbilities face (Lynch & Gussel, 1996).

Since the 1960s, disAbility-rights activists have said that the biomedical model limits the way we understand and manage disAbilities. Initially, disAbilities were conceptualized from a biomedical perspective. The biomedical model suggests that disAbility lies solely in the body of the individual (i.e., that intervention at the level of body or change in the individual body is required to remove barriers). Implicit in this model is that ineffective interventions or changes to the individual result in lasting barriers and impairment. The biomedical model has been linked with experiences of oppression and discrimination against individuals with disAbilities (Corker, 2000; Jung, 2002). One major theoretical shift is from the biomedical model to the social model (i.e., from attempting to “cure” a disAbility through medical intervention to a focus on how social arrangements support ‘able’ bodied-ness and fail to support difference). According to Hahn (1988), many persons with disAbilities see that several of the problems that they face stem from discrimination and prejudice rather than from the direct result of their own disAbilities. Oppression, discrimination, and prejudice toward people with disAbilities has been noted as stemming from an assumption of “biological inferiority” (Hahn, 1988, p. 38) where those who do not meet society’s standards of physical attractiveness or autonomous functioning are not valued. As Hahn (1988) notes, a source of overlooked prejudice is that individuals with disAbilities are seen as violating “important cultural norms and values” (p. 38) and that their marginalization is, therefore,

somehow justified. As a result of these attitudes and behaviours, there is a need for change from examining disAbilities from a medical or economic standpoint, to that of a socio-political approach (Hahn, 1988), such that disAbility resides not only within the body of an individual but also in how that individual interacts with the environment, which is constructed around able-bodiedness (Hahn, 1988; Jung, 2002). By focusing on the role that environments (both physical and learning, for example) play in generating disAbility, and not focusing solely on the physical body of the individual with a disAbility, the limitations of a biomedical model are avoided (Jung, 2000). From this perspective, the onus for change is no longer just on the individual but, instead, on those who have control over environmental contingencies that can impact the person with a disAbility. It is therefore recognized that many of the limitations placed on people with disAbilities, come not from people with disAbilities themselves but from those in their surroundings (Hahn, 1988).

Social arrangements that highlight difference in terms of disAbility can be from physical accessibility (e.g., buildings that do not allow access via wheelchairs) to teaching accessibility (e.g., content and evaluation that favour one particular style of learning). The social model of disAbility allows for the examination of systemic social factors that create barriers for individuals who may or may not be identified with a disAbility. Adherents of the social model insist on building environments (e.g., physical settings, institutional policies, educational practices, or physical access) differently, as historically, people without disAbilities have had the power to organize those environments (Jung, 2002).

Traditional formal educational practices have included significant constraints that

fail to meet the needs of individuals with disAbilities (Foreman, Dempsey, Robinson, & Manning, 2001). Foreman et al. (2001) found that students with disAbilities, compared to students not classified as having disAbilities, reported being less assisted by the presentation of lecture and tutorial materials, assessment practices, and library services. Also, students with disAbilities reported experiencing more assistance from support services than students classified as having no disability. By extension, these findings suggest that current social arrangements or environments are not accessible to students with disAbilities without the provision of more support services, and that, even with greater support, students with disAbilities experienced more difficulty in a post-secondary setting than their non-disabled peers.

When looking at the barriers students with disAbilities face in post secondary institutions, issues range from limitations in physical access to institutional policies that do not create genuine opportunities for equal educational access. The accommodation and support of students with disAbilities is a complex systemic issue. The social model focuses on social arrangements, (e.g., policies and procedures) so that disAbility is defined within the context of the barriers created within institutions. Historically, policies and procedures within the educational system were neither designed to assist students with disAbilities at the post-secondary level nor to provide accessible post-secondary environments. Post-secondary education was not included in the provincial legislature until 2001 (i.e., the *Ontarians with Disabilities Act* (ODA) of 2001 and the *Accessibility for Ontarians with Disabilities* (AODA) of 2005) when policies and practices were brought forth to promote accessible settings. These policies, however, have not necessarily reflected the needs of students with disAbilities (Hill, 1994). Not only do

students with disAbilities have a right to have access to postsecondary settings, but they also need to have ready access to services provided through offices designed to address their needs specifically. These student development offices provide services such as note-taking, exam accommodations, and support from a case manager. They can also help students to access funds, such as bursaries for students with disAbilities, to cover the costs of computers, computer software programs (e.g., voice recognition and text-to-voice programs), research assistants, and assistive technologies that reduce barriers faced by people who have various kinds of disAbilities. The availability of funding for students with disAbilities is another way in which equal opportunity for educational pursuits is initiated and maintained. The additional services that funding provides can diminish student stress, accommodate disAbility, and lead to more successful post-secondary experiences.

Although legislation has mandated accessibility to postsecondary institutions and the provision of services (e.g., ODA), students making the transition from high school to university are required to be proactive and to establish contact with student services to request accommodations relevant to their needs (Ontarians with DisAbilities Act, 2001, Accessibility for Ontarians with DisAbilities, 2005). This approach to self-advocacy is supported by Brown, Clopton and Tulson (1991) who suggest that students need to be exposed to a system that fosters independence, if they are to develop realistic expectations that they will later use in the work world. However, some students are not identified as having a disAbility until the beginning of their post-secondary career (Brown, et al., 1991). Also, barriers and attitudes toward initiating contact with services have not been examined.

Literature Review

Brief history of disAbility legislation and advocacy movements

Throughout the last few decades, several political movements, both in Canada and the United States, have made education possible for many students with disAbilities (Hahn, 1988; Ontario Human Rights Commission, 2002). In Canada, the disAbility movement has been most clearly defined through its “inclusion of equality guarantees for persons with disAbilities in its Constitution” (Baker, 1993, p.483).

In comparison, when Abraham Lincoln signed legislation more than 135 years ago to provide higher education for students who were deaf at Gallaudet University, a message was thereby sent to the country that people with disAbilities are not “incapable of thinking, learning or achieving” (Jarrow, 1993, p. 5). Since this time, the United States has implemented the *Americans with Disabilities Act* (ADA), which focuses on a number of systemic reforms such as transportation (Baker, 1993). The ADA is intended to improve the quality of life for people with disAbilities (DuBois, 1998). This type of legislation provides opportunities for adult educators to play an important role in societal change when it comes to adult learners with disAbilities (DuBois, 1998).

In 1977, Bogden and Biklen noted that discrimination against people with disAbilities had not ended and that it had just then been acknowledged. In the United States, up until 1971, students with disAbilities were excluded from public education (Lippman, Leopold, & Goldberg, 1973) but it is now mandated that all people have the right to public education (Education for All Children Act, as cited by Bogden & Biklen, 1977).

Ontario amended their Education Act in 1989, guaranteeing that every child receive an “appropriate education” (Ontario Provincial Government, 1989).

Unfortunately however, this did not cover post-secondary students with disAbilities who often went to specialized post-secondary institutions or just entered the job market directly out of high school (Baker, 1993). Most recently, the Ontario Provincial Government has introduced the Ontarians with DisAbilities Act (2001) and the Accessibility for Ontarians with DisAbilities Act (2005) in an effort to make life for people with disAbilities more mainstreamed. The ODA and the AODA fill the gaps in earlier legislation to ensure accessibility at the post-secondary level.

As part of the Ontarians with Disabilities Act, universities and colleges play a crucial role ensuring that students with disAbilities can access education if they so desire and gain the opportunities that higher education can provide (Council of Ontario Universities [COU] Working Group, 2002). Each institution of higher education is required to develop an accessibility plan, which is to be prepared and reviewed yearly by an appointed committee or working group. Members of the working group may be from: administration and finance, physical plant, centres for students with disAbilities, employment equity/human resources, library, admissions, student affairs, university student organizations, academic affairs, faculty and staff associations and the university or college human rights office (ODA Section 3. i). The accessibility plan is designed to record barriers encountered by students within the post-secondary institution and to outline goals and long-term plans designed to remove barriers and implement appropriate remedial accommodations. In preparation for these plans, the committee is to consult

with those in the institution who represent the population of those with disAbilities (COU Working Group, 2002).

The success of students with visible and invisible disAbilities is based on policies that provide accessibility and accommodation that foster participation and inclusion of all students (Jung, 2002). Postsecondary institutions have a duty to accommodate students with disAbilities which means taking an active role in modifying facilities, practices or services to prevent a person with a disAbility being excluded from participating (Jung, 2002).

Definitions

The Ontarians with Disabilities Act and the Human Rights Commission define disAbility as:

“any degree of physical disability, infirmity, malformation or disfigurement that is caused by bodily injury, birth defect or illness and, without limiting the generality of the foregoing, includes diabetes mellitus, epilepsy, a brain injury, any degree of paralysis, amputation, lack of physical co-ordination, blindness or visual impediment, deafness or hearing impediment, muteness or speech impediment, or physical reliance on a guide dog or other animal or on a wheelchair or other remedial appliance or device; a condition of mental impairment or a developmental disability, a learning disability, or a dysfunction in one or more of the processes involved in understanding or using symbols or spoken language, a mental disorder, or an injury or disability for which benefits were claimed or received under the insurance plan established under the Workplace Safety and Insurance Act, 1997” (Section 10.1).

Barriers are defined by the ODA Guidelines for the University Sector COU Working Group, 2002) as “[A]nything that prevents a person with a disability from fully participating in all aspects of society because of his/her disability” (p. 6).

The term “accommodation,” is defined by the Ontario Human Rights Commission as a procedure that will “result in equal opportunity to attain the same level of performance, or to enjoy the same level of benefits and privileges enjoyed by others, or if it is proposed or adopted for the purpose of achieving equal opportunity, and meet the individual’s disability related needs” (Section 5). Accommodations should respect the dignity of the person with a disability, promote full participation and integration, and protect confidentiality.

In a post-secondary setting, accessibility issues are related to the nature of a student’s disability. For an individual with a physical disability, accessibility may be related to physical access and, as such, may include access to the university itself, to lecture halls, or to washrooms. For students with learning disabilities, accessibility may be related to the availability of specific accommodations (e.g., for expressive written disability, accommodations may include provision of extra exam time, the provision of notetakers, taping of lectures, or a differential weighing of marks).

Post-secondary education and students with disabilities

Research in the area of higher education and disabilities is important because there has been an increase in the number of students with disabilities entering post-secondary institutions, due to a combination of legislative, (e.g., *Americans with Disabilities Act* (1990); Lynch & Gussel, 1996; Christ & Stodden, 2005; Hong, Ivy, Gonzalex, & Ethrensberger, 2007) academic, and social changes and advancements

(Gilson, 1996; Lynch & Gussel, 1996; Leyser, Vogel, Wyland & Brullel, 1998) such as the provision of better physical access, providing appropriate pedagogical/andragogical accommodations, and promoting a community where services are also provided by individuals who understand the challenges faced by people who have various kinds of disAbilities (Gilson, 1996). Approximately 9% of students entering college in the United States in 1998 reported having a disAbility, as compared to only 3% in 1978 (Henderson, 1999). As an underrepresented group in institutions of higher learning, students with disAbilities have a right to a post-secondary education and are affirming this desire, as shown through increased attendance rates (Hall & Belch, 2000). Due to increased attendance of post-secondary students with disAbilities at Canadian universities (Canadian Association of DisAbility Service Providers in Postsecondary Education [CADSPPE], 1999) there is a need to establish clear policies in an effort to provide appropriate services for students with disAbilities (Cox & Walsh, 1998) for academic success. As Hong et al. (2007) suggests, faculty members are not aware of how to work with students with disAbilities or with the policies related to the accommodation and rights of these students.

Barriers to post-secondary education – students with disAbilities

Post-secondary institutions have a responsibility for knowing how to access available accommodations and these need to be clearly laid out by the post-secondary institution and can contribute to dramatic improvement in student success (Wilson, et al., 2000).

Institutional policies.

The increase in enrolment of students with disAbilities in higher education institutions has been noted in the United States (Vogel & Adelman, 1990), Russia (Iarskai-Smirnova & Romanov, 2006), and the United Kingdom (Pumfrey, 2008). Between 1986 and 1994, the percentage of students with disAbilities rose from 29 to 45% in the United States (Hall & Belch, 2000). Also, 8% of students with disAbilities reported having a disAbility upon entry into post-secondary education in the United States (Treloar as cited in Hawke, 2004). More recently, Wilson, Getzel, and Brown (2000) have noted an increase in post-secondary education as being a possible option for students because of changes, not only socially, but also academically and legislatively.

According to Cox and Walsh (1998), following two decades of increased pressure from groups who addressed the educational needs of students with disAbilities and litigation against a university in 1997, there was a call for professional standards. It became increasingly clear that there was a need to establish policies in an effort to provide appropriate service for students with disAbilities. Depending on the university, a policy can include either all types of disAbilities or can relate to specific disAbility groups (Cox & Walsh, 1998). The duty to accommodate exists at postsecondary institutions not only for the benefit of students with disAbilities, but also to protect the institutions from unreasonable expense or undue hardship (Jung, 2002).

In their analysis of University policies in Canadian universities, Cox and Walsh (1998) identified eleven key variables for the development of policies surrounding students with disAbilities:

1. Definitions of disAbility – one third of universities defined disAbility within their policies, however, definitions varied between various institutions. These definitions ranged from general (e.g., a qualified student who otherwise meets task requirements) to the specific (e.g., a particular disAbility is defined and in some instances temporary conditions that would require service provision, i.e., a broken limb or recent eye surgery).
2. Undue hardship – refers to the post-secondary institution not incurring undue monetary cost for services such as interpreters, psychoeducational testing, and structural modifications to buildings, adaptive technology, and exam supervision. Each student with a disAbility needs to be assessed at an individual level in order to determine the effect of undue hardship. In many instances monies may be provided by federal or provincial sources. Costs unsupported by the institution are then negotiated with the student on an individual basis.
3. Legal and procedural considerations – The Provincial Human Rights Code and the Canadian Charter of Rights and Freedoms should be cited in each institution's policies and mission statements.
4. Admissions – each institution's policy on admissions should identify requirements and special considerations for those who have met the entry level criteria.
5. Documentation – students must identify that they have a disAbility in order to receive accommodations and services as stated in each

institution's policy. Early identification is encouraged as it gives students the optimal opportunity for success. Documentation is required for students to obtain accommodation and services through offices for students with disAbilities (e.g., psychoeducational assessment for a student with a learning disAbility or medical documentation for other disAbility).

6. Alternate academic accommodations – accommodations such as extended time on tests, change in test formats, and the provision of alternative formats, such as large print or Braille, need to be made on an individualized basis as what may help one student will not necessarily help another. It is also necessary to stress the need for students to self-identify. Usually, documentation is needed to determine appropriate accommodations.
7. Academic integrity – University policies suggest in some situations the accommodations provided to students with disAbilities are too lenient and do not evaluate student knowledge. "The tension point commonly identified is achieving a balance between minimizing the impact of the disAbility on the students performance and assuring equal opportunity to demonstrate mastery without compromising academic standards" (Cox & Walsh, 1998, p. 33), however, common sense should always prevail.
8. Service accommodation - includes such services as, transportation, note-taking service, orientation, academic advising, and physical accessibility.

9. Experts and advisory committees - when implementing policies, it is important to have people available for committees to approach when questions arise in regard to disAbility issues. These committees should be comprised of faculty member(s), students and community members all of whom should have knowledge of disAbility issues and some of whom should have first hand knowledge of disAbility concerns.
10. Review Mechanism - is designed to ensure that ideas and viewpoint presented during the policy development process meet the current needs of the students. Review can be annual or on an as-needed basis.
11. Appeals Mechanism – fairness is often an issue that challenges policies. Students should follow the appeal guidelines set out by the institution.

Due to the diversity of campuses across Canada, Cox and Walsh conclude that it would be difficult to create the ideal disAbility policy considering the various cultures and histories across the nation. Similarly, Hill (1994) found that the students felt that policies were discriminatory within themselves, (e.g., inequities exist between the disability groups - physical disAbility versus learning disAbility) and that more support may be provided for those with physical disAbilities. The eleven variables identified by Cox and Walsh, however, provide an adequate framework to guide policy development.

According to Richard (1995) some universities offer faculty and staff awareness training combined with the appropriate provision of accommodations. She sees that this type of campus activity contributes greatly to the success of the students with disAbilities, because it increases the faculty members' awareness of specific needs of students with disAbilities. Accordingly, it seems as though most faculty members would

appreciate some of training in regards to laws pertaining to students with disAbilities (Carney, Ginsberg, Li, Orr, Parks, & Schulte, 2007). The degree to which organizations promote and develop supports for students with disAbilities and the faculty members who teach them impacts the educational experiences of both. As barriers decrease, an increase in the number of students with disAbilities has occurred in institutions of higher education (Brinckerhoff, Shaw, & McGuire, 1993; Vogel & Adelman, 1993). When talking about institutional attitudes, Fitchen (1988) states that these attitudes "can be a vital ingredient in the success or failure of students with a disability and in the overall success of the mainstreaming effort in postsecondary education" (p.171).

The experiences of students with disAbilities should be identified accurately in the development and implementation of policy and practice for both instructor practice and organizational policy. It is important that four issues be explored in regard to students with disAbilities: 1) the need for flexibility and variety in teaching and learning – the solution for one student with a sensory disAbility may not work for another student with a sensory disAbility; 2) the understanding that accommodations do not change the outcome or the expectations of the objectives of the course; 3) that students with disAbilities and faculty members who teach them need to have access to information that ensures the achievement of flexibility, quality, variety, and parity; and 4) the importance of staff attitudes and actions in regard to the issues that students with disAbility encounter. These four recommendations were derived from a study designed to identify and evaluate practices that impacted students' learning (Fuller, et al., 2004)

Hill (1994) looked at the various experiences of students with disAbilities in postsecondary settings. Issues examined ranged from physical access, to post-secondary

institutional policies, to issues surrounding hidden disAbilities. In response to queries regarding the institutional policies for students with disAbilities, the students reported that the policies did not seem to reflect an institutional understanding of disAbilities and further, that required modifications represented burdens to the university or college administration. For many students who first arrive in the university setting, they are not aware of or “do not understand their rights or the process for requesting accommodations” (Hurtubis & Lehmann, 2006, p. 28).

Faculty members' knowledge, skills, and attitudes.

Gaining the proper accommodations is not only the responsibility of the students and the service providers assisting students with disAbilities; faculty members must also be willing to implement the accommodations. This, of course, happens when faculty have a positive attitude towards integration (Hill, 1996).

Faculty members at post-secondary institutions need to have a clear understanding of the variety of student needs in order to provide appropriate instruction to all (Fitchen, 1990). Not only has higher education witnessed an increase in the number of students with disAbilities over time, but the range of disAbilities in the student population has expanded as well (Kroegeer & Schuck, 1993; Ryan & McCarthy, 1994).

Faculty members report having a limited knowledge of disAbilities and available services (Leyser et al., 1998; Aksamit, Morris & Leauenberger, 1998); are assessed to have a limited understanding of disAbilities (Leyser et al., 1998). Hill (1994) suggests that faculty must be made aware of the needs of those students with disAbilities, possibly through the use of general sensitization sessions as well as in-depth sessions at the beginning of term. These types of sessions would give faculty members more

information regarding the needs of students with various disAbilities. One of the most important aspects of achieving academic accommodations is the post-secondary administrations' and faculty members' realization that provisions are needed in order for a student with a disAbility to succeed (Hill, 1996) and that accommodations should not be seen as providing a student with special treatment. The attitudes of faculty members' towards the intellectual capacities of students with disAbilities are not always immediately evident (Biklen, 2000).

The belief that giving accommodations to students with disAbilities reduces academic standards persists in academic settings (Gadbow, 2002). Accommodations are designed to provide all individuals with equal access to education. As the arrangements of social environments can contribute to the creation and maintenance of disAbilities (Jung, 2002) accommodations are geared toward leveling the educational field. Students with disAbilities do not want preferential treatment; rather, they want to meet academic requirements and have equal consideration in educational and professional programs. However, students may need to be taught and/or evaluated in different ways that accommodate their individual needs. In the end, students with disAbilities are able to demonstrate competencies the same as those of their peers without disAbilities (Gadbow, 2002).

While most faculty members would be willing to provide accommodations to students with disAbilities, certain accommodations are more likely than others to be overlooked and, in many cases, not put into place (Nelson, Dodd, & Smith, 1990). Those accommodations that are generally supported by the faculty member(s) may include: the

overlooking of spelling errors, poor grammar and improper punctuation (Matthew, Anderson, & Skolnick; Nelson, 1987; Satcher, 1992).

Varied styles of teaching and learning warrant the respect of educators, as accommodations are necessary for the success of students with disAbilities in the learning environment (Gadbow, 2002). In order for adult learners to be successful, their needs must be treated uniquely (as disAbilities are so diverse) and they must be respected as competent learners with the ability to develop and learn skills (Foreman, 2001). Aksamit, et al. (1987) and Fonosch and Schwab (1991) have found positive faculty attitudes toward the integration of students with disAbilities at the post-secondary level. Aksamit et al. (1987) note, however, that these positive faculty attitudes may indicate a social desirability response bias, especially as the mean score reported was significantly higher than the knowledge scale score. Nonetheless, attitudes of both faculty members and support services staff were significantly related to “sex, previous contact, presence of information and years of job experience” (p. 57). In addition, the significant relationship between information regarding learning disAbilities and positive faculty member attitudes highlights the importance of providing education and training to faculty members and support staff to promote a more equitable and positive learning climate for students with disAbilities. Aksamit et al. suggest that assessment of faculty members’ attitudes pertaining to students with disAbilities is important in improving the quality of services to students with disAbilities. These authors suggest that quality of service be defined as the availability of modifications for academic programs.

Only one study was found that reported negative views of faculty towards their students with disAbilities, such that the academic capabilities of students’ with

disAbilities are seen as limited or the faculty member questions their ability to work with these particular students (Minner & Prater, 1984). Attitudes were assessed by faculty reading vignettes that characterized a student either positively or negatively with and without a label of learning disAbility (LD). Faculty members tended to rate the descriptions of students labeled with a LD more negatively.

In the study by Aksamit et al., faculty members had a predominantly positive attitude toward students with LD and were questioned directly about their attitudes. The authors themselves raised the issue of a possible social desirability response bias. Minner and Prater (1984), in comparison, indirectly assessed attitudes toward students with a disAbility and found attitudes to be more negative.

A faculty member's willingness to accommodate "is a crucial factor, since individual faculty members control whether or not students are provided instructional accommodations" (Nelson, et al., 1990 p. 186). A study by Norton (1997) regarding accommodations of students with learning disAbilities found that faculty members generally approve of the accommodations. Depending on the framework of the material being taught, students with disAbilities will have varying needs in order to fully benefit from class content (Poison & White, 2000).

Various factors may contribute to the variability found in faculty attitudes. For example, previous experience with students with disAbilities may increase the faculty members' awareness of the needs of students with disAbilities. Alternatively, faculty members may perceive that a student with a newly diagnosed learning disAbility may require more faculty time and involvement to determine the effectiveness of different accommodations. Those faculty members who study in areas that deal more with people,

such as psychology and sociology, tend to have an increased awareness and may be more attuned to the needs of the students (Leyser, et al., 1998). The attitudes of the faculty also relate to a number of selected variables such as the gender of the faculty, with females being found to be more positive (Baggett, 1994; Akasmit et al., 1987; Fonosch & Schwab, 1981); the more information faculty have received on the specific disAbility the more positive their attitudes (Aksamit et al., 1987); and the academic discipline to which the faculty belong (i.e., the faculties of Business and Social Sciences had the most positive attitudes; Fonosch & Schwab, 1981). Lastly, faculty members' past experience also impacted their attitudes towards students with disAbilities, in that faculty members who had prior contact with students with disAbilities or who were more experienced were more likely to have positive attitudes and support the use of accommodations (Fonosch & Schwab, 1981; Fichten, Amsel, Bourdon, & Creti, 1988; Satcher, 1992). "For all students, it is important/crucial that educators approach the student from a stance of presuming he or she is competent, for example, intelligent, potentially capable of expression, interaction and leadership" (Biklen, 2000, p. 340).

Students with disAbilities attitudes, knowledge, & skills

Fuller, et al. (2004) looked at the experiences of students with disAbilities in a post-secondary setting in regard to assessment, teaching and learning. The authors looked at how teaching and learning take into account the needs and rights of students with disAbilities as learners. The experiences of students' in a post-secondary setting were reviewed and recommendations were made to assist them in learning the material. Some students beginning their postsecondary education may not be aware that more or

different services are available to assist in their coursework, as students with disAbilities differ in their willingness to seek support (Fuller et al.).

Fuller et al. suggest that students differ in their willingness to seek support in post-secondary settings. Having the necessary skills to seek out support and/or accommodations can be an important determinant for academic success. The ability to communicate learning differences to individuals in the academic and work setting is considered 'critical' for success (Carney et al., 2007). Nonetheless, although 63% of students "disclosed their disability to professors . . . indicating a level of self-advocacy skills, . . . 45% had a negative response from faculty" (Carney et al., p. 37). Such findings suggest that students' ability to communicate their needs does not necessarily lead to a positive experience.

The finding that students differ in their willingness to seek support (Fuller et al., 2004; Norton, 1997) may encompass factors such as: students may wish to attempt courses without accommodation; students may not know what accommodations or services are available for their particular disAbility; or that a different type of accommodation that may help them. Willingness to seek support may also be influenced by students' perceptions that faculty members do not have adequate awareness of the issues that the student faced in order to adequately address particular student needs (Hill, 1996). Following Fuller et al.'s (2004) recommendation, the present research is designed to provide both students and faculty members with an opportunity to voice their experiences in a post-secondary institution, to learn about both groups' knowledge, attitudes, and skills regarding the presence of, usefulness of, and need for accommodations. Given the diversity of students with disAbilities at post-secondary

institutions, it is crucial to give voice to their experiences of learning, teaching, and assessment that can then affect disAbility-focused practice and policy in universities and colleges. Upon completion of the proposed research, the results will be made available to the entire community of the participating university and the wider academic community through publications and presentations. Ideally, this research will help to facilitate further faculty education with regard to students with disabilities and students education about the nature of services and supports available to them and how best to access them. The present study is designed to generate information that can be used by all members of the university community to understand the context in which students with disAbilities study.

Fuller et al., (2004) state that by entering into higher education, students with disAbilities are increasing their knowledge base, obtaining good qualifications, developing the appropriate social skills, and engaging in discussions and debates. Higher education provides an opportunity for empowerment and equity for students with disAbilities. Issues of inclusion have been increasingly raised; nonetheless, the voices of students with disAbilities are rarely being heard. The present research project provides an opportunity for students with disAbilities and faculty members to voice their experiences.

The role of Expectancy Theory in the present study

Eccles and colleagues (1983) expectancy-value theory addresses motivational factors in terms of goals, needs, and social comparisons (Burton, Chen, Grover, & Stewart, 1992; 1993; Geiger & Cooper, 1996). There are three types of beliefs associated with motivation: *expectancy*, *instrumentality*, and *valence of rewards*. Expectancy is the

degree to which an individual believes his/her effort will result in effective performance. Instrumentality refers to the belief that efforts will result in effective rewards. Valence of rewards is the perception of value of the expected rewards (Greenberg, Baron, Sales, & Owen, 1996). For a student arriving in a postsecondary education setting with positive past accommodation experiences, he or she would be motivated to succeed as past efforts and performance have been rewarded with positive academic achievement. A successful reward will positively re-start the motivational cycle resulting in increased effort.

Relating the expectancy model to the present investigation, a student's accommodation experience is dependent, in the first instance, on the degree of effort they put towards facilitating communication with their faculty members regarding their accommodation needs. If they are able to communicate their needs effectively (i.e., "perform" in the expectancy model) this will contribute to positive expectancy. If this performance leads to the student receiving the accommodations that will assist them in performing effectively so that good performance increases the student's chances of being successful in the course, they will experience that the performance is instrumental in producing the desired outcome. With this success, a student is likely to continue the cycle of effort-performance to obtain more academic credits. Conversely, for a student with negative past accommodation experiences, he or she may not be as motivated to advocate for personal needs. The student who has had a negative accommodation experience is not as likely to make the effort to communicate he or his needs to faculty members, therefore increasing her or his chances of not performing to the best of her or his abilities as a result of an expectation that the effort does not result in effective performance that will lead to a desired reward.

With reference to the academic success of students with disAbilities, expectancy, instrumentality, and valence all play a role. Here, expectancy can be seen as the perception that both the student and faculty member has of the relationship between effort and performance, while instrumentality refers to the perception that one's behaviour will be rewarded and valence reflects the perception the individual has of the importance and the value of the reward (Greenberg, et al., 2000).

Expectancy, instrumentality, and valence could play a role in how the skills, knowledge, and attitudes of the students and faculty members interact with barriers and accommodations to successful course completion. The work of Geiger and Cooper (1996) which looked at students majoring in accounting in a large public university found that for students who moved from low to moderate expectancies for success showed significantly larger increases in effort than those students who moved from moderate to high expectancy. By extension then, those students with disAbilities who have low expectancies for success, who then find themselves within an organizational structure with faculty members who can provide supports, may ultimately find that their expectations for success would increase. In turn, academic effort may increase as well. For example, for a student who has tried and persistently failed or received rewards with low valence they will develop the expectation that effort does not change performance in a way that results in meaningful reward. The same is true for faculty who may put considerable effort into accommodations only to be persistently criticized and/or find that the students they attempt to help do not perform as they hoped. In these circumstances, faculty may develop the expectation that irrespective of their efforts, they will not see the

kind of successful course performance they wish to see in their students. These expectancies are moderated by knowledge, skills and attitudes.

Research Focus

To facilitate successful program completion, students with disAbilities and faculty members need to work in collaboration. To achieve this goal, knowledge, attitudes and skills are needed from both students with disAbilities and faculty members. On the path toward achieving a higher education there are successes and barriers that both parties will most likely encounter.

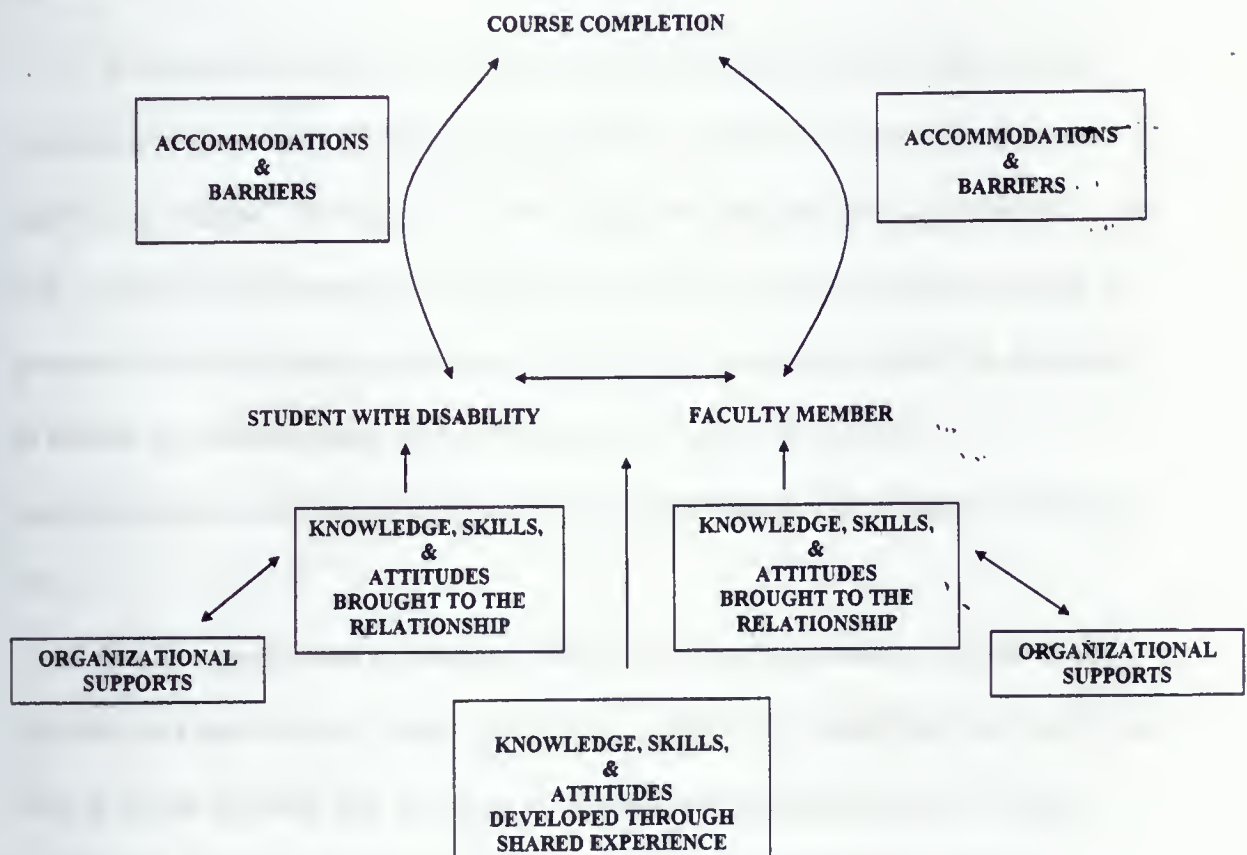
As Hill (1994) explains, student perceptions regarding institutional policies come mainly from legislation that focused on a mainstreaming system. Mainstreaming students with disAbilities into post-secondary institutions has been the primary goal the last decade.

The goal of both faculty members and students in a post-secondary setting is successful course completion. Success, however, can be defined in different ways by the student, the faculty member, and the institution. Also, how success is defined can be dependent on the knowledge, skills, and attitudes that are brought to the table and this includes the institutional supports that are available. Further, how barriers and accommodations are defined, utilized, or questioned undoubtedly impacts course completion, yet how such barriers or supports are defined depends largely on the knowledge, experience, and skills of the faculty member and student. Lastly, faculty members' and students' shared and prior experiences also impact knowledge, skills, and attitudes with regard to barriers, accommodations, and the development of institutional supports. Notwithstanding these observations, the present investigation sought to outline

the complex relationship between all of these variables by constructing the following *Dynamic Accommodation Model* which is based in Expectancy theory (Figure 1):

FIGURE 1

Figure 1.



Examples of Figure 1 in action:

A. How do organizational structures and faculty members' and students' with disabilities knowledge, skills, and attitudes interact to influence postsecondary academic experiences?

The organizational structures for any given postsecondary education setting will differ. However, with the more recent mandates for accessibility plans perhaps

organizational structures to support students with disAbilities may become more standardized. Given the particular requirements of students at particular institutions, where support services exist to differing degrees, needs' will be different.

B. Examples of possible academic outcomes determined by the knowledge, skills, and attitudes of both students with disAbilities, faculty members, and organizational supports.

1. *A student with a disAbility and a faculty member both of whom have had prior experience in the area of disAbilities that leads to a positive (i.e. successful academic experience) outcome.* A student with a disAbility who understands his/her disAbility and how it affects his/her learning would be considered to have the knowledge and skills to promote his/her own learning and positive academic experiences. In addition, she/he has an attitude that acknowledges his/her disAbility, as well an outlook that supports/accommodations are helpful and experiences thus far do not hamper a desire to learn.

A faculty member who has had experience with several students with disAbilities over the years may be more comfortable having students with disAbilities in his/her class. Also, as he/she has dealt with a number of different accommodations and may have worked with the students to find the most appropriate accommodations. Given experiences, his/her knowledge and skills to assist student with disAbilities may be more extensive. Also, the faculty member may have seen the benefit of accommodations. The knowledge, skills, attitudes and past experience of the student with a disAbility and faculty member should come together and promote positive academic experiences. If and

when barriers are encountered, the possibility exists for both individuals to work together to overcome them.

Organizational structures that promote positive academic experiences would be student development centers which provide accommodation, personal support, and other services. For faculty, organizational supports would be teaching or educational centers within the postsecondary institution that promote and provide workshops to highlight issues surrounding the education of students with disAbilities. Also, the dissemination and availability of current research findings regarding education for students with disAbilities would improve experiences, however, it is the responsibility of faculty members and students to access this information and available services.

2. Student with a disAbility and experience in the area of disAbilities (or accommodations) and a faculty member with minimal experience in the domain of disAbilities that leads to a mixed outcome.

A student with a disAbility who understands his/her disAbility and how it affects his/her learning would be considered to have the knowledge and skills to promote his/her own learning and positive academic experiences. In addition, she/he has an attitude that acknowledges his/her disAbility and that support services benefit his/her learning and this attitude does not hamper a desire to learn.

A faculty member who has had a few students with disAbilities during his/her academic career may be less comfortable having the students in his/her classes because he/she has not had much of an opportunity to work with students with disAbilities and is not familiar with accommodation procedures. Although she/he may have dealt with accommodation issues, this individual may not fully understand how these benefit

students. The faculty member, therefore, may have some reservations as to the validity of particular accommodations.

The organizational supports available for students with experience and knowledge of his/her disAbility would be student development services that provide appropriate accommodations. Faculty members with less experience in the area of disAbilities may not be aware of available supports or understand the necessity for particular supports and may not engage in the accommodation process fully.

3. An inexperienced student with a disAbility who has minimal experience with accommodations and academic settings, with a faculty member who has experience with accommodations and the academic setting may lead to a mixed (positive and negative) outcome.

For example, a student with a disAbility may not have come to terms with his/her disAbility and/or has had little opportunity to develop his/her skills to promote optimal learning experiences. If this student's professor, however, has previously had several students with disAbilities in his/her class, across time and is comfortable having students with disAbilities in their class, the student's experience may be more positive. Also, if this faculty member has dealt with a number of different accommodations and worked with students to find the most appropriate accommodations, the student's academic experience may be enhanced.

The faculty member may see the student struggling and suggest the use of appropriate accommodations. If the student, however, does not believe that accommodations are needed or beneficial this may decrease the possibility of success.

For a student with a disAbility who has little experience in the post-secondary setting, he/she may attempt attendance without support or believe he/she can have optimal academic experience without support. Also, a student with a disAbility may not know what to do to help him/herself or know that different accommodations and services are available until someone else suggests these options. A faculty member in this situation may attend appropriate workshops regarding education and teaching for students with disAbilities in a post-secondary setting and be better able to promote a climate in which to foster educational goals. A student with a disAbility who has little experience with accommodations in the post-secondary setting and a faculty member who also has little experience with accommodations and the differing needs of students with disAbilities may lead to a more negative academic outcome due to lack of experience and exposure.

For example, a student with a disAbility may not have come to terms with his/her disAbility and/or has had little opportunity to develop his/her skills to promote optimal learning experiences. A faculty member who has had experience with several students with disAbilities over the years may be more comfortable having students with disAbilities in his/her class. Also, as he/she has dealt with a number of different accommodations and may have worked with the students to find the most appropriate accommodations. The knowledge, skills, attitudes and past experience of the student with a disAbility and faculty member should come together and promote positive academic experiences. If and when barriers are encountered, the possibility exists for both individuals to work together to overcome them.

The student may not be aware of or utilize the accommodations available to him or her and the faculty member may not be aware of the accommodations that may help the student achieve success in his/her course.

The degree to which organizational supports exist and students with disabilities and faculty members know of the supports would also impact successful course completion. A student may not know of the student development services available or that different accommodations and services may assist. Faculty members may not be aware of how to assist students with differing educational needs or where to access information.

Methodology

Study design.

A mixed-methods approach advocated by Fontana and Frey (2000) was used in the present investigation, incorporating both qualitative and quantitative methodologies. In the first phase of the research, both faculty and student participants were given the choice of having an individual interview or participating in a focus group. All participants chose to have individual interviews. A semi-structured interview format was used (see Appendices B & C). Interviews were coded by the principal investigator as well as a research assistant, subjected to reliability analyses, and content and themes were subsequently identified. Themes arising from the interviews were used in the development of two questionnaires from which the quantitative data and some additional qualitative questions were derived in the second phase of the research (see Appendices D & E). The qualitative interview method allowed for discussion of specific experiences (suggestive of a phenomenological approach, [Merriam, 1998]) of both students and faculty to enrich our understanding of the nature of successful course completion. For the quantitative portion of the research, descriptive and inferential statistics were used to examine issues such as the frequency and kind of accommodations used by faculty members; the experiences of students as self advocates; and the differences reported between faculty members knowledge of students disability-related learning needs in successful and unsuccessful course completion experiences.

Research questions

Knowledge.

- What degree of knowledge do faculty members have regarding issues that

- students with disAbilities encounter in a post-secondary setting?
- How do faculty members perceive students with disAbilities use of accommodations in a post-secondary setting?
- What are the systemic issues faced by university faculty members in the education of students with disAbilities at the post-secondary level?

Skills.

- What are the number and kind of accommodations students with disAbilities utilize within the post-secondary institution?
- What do faculty members report as requirements in order to assist students with disAbilities effectively?

Attitudes.

- What are the different kinds of attitudes faculty members hold toward students with disAbilities?
- What are the barriers students with disAbilities face?
- What attitudes do students with disAbilities hold toward faculty members?
- What challenges do students with disAbilities perceive faculty members to face as they accommodate the needs of the student?

Barriers.

- What barriers do students with disAbilities perceive in a post-secondary setting?
- What types of accommodation experiences do students with disAbilities have in the post-secondary setting?
- What barriers do students with disAbilities face in communicating with faculty members about their learning needs?

- What barriers do faculty members face in communicating with students with disAbilities?
- What barriers do faculty members encounter in their attempts to accommodate students with special needs?
- What barriers do faculty members encounter in their attempts to accommodate students with special needs?

Successful and unsuccessful accommodation experiences.

- What faculty member qualities do students with disAbilities perceive as effective in their educational experience?
- What qualities in students with disAbilities do faculty members perceive as effective in their attaining academic success?
- What kinds of successful accommodation experiences have students with disAbilities had in a post-secondary setting?
- What kinds of successful experiences have faculty members had in accommodating students with disAbilities?

Measures:

During the interview phase, students with disAbilities and faculty members were asked a number of questions that related to their experiences with accommodations, barriers to accommodation, and knowledge of special needs. A semi-structured interview format was used with questions designed to address issues related to the research questions listed above. The interviews were conducted either in the offices of the faculty members or, in the case of student participants, in the Child and Youth Studies play lab or in a study room in the library. There were two to three people present at the interviews;

usually the primary investigator and the participant and, sometimes, a research assistant. The research assistant was there to clarify any questions if the participant did not understand the speech of the investigator.

From the transcriptions of these interviews, themes were identified that were used to develop the questionnaire measure. Two questionnaires were developed and distributed; one to students with disAbilities and the other parallel questionnaire to faculty members. Semi-structured questions and Likert - type rating scales were used in the questionnaires.

Questionnaire items were developed by taking the main themes from the interview transcripts. For example, in response to the interview question: “what accommodations are you aware of that are available to students with disAbilities” faculty members reported several different accommodations, one of which was “having note-takers in the classroom.” Along with other accommodation, *notetaker in the classroom* was then translated into an questionnaire item ‘notetaker in the classroom’ and respondents indicated if this accommodation had ever been requested, the degree to which faculty members assessed this accommodation as benefiting the student, and the degree of inconvenience this accommodation posed to the faculty member.

Questions were developed with five-point Likert-type scales and open-ended questions were added to give respondents the opportunity to elaborate on their answers. The latter were transcribed and coded for themes and sub-categories.

Participants and recruitment.

Posters and e-mails were used to recruit students with disAbilities and faculty members for interview and questionnaire participation. The Student Development

Centre, Services for Students with DisAbilities, assisted the researcher in sending e-mails to prospective participants using the recruitment material provided to them. This ensured confidentiality of the students with disAbilities as the researcher did not have direct access to the students' e-mail addresses. It also ensured targeted recruiting to students who had chosen to associate with the Centre. Posters were also displayed in the Student Development Centre, Services for Students with DisAbilities office, with appropriate information including contact information for the researcher. The principal investigator identified for the student participants that she also has a disAbility in hopes of making the students more comfortable in participating in the study. In recruiting student participants for the questionnaire, the researcher asked permission of the faculty members who participated in the research to allow the researcher to speak in their respective classes. In recruiting faculty members, the Centre for Teaching, Learning and Educational Technologies (CTLET) sent the recruitment material to members of the Universal Instructional Design (UID) Committee. Also, a faculty member e-mail list was obtained through the Office of Research Services and e-mails were sent to all faculty members in the university.

Ten students with disabilities were involved in the research (interviews $n = 5$ and questionnaires $n = 5$). Forty-nine faculty members from various disciplines were involved in the research (interviews $n = 8$ and questionnaires $n = 41$).

Data collection:

Interviews - Individually, five students and eight faculty members took part in interviews of 30-60 minutes duration. After the completion of these 13 interviews, additional volunteers were asked if they could be contacted to complete a questionnaire

instead of an interview as a less time consuming alternative to the interview. The only difference between participants who were interviewed and those that were asked to be contacted during the questionnaire phase of the research was when they contacted the researcher.

Information gained through the interviews was used to formulate the questionnaires that were used later in the research. The interview questions were designed to draw out the kinds of information and experiences faculty members and students had regarding accommodation in a post-secondary setting. The main conceptual ideas for the interview questions originated from a previous survey designed by a faculty member to focus on accessibility issues within a post-secondary setting with a predominant focus on physical accessibility. Specifically, questions focused on the kinds of knowledge, skills, and attitudes that impacted accommodation. Faculty and student interview protocols were designed using a substantially parallel format.

Questionnaires – Based on information gained from student and faculty interviews two questionnaires were developed and distributed to students with disAbilities and to faculty members to triangulate the themes identified in the interviews (Owen et al., 2000). Likert-type questions suitable for SPSS analysis were used (see Appendices C and D). For example, in the interviews, faculty members were asked “can you describe what you have done to accommodate students with disabilities?” Then within the questionnaires they were asked to rate the effectiveness of accommodations identified in the interviews, such as the use of note-takers, extra-time on tests and exams, use of a scribe or computer for tests and exams.

The items for the questionnaires were developed by reviewing the transcribed interview questions. Themes and areas suggested by the interviewees as being of particular importance and/or concern were highlighted (e.g., barriers encountered and successful accommodation experiences). The faculty member and student questionnaires were designed to be parallel in question form and content wherever possible. In addition, items were designed to correspond to the Dynamic Accommodation Model (see Figure 1), so as to tap into the knowledge, skills, and attitudes of students with disabilities and faculty members which contribute to course completion, as well as the barriers and accommodations, organizational supports and the interaction among these variables.

Analyses:

Qualitative analyses.

Information from the interviews was used to generate qualitative descriptions of experiences in the domains of accommodations, barriers, knowledge, skills, and attitudes, academic relationships and experiences between students with disabilities and faculty members. In addition, the participants' perceptions of the organizational structures available to support their learning and teaching needs were reported.

A phenomenological approach was used to focus on the structure or the essence of the experience the participants had encountered (Merriam, 1998). Questions asked of participants to depict these experiences included: what knowledge, skills and attitudes do faculty members and students with disabilities have; and what are effective/ineffective strategies you have used in either managing your disability or teaching students with disabilities?

When more information was needed or the principal investigator wanted the

interviewee to provide more detail or clarification, probing questions (i.e. 'can you expand on that'; 'can you give me an example'; 'can you tell me more') were used. .

When reporting on the data from the interviews and determining what participant quotes would be included, the researcher focused on issues related to the relationship between faculty members and students and did not focus specifically on information about other units in the university.

Quantitative analyses. Descriptive analyses (frequencies, percentages, mean, mode, and medians) were conducted on the questionnaire responses (e.g., the frequency of student and faculty members' use of accommodations to provide a general description of respondents' experiences and their knowledge, skills, and attitudes toward accommodations). In addition, the reported level of knowledge, skills, and attitudes of participants was examined to determine if students with disabilities or faculty members have knowledge, skills, or different attitudes in relationship to different accommodation experiences. Of particular interest was the examination of experiences, knowledge, skills, and attitudes as they relate to organizational supports. Given the very small ($n = 5$) number of student questionnaire respondents, it was not possible to conduct in-depth quantitative comparisons of student and faculty responses to matched items.

Consent process.

Interviews – Letters of information and consent forms were provided to the participants prior to the interviews. Participants were asked to read these materials prior to their interview but were asked not to sign the form until they had their interview. Prior to starting their interview, participants went over the consent form with the principal investigator at which time they were asked to sign the consent form. The letter of

information and the consent form both explained that participation in this study was completely voluntary, and the participants were advised that they could withdraw from the study at any time with no penalty (see Appendices E and F).

Questionnaires - There was a separate form for consent included with the questionnaire packages for students and faculty participants. Each questionnaire was assigned an identification number, so answers provided could be kept confidential. Only the principal investigator had access to ID numbers and names. Participation was completely voluntary and the participants were advised that they could withdraw from the study at anytime with no penalty (see Appendices G and H).

Results

In the sections that follow, faculty responses to interview questions and questionnaires will be reported. Given that there was a low student response rate to the questionnaire section of the research, the main focus will be on student interview results. These data are organized to address each of the research questions identified above.

Reliability

Two randomly selected student interviews and two faculty interviews were coded by a second coder. The results from the Cohen's Kappa test for reliability show coding for the student interviews was .773 ($p < 0.00$) and coding for the faculty interviews was .773 ($p < 0.00$).

Knowledge

In examining the knowledge of faculty members and students with disAbilities, three main issues were explored: what knowledge faculty members have regarding issues that students with disAbilities encounter; what perceptions faculty members have of students' use of accommodations, and what systemic issues faculty members face in attempting to address the pedagogical needs of students with disAbilities. For questions focused on participants' perceptions of successful and unsuccessful course completion, the terms "successful" and "unsuccessful" were not defined thus allowing the participants to interpret the terms for themselves. Those questions that asked about academic accommodations focused on their specific benefits to students with disAbilities from both the student and faculty perspectives. Questions that asked about systemic issues included topics such as whether faculty members had enough information about the students' disAbilities to allow them to plan appropriate accommodations.

What degree of knowledge do faculty members have regarding issues that students with disAbilities encounter in a post-secondary setting?

Faculty.

Four questions were asked of faculty members about their knowledge of disAbilities. Issues that were explored included whether faculty members had a good understanding of the students' disAbility when the students were successful and whether they had enough information about the students' needs when they were unsuccessful in a course. Mean ratings were 3.39($SD = 1.45$) and 2.60($SD = 1.45$) respectively. A t -test of paired samples where $t(29) = 2.523$ indicates that faculty members reported having a better understanding or knowledge of the needs of students with disAbilities who were successful than for those who were not successful in their course. Faculty indicated that their understanding of students' particular disAbilities had an impact on student success ($M = 3.5$; $SD = 0.98$ out of a maximum of 5) and that their knowledge of disAbilities in the post secondary setting was moderate to good ($M = 3.33$ $SD = 1.15$ with 5 indicating extensive knowledge).

Students.

Students expressed a range of perceptions about faculty interest and knowledge of disAbilities. One student reported that faculty members do not see accommodating students' needs as their responsibility, Others suggested that faculty members should do research to accommodate students more effectively; "I think he or she should have a basic knowledge, or at least have some ideas about what these, what a student needs, so

he can do some [re]search so he can get help from services, I think that would be really helpful.”

Students had varying perceptions of faculty knowledge of disAbilities. One student did not feel that faculty needed to be aware of their disability; “I think most professors, in terms of my disability, they don’t need to know about it (disability)”. While, in speaking about the ‘Letters of Accommodation’ provided by the Student Development Centre, another student said that “...most of them (faculty) weren’t aware. When I gave them the letter, some of them had seen the letter before and ... some hadn’t.” The Centre for Students with disAbilities provides letters to faculty members describing the specific accommodation needs for all students who register with them. Students are responsible for delivering these accommodation letters to faculty members personally. One outcome of this personal exchange is an opportunity for the student and faculty member to discuss the student’s accommodation needs, to give the student and faculty member the opportunity to “voice” their questions or concerns.

How do faculty members perceive students with disAbilities’ use of accommodations in the post-secondary setting?

Faculty.

Faculty members responded to a question about what accommodations they had made or granted for students (see Table 1). They reported accommodating students’ needs in a variety of ways, some of which reflect extra effort on the part of faculty members. For example, three participants reported using enlarged material to accommodate students with visual impairments:

“ . . . I feel so guilty because to some degree I kept forgetting that he was virtually

legally blind and . . . he didn't really want any one to know, so he was sort of sitting at the front . . . as I would leave my notes right there so he could see my notes and he could pick up anything he couldn't pick up off the board."

Another faculty member noted;

.. . I got all my overheads and I enlarged them as much as I could and then photostated [sic] all my overheads for her.

Several faculty members described having students write exams in their offices, not only allowing the extra time, and an alternate location, but also being available for any questions;

"... because her exam will be on Kurzweil she is going to write the quiz for me here and I can do it from my machine to her machine and I told her she could do doodles or draw pictures [while the rest of the students write their quizzes in class]. . . she knew she wasn't putting down enough . . . what I got her do, was put down more."

Another faculty member also reported focusing on the students' strengths while giving them extra help to overcome the barriers:

"...[as] someone who teaches research courses my main focus is to help people to become researchers, so how is it that a student who has some kinds of disAbilities will be able to then conduct research that makes sense for them, that draws on their strengths rather than capitalizing on weaknesses..."

Other faculty members felt that any of the accommodations that they had made were 'minor':

Table 1

What faculty members have done to accommodate students with disAbilities

Cited by 1 Faculty	Cited by 2-3 Faculty	Cited by 4+ Faculty
Providing a safe, physical environment	Enlarged material	Note takers in class
Learning contracts	Customized assignments	
Preferred seating	“Circle of friends”- Peer helpers	
Talking with students about course material	One-to-one assistance	
Allowing travel time between classes	Additional time for tests, exams and assignments	
	Writing tests/exams in alternate location or with professor	
	Alternate arrangements for assignments	
	Providing students with lecture notes prior to class	

Note: Interview Question: “Can you describe what you have done to accommodate students with disAbilities?”

I've accommodated all of them by giving them extra time, having them up in different rooms, making myself available to them...Pretty minor stuff what I've done, what I've had to do.

Faculty were given a list of student accommodations and asked if any students with disAbilities in their classes had requested any of the items in the list in the previous five years. These accommodations were those identified with the highest frequency in the faculty questionnaire (see Table 2). Faculty members were asked to report on the extent to which they believed the accommodation benefited the student and on the level of inconvenience it presented to them as faculty members. Respondents identified that the most frequently requested accommodations were: having an alternate location available for the writing of tests and exams, and having note takers in class, followed by alternate material format. In general, faculty members rated accommodations as not causing any inconvenience.

Students.

When students were asked about accommodations (see Table 3) they reported that having a note-taker in class, having an alternate location for exams, using a computer for exams and having access to adaptive technology were most useful. In reference to using a notetaker as an accommodation, one student reported:

"I've used notetakers for the last two years, which has been useful because sometimes I'll miss things because I also have a learning processing disorder so sometimes things don't come out as well as they should so I may miss something when I try to type it."

For some students, writing exams in a different space from the rest of the class is reported as useful; “The extra room is extremely useful for me . . . it gives me a chance, it’s a lot quieter, I can focus better . . . because there are not a lot of other people around me [I am not as] stressed out.” Another student reported how having extra time is a useful accommodation; “. . . and you get time to think and plan, you know, write, you don’t just get time to just whack it all down... you get time to organize your thoughts.” Enlisting a faculty member’s help was also identified as a useful and successful accommodation; “. . . the fact that profs are aware ahead of time about my disabilities helps because . . . sometimes I need to talk to the prof and say, this is part of my problem so what can we work out and that’s helpful.”

Table 2

Faculty member responses to accommodation requests

Accommodation	Mean	Standard Deviation	n
Note Taking			
Requested	0.902	0.436	41
Benefit	4.404	0.762	28
Inconvenience	1.250	0.541	36
Alternate Format			
Requested	0.500	0.641	40
Benefit	4.844	0.352	16
Inconvenience	2.150	1.077	20
Alternate Exam Locations			
Requested	0.976	0.273	41
Benefit	4.279	0.780	34
Inconvenience	1.789	0.970	38
Other accommodations *			
Requested	0.880	0.332	25
Benefit	4.043	1.177	23
Inconvenience	2.348	1.238	23

* indicates accommodations not otherwise specified

** (1=not at all; 5=very)

Table 3

Accommodations that have been useful for students with disAbilities

Cited by 1 student	Cited by 2-3 students	Cited by 4-5 students
Extra time for tests and assignments	Alternate location for exams	Having a note-taker in class
Tape recorder in class	Use of a computer for exams	
Faculty being aware of students disAbility	Adaptive technology → i.e. Kurzweil reading software	
Enlarged exams		

Note: Interview Question: “What accommodations have been most useful for you?”

What are the systemic issues faced by university faculty members in the education of students with disAbilities at the post-secondary level?

Two questions from the faculty member questionnaire focused on systemic issues faced by faculty members.

When asked if they felt accommodating students was important to their career success, faculty members' ($n = 35$) mean rating was 3.34 ($SD = 1.39$). This moderate response mean suggests that faculty respondents see some connection between accommodation of students with disAbilities and their own career outcomes however the response did not appear to be consistent across faculty respondents. There is some suggestion that responding faculty members may also see accommodation of students as a relatively solitary enterprise. This is reflected in their response to the questionnaire item that looked at whether faculty members felt having support from their colleagues would foster their growth as a professional ($n = 40$), which generated a mean rating of 2.98 ($SD = 1.44$). This suggests that while some respondents saw this as useful, others saw little utility in receiving support from colleagues in fostering their professional growth.

Skills

This section deals with faculty member and student accommodation skills, and the kinds of accommodations that faculty members grant and that students find effective. Those questions that focused on skills asked faculty members and students to rate their abilities in the context of disAbility in the post-secondary setting. Faculty members were also asked what information they would find helpful in better understanding the needs of students with disAbilities.

What are the number and kinds of accommodations students with disAbilities utilize within the post-secondary institution?

Faculty.

In response to the interview question “Can you describe what you have done to accommodate students with disAbilities?” (see Table 1) individual faculty members reported that they have provided different accommodations with varying degrees of success. For a student with visual impairment one faulty member reported:

I got all my overheads and I enlarged them as much as I could and then I Photostatted all my overheads for her . . . we used to have a great conversation going and everything would be in large print and she would be able . . . she could read along.

Another faculty member reflected on the use of other general accommodations:

I’ve accommodated all of them by giving them extra time,...having them up in different rooms, making myself available to them, making my notes available to them...

Still another professor discussed the issue that physical accessibility does not limit intellectual ability;

“of course she can do [the subject work], she’s in a wheelchair what’s that got to do with [the subject matter]. . . then nobody will give her a job because she didn’t take [subject], well there’s lots of jobs for [graduates of subject area] that involve writing . . . but the big problem is that scientific equipment is not a simple matter of ‘well let’s lower a piece of equipment to wheelchair height, the piece of equipment weighs 2 tons . . . so physically it can’t be lowered and the solution,

take the student up.”

In contrast, in speaking about an unsuccessful experience, a faculty member described feeling great sadness in having tried many accommodations in an attempt to help to a student;

“we tried various things . . . and she simply couldn’t cope . . I just feel so sorry because this is a very intelligent woman . . . you know at first sight you would think a learning disability that’s not a big issue, they should be able to get past that, but they can’t, they need help.”

Students.

When students were asked what skills faculty have that were effective in accommodating their needs, (Appendix A; Table 1) student identified faculty education (understanding of various disAbilities that students may have) and a willingness to experiment with different teaching styles:

“I would say having the ability to, not only explain it well but choosing the right kind of examples with it that compliment it and using both of those effective[ly] is a really great skill because that way you can understand the theory and the practical, which I find a lot of Brock members don’t do, especially in my field, but I find that is a really great for a professor to have because that way, like I said, you can understand it a lot better because you know the surface and you know underneath it.”

Students also indicated the importance of faculty members being patient:

“Patience is really huge, when I found a prof that was patient and understanding that was really great. The other thing is that when you have a professor for more

than one class, like I've had one professor for three years now, she's the most accommodating, most understanding, she's the one that gives us all sorts of different choices in class."

Students' ($n = 5$) median rating on the importance of accommodation to their academic career success was 3 (range = 2; mode = 3) out of a possible 5 where 1 was 'not at all' and 5 was 'very important,' indicating considerable variability in their reliance on accommodation. This is not particularly surprising given the small number of student participants and heterogeneous nature of the respondents' disabilities.

Students were asked to rate the degree to which various classroom accommodations are of use to them (see Table 5 and Appendix A, Table 2). The availability of note takers in the classroom, having an alternate location for exams, using a computer for exams, and having access to adaptive technology were highlighted as most useful for them. Having extra time on tests and exams, and having a scribe for tests and exams were also identified as integral accommodations. For one student, using a computer for exams facilitated the ability to focus on the exam material rather than the pain caused by traditional methods of writing exams by hand; "...computer (for exams) because I have a small motor control problem which means that I can't write as fast or for a long period of time my arm will start to really hurt, so by using the computer I can do things a little faster and a little less damage to my arm." For another student, having the use of a separate room for exams allowed this participant to be more relaxed and to experience a reduced level of stress; "The extra room has been extremely useful to me, 'cause it gives me a chance, it's a lot quieter, I can focus a lot better, I don't get as stressed out because there are not a lot of other people around me [who are] stressed out."

When asked if they felt they have a good understanding of their disAbility related needs, students' ($n = 5$) median rating was 4 (range = 2; and mode = 4), out of a possible 5, where 1 was identified as "not at all" and 5 was identified as "very much so." It appears that for some students, they feel they have good understanding but others are aware that they do not. When asked if they felt they had enough information about their learning needs specifically, students' ($n = 5$) median rating was 4 (range = 1; mode = 4), out of 5 with the same descriptors, again suggesting considerable variability in students' awareness of their own needs.

In terms of their perception of how their understanding of how their disAbility impacts their education, students' ($n = 5$) median rating was 4 (range = 3; mode = 4) with the same descriptors. Similarly, students were asked to rate their knowledge of their disAbility as it applies in a post-secondary setting. For this question individual students' ($n = 5$) median rating was also 4 (range = 3; mode = 4) with the same descriptors. Responses from these two questions are also indicative wide discrepancy in students' awareness of the ways in which their disability may have an impact on their lives as students. Had the group of participants included primarily first year students, which was not the case, this discrepancy might have been even more pronounced since students entering university may have been accustomed to having accommodations in high school provided without their direct intervention while, in university, faculty members rely on students to self identify and to be good advocates for their own learning needs.

Faculty.

When asked; "Please think about a time when you accommodated a student with a disAbility in your class and the student completed the course successfully and answer the

following: Do you feel students are prepared to advocate for their learning needs with faculty?" faculty members' ($n = 40$) mean rating was 3($SD = 0.99$) suggesting that faculty members are unsure whether students are prepared to advocate their learning needs.

When asked what skills students noticed that faculty had that were effective in accommodating their needs, students reported that faculty members' willingness to experiment with different teaching styles, their patience, and their being educated about disabilities were helpful.

Table 4

Accommodations that have been useful for students with disabilities

Cited by 1 student	Cited by 2-3 students	Cited by 4-5 students
Extra time for tests and assignments	Alternate location for exams	Having a note-taker in class
Tape recorder in class	Use of a computer for exams	
Faculty being aware of students disability	Adaptive technology→ i.e. Kurzweil reading software	
Enlarged exams		

Interview Question: “What accommodations have been most useful for you?”

What do faculty members report as requirements in order to assist students with disAbilities effectively?

Faculty.

In response to the faculty interview question ‘What information as a faculty member would help you to better understand students with disAbilities?’ (see Table 5) faculty members reported that workshops about visible and invisible disAbilities; training in Universal Instructional Design; on-line resources; a booklet with information on students with disAbilities; and basic awareness training would be helpful. Faculty members described their interests in various ways. One faculty member expressed an interest in general awareness training: “I would like a workshop first of all that just tells me about who the students are...students with visible disabilities, students with invisible disabilities,” While another was interested in advice about how to help students to feel at ease in class: “I don’t know as much as I should about what I can do or even how I can make students with learning disabilities or other disabilities more comfortable in my classroom so I think there needs to be some great education on the part of the university.”

These results were confirmed by faculty questionnaire respondents who, when asked whether they wish they had more skills in supporting students with disAbilities, indicated that they feel that while they do have a moderate level of skills, they are interested in improving them. Faculty questionnaire respondents indicated their wish to have more information regarding disAbilities, access to workshops and training sessions, a pamphlet and to be provided with hands on experiences or simulations as their preferred professional development formats.

Table 5

Information that would help faculty members better understand students with disabilities

Cited by 1 student	Cited by 2-3 students	Cited by 4-5 students
Sharing experiences with other Faculty Members	Training in Universal Instructional Design	Workshops about students with visible and invisible disabilities
Learning from those with disabilities	On-line resources	
Incentives to support Faculty	Booklet with information about students with disabilities	
More guidance on working with students with disabilities	Basic awareness training	

Interview Question: “What information as a faculty member would help you to better understand students with disabilities?”

In the questionnaire, faculty participants were asked to think about a time when they had accommodated a student with a disAbility and the student completed the course successfully. In this context, they were asked to consider whether their interaction with students changed how they approached their classroom and class participation. Faculty participants described a range of changes in their approach to teaching. Two faculty respondents felt that they should be fair and accessible to all students, regardless of ability. Three said that they felt their accommodations helped students, three indicated it increased understanding and acceptance and three indicated an increase in their awareness:

Yes, I became more conscious of my delivery – spoke more slowly and checked for understanding in and out of class.

Another faculty member cited:

I think I have become more sensitive to a range of special needs and have introduced greater flexibility into course components;

A third faculty member cited:

Absolutely, I had not been as open as I should have been in identifying students who could benefit from accommodation. Now, I encourage students to seek necessary accommodation from both me and from the University.

On the other hand, seventeen faculty members indicated that they noticed no change in their approach to teaching following successful accommodation:

Not really. The class in question (small enrolment) was a very interactive / performance / collective creative class. Always, one works to the strengths of

participating students who are the resources for collective creation. The disabled student brought challenges and material to the class that were risky and exciting to the rest.

Students.

Students were asked to comment on the personal and professional skills of faculty members that they found to be helpful in facilitating their academic success. In response to the question: 'As you reflect on your time at Brock what skills did you notice faculty having that were effective in accommodating your needs?' individual students reported that willingness to experiment with different teaching styles and the patience of the faculty member were helpful to them:

...sometimes I go to see the teacher and he is upset because I didn't understand things, but I listen but I just want to make sure sometimes you know, so I would say in this case, patience from the teacher, on my behalf.

Other faculty member skills noted by students were needing or having education, having an understanding of various disAbilities that the student may have, talking with the students about course content, and being comfortable in respect to their teaching ability.

The questionnaires also asked what skills that students wish faculty members had include having greater knowledge of disAbilities, having patience, being understanding of students' needs and giving students suggestions for success. When asked if they wished faculty members had better skills in working with students with disAbilities, the median rating for five respondents was 4 (range = 2; mode = 4). This finding suggests a wish for faculty members to have better skills for working with students with disAbilities.

Attitudes

In investigating attitudes that faculty members and students with disAbilities have in the post-secondary setting, four questions were explored. These examined faculty members' attitudes towards accommodating students with disAbilities, the attitudes that students notice faculty members showing, students' attitudes toward their disAbility, and the different challenges that faculty members face in accommodating students with disAbilities.

What are the different kinds of attitudes faculty members hold toward students with disAbilities?

Faculty and students.

In the questions that investigated faculty members' impressions of other faculty towards accommodation and those that asked for student impressions of faculty member attitudes, mean and median ratings respectively were 3.63(1.03) and 4.0(2.0). This suggests that faculty members have reasonably positive impressions of their colleagues' accommodation for students with disAbilities. Students feel that faculty member attitudes towards students with disAbilities are generally positive but with a large standard deviation. With such a small number of student responses this seems to reflect the individuality of student experience.

What attitudes do students hold toward faculty members?

Students reporting on faculty attitudes.

The five students who were interviewed reported encountering a range of faculty attitudes to accommodation. In response to the interview question: "As you reflect on your time at Brock what attitudes did you notice faculty having that were effective in

accommodating your needs?” Students reported faculty attitudes that included empathy, faculty being receptive to accommodating student needs and faculty being encouraging in their interaction with the student. The following faculty attitudes were identified by two to three students: positively understanding student needs; faculty being supportive and understanding of all student needs; and, conversely, faculty members demonstrating a lack of concern for accommodating student needs. In the questionnaire, when asked about their perception of faculty members’ willingness to support their accommodations the five student respondents’ scores had a median of 4 (range=5; mode = 5) where 1 is ‘not at all’ and 5 is ‘very much so.’ This suggests that while some students find faculty willing to help, there is considerable variability in individual experience which is not surprising given the small number of respondents.

Empathy with student needs was seen as a key attitude in faculty: “I believe they were empathetic to my problem and especially because mine isn’t a visible problem I thought they would be less likely to accommodate me because there is no policy on that kind of thing.” Students spoke of how faculty members can make changes when they are more established as role models within the institution: “As far as attitudes, as I’m here a lot of the profs that have been really nice to me, have taken one more of senior positions in my department, so the ones that are very accommodating are starting to get toward the top and they are starting to influence the younger ones and that’s what I am seeing.”

As indicated above, not all students who reported positive experiences. One student described how faculty members were not understanding:

A good attitude would be like, they understand that I have a problem and they understand my needs, but negative attitudes from this point would be like, they

are not very helpful even if they understand, we are not going to break this barrier try to help me to the best capacity...I don't know my point would be, they don't feel really concerned I think because it's my life, kind of, so if they don't feel concerned.

Students and faculty reporting on student attitudes.

When asked how they would rate their attitude toward their disAbility in a post-secondary setting, the median and modal responses of students were 4 (range=2) on a five point scale, for which 5 was having a good attitude towards ones disAbility suggesting this that these students feel quite positive about their disAbility. When asked to rate their impression of students' attitudes toward accommodation, faculty members' ($n = 39$) mean rating was 3.73($SD = 1.04$). This suggests that faculty members feel that students generally have a moderately positive attitude towards accommodation.

Barriers

To explore the barriers that students with disAbilities and faculty members face in receiving or providing accommodations, several questions were used from the interviews and questionnaires. Questions focused on barriers faced by students within the academic setting and communication barriers that sometimes occur in negotiating accommodations. Questions that focused on accommodations asked about those that have been requested and how they have contributed to students' success.

What are the barriers students with disAbilities face?

Students and Faculty.

To assess the barriers that students with disAbilities face within the post-secondary setting, two interview questions were asked, one from the faculty

questionnaire and one from the student questionnaire. In response to the faculty member question regarding faculty perception of student barriers (see Appendix A: Table 4), the barriers identified most frequently by faculty respondents were aspects of the physical environment:

a lot of barriers at Brock, [are] from the environmental physical structures right on through to the mentally of other students and of other professors, and some of [them are] from ignorance... some from [a] lack of empathy, so I don't know. I don't think of specific barriers, I think there [are] a lot.

Faculty member knowledge and attitudes were also cited as identified by several faculty members as being key:

At the university level . . . one barrier that every student with a disAbility faces, that I've come across is ignorance, and I will, not happily admit to it, because I am not an expert on student needs. . . if you are in my class you are under my care, as far I am concerned, and if you are under my care I want you to get the best possible experience you can get out of my class. I think largely the predominant barrier I would see . . . the vast majority of faculty I encountered really don't know that much about students with disability or don't really care much about teaching or teaching students with disabilities if it has to be delivered in a different way.

I think the university's attitude toward people who need some sort of help has improved a lot recently. At the moment, most of the students I have seen are people with learning disabilities and it's taken, I don't mean sympathetic or

empathetic, but it's taken me some time to learn what sorts of supports these people need and how I can provide those supports.

Faculty members also identified a lack of faculty understanding of what accommodations are available to the students:

one of the barriers they may face is that there is a lot of other faculty members, like me, I think, that don't really know what's it like, don't really know what kind of accommodations we can make, we need to make, don't really understand if Brock is making appropriate accommodations for people, I actually don't know if all the rooms are wheelchair accessible for example. I don't know if all the rooms um, if the screens are visible, if the professors can be heard, if there is audio taping equipment.

Faculty members expressed concern that students with disabilities feel isolated:

There seems to be one or two people who need that sort of support and I think students particularly with learning disabilities feel isolated in the classroom, they are having such a struggle to try and follow what's going on that they don't feel able to talk to their peers and say 'what on earth was he saying here or I didn't understand that' or whatever and also, shy, well all, well most students I should say, almost all students are very shy about sticking their hands up in the class and saying 'what on earth are talking about' and I wish they would.

Table 6

Barriers that faculty members see students with disAbilities facing within University

Cited by 1	Cited by 2-3	Cited by 4-5	Cited by 6+
Rate of Delivery	Policy/University Attitude	Faculty Attitudes	Physical Environment
Time between classes	Not knowing what is available in lecture halls	Faculty not understanding students disAbility	
Student with a disAbility may feel isolated			
Students' emotional state			
Lack of empathy			
Communication			

Interview Question: "What barriers do you see students with disAbilities facing within the university?"

Students.

In a similar barrier question posed to students, the most frequently cited barriers were:

Faculty member not understanding the students' needs:

I haven't actually faced a lot of problems, most professors are really good about it, and they are very understanding and are very helpful. I only ran into one professor in first year who was kind of, I'm not sure whether he was against the idea or he was trying to see if I could do it outside, he was suggesting that I write things in the room with everyone else and then saying that I can have time afterwards in the room if I needed...it is a weird idea because maybe he was trying to pressure me out of doing this extra time thing to, because there is a stigma of sitting around writing while everyone else is still writing

Discriminatory policies and not knowing how the University system works:

I didn't know you could talk to the professor...I didn't know you could explain things and talk to them and ask for more time, things like that, to hand in assignments and things like that.

Being diagnosed with a disability in the post-secondary setting:

I guess my own barrier is I found out I had a learning disability when I was in university, when I was in second year. So there was me coming to terms with the fact that I had a disability, that took a while, 'cause you can't really stop going to school while you figure things out.

Other barriers cited by students included learning adaptive technology, exam times, the stigma of having a disAbility and being accommodated, and physical barriers.

What barriers do students with disAbilities perceive in a post-secondary setting?

Faculty.

In response to the question. ‘What barriers do you see students with disAbilities facing within the University?’ (Table 9) faculty members reported that the university policies and attitudes, physical environment, faculty attitudes and faculty not understanding students’ disAbility related needs were important issues:

I think that one of the barriers they may face is that there is a lot of other faculty members, like me, I think, that don’t really know what’s it like, don’t really know what kind of accommodations we can make, we need to make, don’t really understand if Brock is making appropriate accommodations for people.

Students.

In response to the question: ‘What barriers have you faced during your time at this University?’ individual students reported that being diagnosed with a disability as a major adjustment:

I guess my own barriers is I found out I had a learning disability when I was in University, when I was in second year. So there was coming to terms with the fact that I had a disability, that took a while, ’cause you can’t really stop going to school while you figure things out.

Other barriers included taking notes, physical barriers, discriminatory policies, and accommodation stigma:

I only ran into one professor in first year who was kind of, I'm not sure whether he was against the idea or he was trying to see if I could do it outside, he was suggesting that I write things in the room with everyone else and then saying afterwards in the room if I needed...it is a weird idea because maybe he was trying to pressure me out of doing this extra time things to, because there is a stigma of sitting around writing while everyone else is still writing.

Lack of faculty member support during tests and exams was also identified as problematic :

I have had very few profs come upstairs and ask me if I had any questions during exams. Very few, actually, I think it is about 4 out of, probably like how many profs do you get 16 or 17, have actually come upstairs and asked if I have any questions...that they just sort of think you are off in no man's land.

Thinking about a course that they had completed successfully, students were asked whether they felt they had been prepared to advocate with faculty for their learning needs. Students' ($n = 5$) median rating was 2.0 (range = 2; mode = 1) out of 5, where 5 is 'great difficulty,' suggesting that in this student group there was a vast range of perceived preparedness to advocate for their learning needs with some students obviously feeling ill-prepared to undertake this task.

What types of accommodation experiences do students with disAbilities have in a post-secondary setting?

Students.

When asked what accommodations had been more useful to them (Table 5) individual students identified having a note-taker in class, an alternate location for exams and the use of a computer for exams:

the extra room has been extremely useful for me, 'cause it gives me a chance, it's a lot quieter, I can focus a lot better, I don't get as stressed out . Another useful thing is the computer, because I have a small motor control problem which means that I can't write as fast or for a long period of time...so by using the computer I can do things a little faster and a little less damage to my arm.

They also mentioned the importance of faculty members being aware of their disability:

profs are aware ahead of time about my disabilities because then, sometimes I need to talk to the prof and say, this is part of my problem so what can we work out and that is helpful

Student respondents identified using a variety of accommodations such as having extra time on tests and exams, access to note-takers in classes, isolation and semi-isolation for taking exams, and access to other accommodations not specified were accessed by students.

What barriers do students with disAbilities face in communicating with faculty members?

Students.

Four questions were asked of students regarding communication issues they face with faculty members. Questions addressed topics such as difficulty communicating information to faculty members about one's disAbility (median=3[Range=3; Mode=2]) where 5 is 'great difficulty', about one's specific accommodation needs (median=4[Range=2; Mode=4]) and difficulty requesting signatures for accommodation letters (median=3[Range=3; Mode=1]) with the same indicators. These data suggest that communication is a constant issue faced by student respondents.

What barriers do faculty members face in communicating with students with disAbilities?

Faculty.

To examine the barriers that faculty members face in communicating with students with disAbilities two questions from the faculty member questionnaire were used. Questions focused on topics such as whether faculty members had difficulty communicating about specific accommodations with students who had been unsuccessful in their courses.

What barriers do faculty members encounter in their attempts to accommodate students with special needs?

In response to the interview question "Drawing on your experience, without identifying the student, could you please describe the most unsuccessful accommodation experience that you've dealt with?" faculty members reported that student crisis, not

knowing a student well enough, and not being aware of student needs contributed to unsuccessful accommodation:

You know, I think I have, I think the lack of success sometimes, actually comes because I'm not aware of what kind of supports the student needs and again this applies to any student that I have that if a student will come to me and ask for support I can give it, so if for example a student comes and says, I'm having terrible problems at home or some type of family crisis, I can give an appropriate level of support, I have some students that I know through the grapevine, I know are getting extra assistance or have some need of different types of accommodation but the student has never told me, so I don't want to violate anybody's confidence, I don't want to approach the student and say – you know you look like you need some extra help, so I think in those cases I haven't been as successful as I would like to be because I don't quite understand how I can approach the student, you know and what I can say I can see it and I know, but I can't quite get there with the student.

Another faculty member spoke about a student having unrealistic expectations and a student not making faculty member aware of his/her needs, and students not knowing about or not accessing available services:

I guess that would be [the] student that I mentioned earlier who also was hard of hearing but was disconnected from the information networks and just kind of vanished out of the program, which I think is very sad, I feel, you know is there something more that I could have done, how could I have contributed to that and I didn't. So, I guess the program in general wasn't very accommodating for that

student and there are lots of sort of factors involved with that, not just, um his disability but the disability I think compounded some of the challenges that he faced, which were challenges that lots of our students face but those without disabilities may be more able to get beyond those challenges.

Similarly, in the questionnaire, when faculty members were asked to recall a time when students with disabilities did not do well in one of their classes and consider what contributed to this lack of success, faculty participants identified issues such as limited communication with the student:

No ongoing communication, no attendance (regular) in class, no contact with me or TA during the term. Student informed me of the disabilities after the fact (after the course grades were posted)

Another faculty member commented:

The student was not prepared, did not attend most classes and did not meet the extended deadlines.

Some faculty members felt that some students did not put enough effort into their courses:

Lack of studying, finding the course difficult but not struggling through, not putting enough time into it. A person with a disability often needs to spend more time to achieve the same goal.

In one case, a faculty member was informed about a student's disability at the end of the term making it difficult to accommodate the student's needs:

Last year for example, a student did her 4th year research projects with me but I was not informed of her [disability]– then when we started running into problems it was much more difficult at this point to make the appropriate accommodations.

In the questionnaire, faculty members were asked to identify the degree to which various accommodations were an inconvenience to them. Accommodations that were cited as being inconvenient were; alternate formats (i.e. enlarged materials), and alternate exam locations.

Successful and unsuccessful experiences

In investigating the successful and unsuccessful experiences that faculty and students face in the post-secondary setting, four questions were explored. Research questions focused on faculty member qualities that students with disAbilities find effective in accommodating their needs, the qualities that faculty members perceive to be effective in attaining academic success, and the successful experiences that students and faculty members have within the post-secondary setting.

What kinds of successful accommodation experiences have students with disAbilities had in a post-secondary setting?

Students.

In the interview, when asked to describe their most successful accommodation experience (Appendix A; Table 5), students identified faculty members being empathic towards their needs and faculty members having an open door policy:

I mean that if the prof is there and they have office hours and they are actually in their office hours, I find that the people that are most accommodating to me are the ones that are accommodating to everybody. Like, they are available, open

door policy, they'll listen to anyone I think that's like more of a character trait, 'cause I've had success with professors that are willing to sit down and listen or just talk.

Faculty members' understanding of student needs was also seen as helpful:

So successful means by which they helped me, by actually a lot of them because of my extra time have said, or found ways to get me notes for class time that I may have missed if it was an in-class exam or in-class test or something, like I'm obviously, probably going to miss the majority of the class because I'm going to be taking time and a half or time two, and they are very good about me missing that part of class, like I said making the test stuff get there, get marked as fast as they can, because it does get down to them after.

Conversely, another student identified having no successful accommodation experiences:

Successful. I can give you the worst. I can give you one successful because of persistence, but I can't think of one that is just successful in itself, other than the fact that I'm with the same case manager who understands what I'm going through and can help sometimes with other things that are available and help me work out some of the problems but cannot help me with the things I have identified before in terms of learning.

Students were also asked to identify the degree to which they had found certain accommodations to be useful. They cited semi-isolation on exams, having extra time on exams, and having a note-taker, as the three most useful accommodations.

What kinds of successful accommodation experiences have faculty members had in accommodating students with disAbilities?

Faculty.

In response to the interview question “Drawing on your experience, without identifying the student could you please describe the most successful accommodation experience that you’ve dealt with?” (Appendix A; Table 6) faculty members reported spending extra time with students on tests and assignments:

I can think of two in particular and they are both virtually identical so, both of them were students who required extra time or test taking and in one of the cases, I sent the tests over to SDC and that worked out really well... Another accommodation that I have made um was to give a student extra time just on her own request, that she hadn’t really filed all the right stuff that she needed to file, an I said well this o.k., you come at the same time that the rest of the class is coming and I will set you up in my office and we will give you the appropriate amount of time. I’ve never found that students’ abuse that, they are always really good with that and you know, and in both cases the students did really well.

Faculty members also cited as contributing to student success having support networks within the class, giving alternate assignments, providing students with lecture notes and making provisions in laboratories for students with physical disAbilities:

probably the one lady with the very severe juvenile diabetes, she got around on a scooter but her hands were badly crippled up and um she was very small stature anyway, and she went through chemistry, biology, and ultimately ended up with a biology masters degree and worked as a technician in the biology department for

some years as a research technician, so and she had been told by school counsellors that they didn't expect her to graduate from high school. She came to see Brock along with her parents and the social worker, again, told her you can't do chemistry, and she did and was successful and other than the variable height wheelchair and giving her smaller bottles because she couldn't handle a large bottle of chemicals there wasn't any particular accommodation made.

Consistent with the interview question above, in response to a similar questionnaire item faculty participants cited granting accommodations, providing resources (time, course material and one-to-one assistance) as contributing to student success:

Provided resources (time, course material). Open lines of communication between the student and myself (and the student came to class / or came to see me in my office for help).

Flexibility with due dates, deadlines and course requirements, created a specific learning situation were also identified as being useful:

I tried to assist the student in reaching her potential by creating a "safe" learning environment. I worked with the student in uncovering the best possible way to structure each learning lesson so as to maximize the chance of her reaching her potential.

Having open communication with students was seen as contributing to success;

The student developed good rapport with me, as the course instructor, offering recommendations for how his disAbility could be accommodated, without fear of

reprisal or alienation. The student has reasonable expectations for accommodation, but was not excessively demanding.

Discussion

The focus of the present study was to investigate the perceptions of students with disAbilities and faculty members concerning access to accommodations in a post secondary institution. Both faculty knowledge of disAbilities and approaches to making accommodations for students, as well as student knowledge and skill regarding disAbilities were examined in order to draw conclusions about where appropriate supports are needed. While previous studies have tended to focus primarily on either student (Gadbow, 2002) or faculty knowledge and skills (Hill, 1996), this study examined accommodations for students' disAbilities from a dynamic systemic perspective by including both faculty and student perceptions of factors that contribute to students' academic success. A Dynamic Accommodation Model (Figure 1) was developed for this study, however, the small sample respondent size in the present study precluded testing all aspects of the model. The Dynamic Accommodation Model is a theoretical model that examines the relationship among the knowledge, skills and attitudes that university faculty members and students with disAbilities bring to their interaction in the academic context, in which both groups encounter factors that act as barriers to or facilitators of accommodations on the path to course completion. Understanding how faculty and student knowledge and skills interact was an important component of this study.

Knowledge

In previous studies, faculty members reported having a limited knowledge of disAbilities and the services that were available to address them (Aksamit et al., 1998; Leyser et al., 1988). This self-disclosure has been confirmed by the assessment of faculty understanding of disAbilities undertaken by Kruse et al. (1998). Further, Hill (1994)

notes that important determinants of students' academic success include: (a) faculty members' awareness of the issues that students with disabilities encounter; (b) faculty understanding of students' learning needs and the critical role that accommodations play in meeting them, and; (c) the systemic issues faculty members face in attempting to address the pedagogical needs of students with disabilities. Similar to these findings, the results of the present study suggest that while faculty members felt that they had a good understanding of students' disability related accommodation needs, they did not have enough information regarding the general nature of the students' disabilities. Faculty respondents' ratings also suggest that in successful accommodation experiences they had sufficient information but in unsuccessful accommodation experiences they did not. While no causal relationship can be inferred from these results, they suggest that faculty members' knowledge of students' disabilities may be a factor in students' academic outcomes. It is possible that if faculty members do not have adequate information about students' specific disabilities then they may have greater difficulty understanding student needs and implementing resources appropriately.

As a student with a disability, I have had to deal with the lack of knowledge some faculty members have about my disability. Although my disability (Cerebral Palsy) does not directly impact my ability to learn, some faculty members have misinterpreted my speech impediment as indicating that my mental ability is also affected. Of course this is far from the truth. If it was, I am not sure that I would have progressed as far as I have. This lack of knowledge could contribute to faculty members' attitudes about what students with disabilities are capable of accomplishing.

Skills

Hill (1994) suggests that faculty members must be made aware of students with disAbilities learning needs through sensitivity training and more in-depth training sessions examining student issues. To be successful, adult learners require their needs be treated uniquely and with respect (Foreman, et al. 2001). The current findings indicate that faculty member respondents felt that while they do have a moderate level of skills, they are also interested in improving them. Students reported that the skills they saw faculty members possessing included patience, having a willingness to experiment with different teaching styles and having an understanding of various disAbilities. Based on student reports, faculty workshops could focus on how to provide more variation in the delivery of course content and on developing specific knowledge regarding various disAbilities that may require different of teaching methods. If faculty were provided with opportunities for professional development in this area, both they and their students with disAbilities would benefit.

Attitudes

Faculty members' attitudes have been implicated in students' successful course completion (Leyser et al., 1998). Specifically, a willingness to teach students with disAbilities, a willingness to offer a diverse array of instructional accommodations and faculty members' desire to be available for students who need more personal assistance and support were critical to student success. In the present study two student respondents referred to faculty members appearing to be unconcerned about the accommodation of their needs however it would be interesting to know if this was a genuine lack of engagement or whether the faculty members may have wished to avoid prying or questioning students about their disAbility and its effects on their academic performance.

Similarly, the students in the current study reported that faculty members demonstrated positive attitudes by being understanding, encouraging and empathetic. There were occasions when students reported that they felt that faculty members were disinterested and unconcerned about their needs. It is possible that some faculty members do not recognize that they may be able to provide accommodation for student needs beyond the specifications laid out by services for students with disAbilities. For these reasons faculty may benefit from opportunities to further develop their understanding of disAbilities and what role they play in helping students with disAbilities to be successful.

Barriers and Facilitating Factors

Although institutions and faculty members support the provision of accommodations for students with disAbilities, these students still may face barriers to course completion (Hill, 1996). In the present study, faculty members suggested that issues related to the physical environment, the attitudes of other faculty members and of students themselves, and a lack of understanding of students' disAbilities, both by the faculty members and by the students themselves, were identified as barriers to students' successful course completion. As one faculty member noted, "ignorance [of disability] is problematic" but, in addition, information about how to implement workable teaching strategies for students with disabilities is not promoted by the institution in general." This is a compelling statement in itself, in that it tells us about the barriers faced by faculty members.

In comparison, the barriers to course completion identified by students included a lack of coordination of pragmatic accommodations; issues related to the physical environment of the university, discriminatory university policies and students' not

knowing or having experience with how the post-secondary institution works. All of these issues take time to rectify. As a student with a disAbility, I have seen first hand how barriers within the post-secondary setting can have a significant impact on individual's academic experiences and performance. Physical barriers were often cited by both faculty members and students. Though most would not identify physical barriers as impacting their academic success, for an individual who may rely on things such as elevators to work properly, physical barriers can have a great impact on their education. I face many physical barriers on a daily basis and have seen first hand how they impact a student's academic progress. I can think of two examples with which I have had to deal. The first is if the elevator is not working when I have a meeting with my thesis advisor, I either risk climbing several flights of stairs where I know I could fall or I must find a way to contact my faculty member and have her come down to meet me. This then means spending time either looking for another place to meet or canceling the meeting altogether if a space is not readily available. The second example for me is when I cannot access the space where I store my scooter when I am not on campus. When this happens I can easily spend up to 45 minutes of my time contacting the appropriate people to have access to the space thus possibly missing important appointments or being significantly late for meetings. These are examples of frequent, not isolated, occurrences. I do not feel that I should need to be on campus up to an hour or more before my scheduled meeting times in order to deal with the frustrating physical barriers that impede my daily work. In comparison with other students I spend large amounts of time working through issues of physical barriers, time that I could spend working or socializing like other students.

In his article on the semiotics of accessibility, Mutua (2001) gives an example of a student with a disAbility that he was observing for a micro-ethnographic case study. Through the example we see how, similar to my experiences cited here, the student in Mutua's (2001) work was dictated by what paths and entrances he could use to get to his classes with his wheelchair, not always the most direct route. Other non-disAbled students were free to use other routes to access the building, allowing these students more time to socialize rather than navigating through paths and entrances just to get to the class.

One challenge discussed by both faculty and students pertains to how the institution works. Students with disAbilities reported that understanding how the institution works was a barrier and was time consuming. The institution provides little incentive (e.g., accommodation support or Universal Instructional Design for progress reports) to foster and promote equity in course completion. In order to help students to be successful it is important for them to understand how the institution works. This will continue to be a barrier unless students are given the tools to understand the institution or the institution provides more incentives to faculty members for accommodations.

Successful and unsuccessful accommodation experiences

When describing successful accommodation experiences, students reported interactions with faculty members who were willing to experiment with different teaching styles, were patient, and had some education to facilitate their understanding of various disAbilities that the students may have. The factors that students identified as contributing to course successful completion were faculty members being empathic

toward the student needs, having an open door policy, and the faculty members understanding student needs, as factors that contributed to their success.

Faculty members reported positive accommodation experiences when the students had reasonable expectations and when they had a good rapport with the students. Communication appears to be a key component of ensuring student success. Faculty participants felt that there were various reasons why students were unsuccessful. These included students having little or no communication with their professor, not completing course requirements, not attending or rarely attending class, and not putting enough effort into their course work. Faculty members were often informed of student's disability after the fact, and told that lecture-speed interfered with learning. Some faculty members reported that in unsuccessful accommodation situations, students did not provide sufficient information. If students and faculty members communicated on a regular basis as a requirement these issues could have been addressed early on thus promoting student and faculty success. In positive accommodation situations it would appear that faculty members and students worked together and communicated beyond the information and services provided by student support services.

General barriers that faculty members have identified that students face include difficulty communicating with faculty members, University policy (i.e., attendance policy is not conducive to particular student situations) and faculty attitudes towards accommodating students with disabilities. Students see more individual barriers, such as access to note-taking and issues with exam accommodations. It would seem, therefore, that faculty members perceive more systemic or organizational support types of barriers and students focussed more on immediate individual barriers. This difference in focus

may reflect the fact that faculty members work within and, therefore have more daily contact with the larger institutional structures within the university than do students. For example, a faculty member is considering the needs of 100 or more students at a given time. Students, in comparison, are more individually focused as they attempt to set up appropriate accommodations for themselves across a variety of classes.

Limitations of the Present Research

A methodological limitation of the present research is that the student and faculty respondents were independent so there was no way to compare the perceptions of respondents to the same situation. A stronger design would include triangulated respondent groups that would include faculty members, students and support staff who are interacting with one another on a day-to-day basis. This would allow for a more direct comparison of each group's perception of shared experiences.

A functional limitation of this research arose from the small number of student respondents in both the interview and questionnaire phases of the study. It is difficult to know why so few students responded to the various means used for recruiting. It is unlikely that the low response rate was due to constricted recruiting since a wide range of recruitment techniques were used. There is also the possibility that students may have had recruitment fatigue since the Centre of Students with DisAbilities was engaged in a research project during part of the time that data for this project were being collected. The issues of students being concerned about self-identifying as having a disAbility is certainly a potential deterrent.

Implications and Future Directions

Future research should focus on establishing what types of professional development would be most beneficial for faculty. It would be interesting to determine whether faculty members would find hands-on types of skill development beneficial. A factor in offering this type of training may be the time limitations faced by faculty due to the institution's increasing focus on the need for faculty to be engaged in research activities. It would be interesting to investigate matched student-faculty member samples to examine whether 'unconcerned' faculty members attitudes are linked to more negative student outcomes. The Dynamic Accommodation Model proposed in the introduction to this thesis and the tenets of Eccles et al. (1983) expectancy theory suggests attitudes are integral to the interaction of students with disAbilities and faculty members. Faculty members who have had a lot of positive experience working with students with disAbilities, may have more positive attitudes. However, this, positive attitude may be altered by negative experience with a particular student. For example, students who have had positive accommodation support with prior faculty members will bring this to the interaction with faculty members they encounter subsequently, whereas a student who has had negative experiences may be less likely to approach a faculty member for help.

The qualitative data from the current study help to capture faculty members' own view of their attitudes toward disabilities and how students view faculty members' behaviour. It is important to note that, in general, faculty members appear to feel positively toward their accommodations of students' disAbilities. In this particular sample, faculty members mainly reported accommodation experience with students with learning disAbilities for which post-secondary institutions have well-documented

facilities. Based on the current finding that faculty feel they do not have enough support and resources provided by the institution, further research where the institution provides necessary supports is warranted, For example looking at institutions that are providing necessary supports in examining faculty attitudes about accommodations. It would be interesting to know to what degree institutional support of various kinds accommodations impacts faculty members' attitudes, (e.g., accommodations of students with mental health issues are not well established). There is limited information in the literature that directly addresses attitudes and responses to trying out different and new types of accommodations. New technologies (e.g., simultaneous webcast) may provide increasing opportunities and access to lived time lectures for people who occasionally cannot attend because of disAbility-related issues. One direction for future research may be to identify the degree to which and success of accommodation suggestions made by students with disAbilities.

By identifying areas and barriers that need attention within post-secondary education I am suddenly concerned that people may see me as ungrateful, complaining, and negative. For it is perhaps the construction of an individual with a disAbility that I am responding to: being seen as negative or rocking the boat or complaining is not an unusual occurrence for me. If I was just quiet and grateful for my opportunities I would not be where I am today; a graduate student doing disAbility-based research. There was a time when I was quiet and uncomplaining. In my first year in university I barely spoke, it was remarked that people didn't realize I had a voice. I was scared because when I had spoken out before I had found myself or had been accused of 'causing trouble' so I began to think being quiet was a good thing. I guess I found my voice when I realized that I had

the support of individuals within the system, who were interested in my knowledge and contribution, people who were willing to listen and advocate with me for change.

References

- Accessibility for Ontarians with Disabilities Act 2005, S.O. 2005, c. 11. Government of Ontario. Retrieved February 2008 from http://www.e-laws.gov.on.ca/html/statutes/English/e-laws_statutes_05a11_e.htm
- Aksamit, D., Morris, M., & Leuenberger, J. (1987). Preparation of student services professionals and faculty for serving learning-disabled college students. *Journal of College Student Personnel*, 28, 53-59.
- Americans With Disabilities Act of 1990, Pub. L. No. 101-336 § 2, 104 Stat. 328 (1991).
- Baggett, D. (1994). A study of faculty awareness of students with disabilities. *National Association for Developmental Education*. Washington DC: EDRS
- Baker, D. (1993). Human rights for persons with disabilities. In *Perspectives on Disabilities* (2nd Ed.) Palo Alto, CA: Health Markets Research.
- Bogden, R. & Biklen (1977). Handicapism. *Social Policy*, 2, 14-19.
- Biklen, D. (2000). Constructing inclusion: lessons from critical, disability narratives. *International Journal of Inclusive Education*, 4(4), 337-353.
- Brincerhoff, L.C., Shaw, S.F., & McGuire, J.M. (1993). *Promoting Postsecondary Education for Students with Learning Disabilities*. Austin, Texas: Pro-Ed, Inc.
- Brown, D., Clopton, B. & Tusler, A. (1991). Access in education: assisting students from dependence to independence. *Journal of Postsecondary Education and Disability*, www.ahead.org retrieved November 6th, 2003.

- Burton, F. G., Chen, Y-N, Grover, V., & Stewart, K .A. (1992-1993). An application of expectancy theory for assessing user motivation to utilize an expert system. *Journal of Management Information Systems*, 9(3), 183-199.
- CADSPPE/ACCSEHP (1999) Towards Developing Professional Standards of Service: A Report on Support for Students with Disabilities in Postsecondary Education in Canada. Canadian Association of Disability Service providers in Postsecondary Education. <http://www.cacuss.ca/en/16-publications/details.lasso?pid=327> retrieved July 9th, 2008.
- Carney, K., Ginsberg, S., Lee, L., Li, A., Orr, A., Parks, L., & Schulte, K. (2007). Meeting the needs of students with disabilities in higher education: How well are we doing. *Delta Kappa Gamma Bulletin*, 73, 35-38.
- Christ, T.W. & Stodden, R. (2005). Advantages of developing survey constructs when comparing educational supports offered to students with disabilities in post-secondary education. *Journal of Vocational Rehabilitation*, 22, 23-31.
- Corker M. (2000). Disability Discourse in a Postmodern World. In T. Shakespeare (Ed.) *The disability reader: Social science perspectives*. London: Redwood Books.
- Counsel of Ontario Universities (2002). *The Ontarians with disabilities act, 2001 guidelines for the University sector*. Retrieved May 2003, from http://www.cou.on.ca/publications/briefs_reports/online_pubs/DisabilitiesActGuidelines.pdf.
- Cox, D. & Walsh, R.M. (1998). Questions to consider in policy development for postsecondary students with disabilities. *Journal of Postsecondary Education and Disability*, 13. www.ahead.org retrieved September 9th, 2002.

- DuBois, D.A. (1998). Adult learners with disabilities: a new imperative for adult educators. *New Horizons in Adult Education*, 12, 4-13.
- Eccles, J. S., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., & Midgley, C. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motivation* (pp. 75-146), San Francisco: Freeman.
- Education Act – O. Reg 181/98. Retrieved November 17, 2003, from <http://www.e-laws.gov.on.ca:81/ISYSquery/IRL9FCD.tmp/1/doc>
- Fichten, C.S., Amsel, R. Bourdon, C.V., & Creti, L. (1988). Interaction between college students with a physical disability and their professors. *Journal of Applied Rehabilitation Counseling*, 19, 13-21.
- Fitchen, C.S. (1988). Students with physical disabilities in higher education: Attitudes and beliefs that effect integration. In H.E. Yuker (Ed.), *Attitudes towards persons with disabilities*.(pp. 171-186). New York:Springer.
- Fonosch, G.G., & Schwab, L. O. (1981). Attitudes of selected university faculty members toward disabled students. *Journal of College Student Personnel*, 22, 229-235.
- Fontana, A., & Frey, J.H. (2000). The interview: From structured questions to negotiated text. In N.K. Denzin & Y.S. Lincoln (Eds.), *The handbook of qualitative research* (2nd ed., pp 645-672). Thousand Oaks, CA: Sage.
- Foreman, P., Dempsey, I., Robinson, G., & Manning E. (2001). Charteristics, Academic and Post-university Outcomes of Students with a Disability at the University of Newcastle. *Higher education research and development*, 20, 313-325.

- Fuller, M., Healey, M., Bradley, A., & Hall, T. (2004). Barriers to learning: A systemic study of the experience of disabled students in one university. *Studies in Higher Education, 29*(3), 303-318.
- Gadbow, N.F. (2002). Teaching all learners as if they are special. *New Directions for Adult and Continuing Education, 93*, 51-62.
- Geiger, M. A., & Cooper, E. A. (1996). Using expectancy theory to assess student motivation. *Issues in Accounting Education, 11*(1), 113-114.
- Gilson, S.F. (1996). Students with disabilities: an increasing voice and presence on college campuses. *Journal of Vocational Rehabilitation, 6*, 263-272.
- Greenberg, J., Baron, R. A., Sales, C. A., & Own, F. A. (1996). Behaviour in Organizations: Understanding and managing the human side of work. Ontario: Prentice Hall.
- Hadley, W.M. (2006). L.D. Students' access the higher education: Self-advocacy and support. *Journal of Developmental Education, 30*(2), 10-16.
- Hall, L.M. & Belch, H.A. (2000). Setting the context: Reconsidering the principles of full participation and meaningful access for students with disabilities. *New Directions for Student Services, 91*, 5-17.
- Hahn, H. (1988). The politics of physical differences: disability and discrimination. *Journal of Social Issue, 44*, 39-47.
- Hawke, C.S. (2004). Accommodating students with disabilities. *New Directions in Community Colleges, 125*, 17-27
- Henderson, C. (1992). College freshmen with disabilities: A statistical profile. Washington, DC: American Council on Education, HEATH Resource Center.

- Hill, J.L. (1994). Speaking out: Perceptions of students with disabilities at Canadian Universities regarding institutional policies. *Journal of Postsecondary Education and Disability, 11*. www.ahead.org retrieved September 9th, 2002.
- Hill, J.L. (1996). Speaking out: Perceptions of students with disabilities regarding adequacy of services and willingness of faculty to make accommodations. *Journal of Postsecondary Education and Disability, 12*, 22-43.
- Hong, B.S.S., Ivy, W.F., Gonzalex, H.R., & Ethrensberger, W. (2007). Preparing students for post secondary education. *Teaching Exceptional Children*, Sept/Oct, 32-38.
- Hurtubis Sahlen, C.A. & Lenhmann, J.P. (2006). Requesting accommodations in higher education. *Teaching Exceptional Children, 38*, 22-26
- Iarskaia-Smirnova, E.R., & Romanov, P.V. (2006). The problem of access to a higher Education for handicapped people. *Russian Education and Society, 48*(8), 54-71.
- Jarrow, J. (1993) Beyond Ramps: New Ways of Viewing Access. *New Directions for Student Services, 64*, 5-16.
- Jung, K. E. (2002). Chronic Illness and Educational Equity: The Politics of Visibility. *NWSA Journal, 14*(3), 178-200.
- Kroeger, S. & Schuck, J. (1993). Moving ahead: Issues, recommendations, and conclusions. *New Directions in Student Services, 64*, 103-110
- Leyser, Y, Vogel, S., Wyland, S., & Brulle , A. (1998). Faculty attitudes and practices regarding students with disabilities: Two decades after the implementation of Section 504. *Journal of Postsecondary Education and Disability, 13*.
retrieved September 9th, 2002 from www.ahead.org.

- Lippman, L., & Goldman, I.I. (1973). *Right for education: Anatomy of the Pennsylvania case*, New York: Teachers College Press.
- Lynch, R. T. & Gussel, L. (1996). Disclosure and self-advocacy regarding disability-related needs: Strategies to maximize integration in postsecondary education. *Journal of Counseling and Development*, 74, 352-357.
- Matthew, P.R., Anderson, D.W., & Skolnick, B.D. (1987). Faculty attitude toward accommodations for college students with learning disabilities. *Learning Disabilities Focus*, 3 (1), 46-52.
- Merriam, S.B. (1998). Major types of qualitative research. In S.B. Merriam, *Qualitative research and case study applications in education*. (Rev. ed) San Francisco: CA: Jossey-Bass.
- Minner, S. & Prater, G. (1984). College teachers' expectations of LD students. *Academic Therapy*, 20, 225-229.
- Mutua, N.K. (2001). The semiotics of accessibility and the cultural construction of disability. In L.J. Rogers & B.B. Swadener (Eds.) *Semiotics and disability: interrogating categories of difference* (pp.103-116). New York: State University of New York press.
- Nelson, R.J., Dodd, J.M., & Smith, D.J. (1990). Faculty willingness to accommodate students with learning disabilities: A comparison of *academic divisions*. *Journal of Learning Disabilities*, 23, 185-189.
- Norton, S.M. (1997). Examination accommodations for community college students with learning disabilities: How are they view by faculty and students? *Community College Journal of Research & Practice*, 21, 57-69

- Ontarians with Disabilities Act, 2001 S.O. 2001, C. 32 Government of Ontario. Retrieved May 2003, from http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/01o32_e.htm
- Owen, F. A., Griffiths, D. M., Feldman, M. A., Sales, C. A., & Richards, D. A. (2000). Perceptions of acceptable boundaries by persons with developmental disabilities and their careproviders. *Journal on Developmental Disabilities*, 7, 34-49.
- Poison, C.J., & White, W.J. (2000). Providing services for adults with disabilities: Barriers to Accommodation. *Adult Learning*, 10, 90-99.
- Pumfrey, P.D. (2008). Moving towards inclusion? The first-degree results of students with and without disabilities in higher education in the UK: 1998-2005. *European Journal of Special Education*, 23, 31-46.
- Regulation 274. Revised Regulations of Ontario, 1980 (Special Education Programs and Services under the Education Act as amended by O. Regs. 553/81, 62/82, and 77/86.
- Richard, M.M. (1995). Pathways to success for the college student with ADD accommodations and preferred practices. *Journal of Postsecondary Education and Disability*, 11. Retrieved September 9th, 2002 from www.ahead.org.
- Ryan, D. & McCarthy, M. (Eds.). (1994). *The Student Affairs Guide to the ADA and Disability Issues*. Washington: NASPA.
- Satcher, J. (1992). Community college faculty comfort with providing accommodations for students with learning disabilities. *College Student Journal*, 26, 518-524.

- Shapiro, J.P. (1993). No Pity: People with Disabilities Forging a New Civil Rights Movement. *The Journal of Rehabilitation*, 59, 4-5.
- Vogel, S.A. & Adelman, P.B. (1993). Success for college students with learning disabilities. New York: Springer-Verlag.
- Wilson, K., Getzel, E., & Brown, T. (2000). Enhancing the post-secondary campus climate for students with disabilities. *Journal of Vocational Rehabilitation*, 14, 37-50.

Appendices

Appendix A

Table 1

Skills that students noticed faculty members having that were effective in accommodating their needs

Cited by 1 student	Cited by 2-3 students
Talk with student about course content	Willingness to experiment with different teaching styles
Comfort level of faculty member in respect to their teaching abilities	Patience from the faculty members
	Education → understanding of various disAbilities that the students may have

Interview Question: “As you reflect on your time at Brock what skills did you notice faculty having that were effective in accommodating your needs?”

Table 2

Classroom accommodations identified by students

Accommodation	Median	Range	Mode	n
Note taking				
Access to	1	1	0	5
Use this accommodation	1	1	0	5
Degree of Usefulness	3	3	2	4
Extra time for tests and exams				
Access to	1	1	1	5
Use this accommodation	1	1	1	5
Degree of Usefulness	4.5	4	5	5
Use of a scribe				
Access to	0	0	0	5
Use this accommodation	0	0	0	5
Degree of Usefulness	1	0	1	4
Use of a computer				
Access to	0	1	0	5
Use this accommodation	0	0	0	5
Degree of Usefulness	1	2	1	4

Table 2 (*continued*)

Accommodation	Median	Range	Mode	n
Isolation for exams				
Access to	0	1	0	5
Use this accommodation	0	1	0	5
Degree of Usefulness	2	4	1	5
Alternate Format				
Access to	0	0	0	5
Use this accommodation	0	0	0	5
Degree of Usefulness	1	0	1	5
Other Accommodations**				
Access to	1	1	1	3
Use this accommodation	--	--	--	0
Degree of Usefulness	4	4	4	3
** Accommodations not otherwise specified				

- Note taking (1 = very; 5 = not at all)
- Other accommodations (1 = not at all; 5 = very)

Table 3

Information that would help faculty members better understand students with disabilities

Faculty members		
Cited by 1	Cited by 2-3	Cited by 4-5
Sharing accommodation experiences with other Faculty Members	Training in Universal Instructional Design	Workshops about students with visible and invisible disAbilities
Learning from those with disabilities	Having on-line resources	
Offer incentives for Faculty to accommodate students with disabilities	Booklet with information about teaching students with disabilities	
	Basic awareness and sensitivity training ie. simulations	

Note: Interview Question: "What information as a faculty member would help you to better understand students with disabilities?"

Table 4

Barriers that faculty members see students with disabilities facing within University

Cited by 1	Cited by 2-3	Cited by 4-5	Cited by 6+
Rate of Delivery	Policy/University	Faculty Attitudes	Physical
	Attitude		Environment
Time between classes	Not knowing what is	Faculty not	
	available in lecture	understand	
	halls	students	
		disAbility	
Student with a			
disability may feel			
isolated			
Student emotional			
state			
Lack of empathy			
Communication			

Interview Question: "What barriers do you see students with disabilities facing within the university?"

Table 5

Successful accommodation experiences that students have had

Cited by 1 student	Cited by 2-3 students
Faculty member understand student accommodation needs	Faculty member was empathetic towards students needs
Faculty member who kept their office hours enabling the Student to receive extra help	
Faculty member had an “open door policy”	
Having a computer with adaptive technology	
Faculty member provided student with extra time for tests, exams and assignments	

Note: Interview Question: “Without identifying anyone, please describe the most successful accommodation experience you have had?”

Table 6

Unsuccessful accommodation experiences that faculty members have dealt with students

Cited by 1 student	Cited by 2-3 students
Misinterpretation of faculty suggestions/comments	Student crisis
Student having unrealistic expectations	Not knowing student well enough
Student not making faculty member aware of their needs	Not aware of student needs
Student not attending classes	
Student not understanding material	

Note: Interview Question: "Drawing on your experience, without identifying the student could you please describe the most unsuccessful accommodation experience that you've dealt with?"

Appendix B:

Interview questions (students)

- What barriers have you faced during your time at this university?
- Which accommodations have been useful to you?
- Which accommodations are ineffective for you?
- Which accommodations could be useful if they were in place?
- What barriers do you face in communicating with faculty members?
- As you reflect on your experience at Brock, what skills, knowledge, and/or attitudes did you notice in faculty members that were the most effective at accommodating your needs? (Please do not identify anyone specifically)
- What are the issues you wish faculty members had more information about regarding disabilities?
- What do you think would be the most effective ways to provide this information?
- Without identifying anyone, please describe the most successful and most unsuccessful accommodation experiences you have had? What made these successful/unsuccessful?
- What advice would you give to a first year student with a disability/faculty member in terms of facilitating accommodation?

Appendix C:

Interview questions (faculty members)

- Please describe what you have done to accommodate students with disabilities that you think was most effective in your classes.
- What barriers do you see students with disabilities facing in this university?
- What accommodations are available to students with disabilities?
- Which accommodations do you feel are effective, and which do you feel are not effective?
- What information/resources/training as a faculty member would help in your understanding of students with disabilities?
- Without identifying anyone, please describe the most successful and most unsuccessful accommodation experiences you have had? What made these successful/unsuccessful?
- What advice would you give to a first year student with a disability/faculty member in terms of facilitating accommodation?

Probing questions for interviews for faculty members and students

- Can you tell me more about that?
- Can you give me an example of that?
- Can you describe a situation in which this issue arose? (Please do not identify anyone)
- Can you describe how you think this could be remedied?

Appendix D:
Student Questionnaire

ID : _____

Date Questionnaire Completed _____

Bridging the Gap: Student Questionnaire

The purpose of the first few questions are to provide an overall description of students who take part in this research survey. The remaining questions focus on experiences of disAbility within this particular post-secondary education setting, and those factors that you believe would improve your educational experience.

A) Please answer the following questions about yourself:

Gender: ☐ Male ☐ Female
(Please check one)

Year of Current Program: _____

Faculty of: ☐ Applied Health Sciences
☐ Business
☐ Education
☐ Humanities
☐ Mathematics and Science
☐ Social Sciences
☐ Graduate Studies
☐ Undeclared

B) Please answer the following questions as they pertain to your experiences as a student with a disAbility at Brock University:

1. Please indicate which category or categories your disAbility falls under. Check all that apply:
 - ☐ physical (e.g. mobility issues)
 - ☐ medical (e.g. diabetes)
 - ☐ sensory (e.g. visual/hearing)
 - ☐ mental health (e.g. anxiety)
 - ☐ learning (e.g. sensory integration)

2. When were you diagnosed with your disAbility? If you have more than one disAbility please check all that apply:
 - ☐ birth to 5 years of age
 - ☐ elementary school
 - ☐ high school
 - ☐ college/technical school/other university
 - ☐ current post-secondary institution
 - ☐ other: _____ (please specify)

3. Please think about a time when you were accommodated as a student with a disAbility in your class, and you completed the course successfully.

i) What did you do that contributed to your success?

ii) Did you feel that you had enough information about your needs as a student?

1	2	3	4	5
not really				very much so

iii) To what degree did you experience difficulty communicating with the professor about the specific details of your accommodation needs?

1	2	3	4	5
no difficulty				great difficulty

iv) What did you learn from this interaction with your professor that changed how you participate in your classes?

4. Please think about a time when you were accommodated, and you were not successful in your course:

i) What factors contributed to failure in the course?

ii) Did you feel that you had enough information about your needs as a student?

1	2	3	4	5
not really				very much so

iii) To what degree did you experience difficulty communicating with the professor about the specific details of your accommodation needs?

1	2	3	4	5
no difficulty				great difficulty

iv) How important is accommodation to your career success?

1	2	3	4	5
not at all				very important

5. For each of the items in the following list of accommodations for students with disabilities, please identify: a) all of the accommodations you have access to; b) if you currently use this accommodation; and c) the degree to which you find this accommodation useful:

Classroom accommodation

Note Taking (e.g. having another student take notes for a student with a disability)

Access to:	___	yes	___	no	
Use this accommodation:	___	yes	___	no	
Degree of Usefulness:	1	2	3	4	5
	very useful			not at all useful	

Exam accommodations

Extra Time (e.g. time and a half)

Access to:	___	yes	___	no	
Use this accommodation:	___	yes	___	no	
Degree of Usefulness:	1	2	3	4	5
	very useful			not at all useful	

Use of scribe/computer (e.g. for a motor disability)

Access to:	___	yes	___	no	
Use this accommodation:	___	yes	___	no	
Degree of Usefulness:	1	2	3	4	5
	very useful			not at all useful	

Isolation/semi-isolation (e.g. writing exam alone or with a small group)

Access to:	___	yes	___	no
Use this accommodation:	___	yes	___	no

Degree of Usefulness:

	1	2	3	4	5
	very useful				not at all useful

Alternate format (e.g. large print for a visual disAbility)

Access to: ☐ yes ☒ no

Use this accommodation: ☐ yes ☐ no

Degree of Usefulness:

	1	2	3	4	5
	very useful				not at all useful

Other (please describe other accommodations you have used): _____

Degree of Usefulness:

	1	2	3	4	5
	very useful				not at all useful

6. In your experience, to what degree do you think these accommodations met your educational needs (please circle)

Classroom accommodation

Note Taking (e.g. having another student take notes for a student with a disAbility)

1 2 3 4 5
Not at all Completely

Exam accommodations

Extra Time (e.g. time and a half)

1 2 3 4 5
Not at all Completely

Use of scribe/computer (e.g. for a motor disAbility)

1 2 3 4 5
Not at all Completely

Isolation/semi-isolation (e.g. writing exam alone or with a small group)

1 2 3 4 5
Not at all Completely

Alternate format (e.g. large print for a visual disAbility)

1 2 3 4 5
Not at all Completely

Other (please describe other accommodations you have used): _____

1 2 3 4 5
Not at all Completely

7. To what degree do you feel you understand how your disAbility impacts your education (please circle)?

1 2 3 4 5
Not at all Completely

8. How would you rate your knowledge of your disability as it applies to you in a post-secondary setting (please circle)?

1 2 3 4 5
Not at all Completely

9. How would you rate your skills related to dealing with your disability in a post-secondary setting (please circle)?

1 2 3 4 5
No skills Extensive skills

10. How would you rate your attitude related to your disability as it applies in a post-secondary setting (please circle)?

1 2 3 4 5
Negative Positive
Attitude Attitude

11. To what degree do you experience difficulty communicating information regarding your disability to faculty members (please circle)?

1 2 3 4 5
No difficulty Great difficulty

12. To what degree do you experience difficulty communicating specific details regarding your accommodation needs to faculty members (please circle)?

1 2 3 4 5
No difficulty Great difficulty

13. To what degree do you experience difficulty requesting signatures for accommodation letters from faculty members (please circle)?

1 2 3 4 5
No difficulty Great difficulty

14. It is in your best educational interest to get to know the faculty member who is teaching you (please circle)?

1 2 3 4 5
Not really Very much so

15. Please rate the degree to which you believe faculty members are willing to support your accommodations (please circle)?

1 2 3 4 5
Not all all Very much so

16. Do you wish faculty members had more knowledge regarding your disability (please circle)?

1 2 3 4 5
Not really Very much so

17. Do you wish faculty members had greater skills regarding disAbilities in the educational setting to foster academic success (please circle)?

1 2 3 4 5
Not really Very much so

18. Please list the skills you wish faculty members possessed:

19. Please rate your impression of faculty members' attitudes toward students' accommodation needs (please circle)?

1 2 3 4 5
Mostly negative Mostly positive

20. To what degree do you think a support group for students with disAbilities would foster academic success (please circle)?

1	2	3	4	5
Not really			Very much so	

21. To what degree do you think faculty members would benefit from:

Having more information regarding disAbilities	1	2	3	4	5
	No benefit			Extreme benefit	

Workshops/ training	1	2	3	4	5
	No benefit			Extreme benefit	

Pamphlets	1	2	3	4	5
	No benefit			Extreme benefit	

Hands-on experience/ Simulation	1	2	3	4	5
	No benefit			Extreme benefit	

22. Additional information/comments:

Appendix E:

Date Questionnaire Completed: _____
Bridging the Gap Faculty Questionnaire

The purpose of the first few questions is to provide an overall description of faculty members who take part in this research survey. The remaining questions focus on experiences of disAbility within this particular post-secondary education setting and those factors that you believe would improve educational experiences.

Please note that at the end of this questionnaire space is provided for you to add additional information or provide further comment.

A. Please answer the following questions about yourself:

Gender: Male Female
 (please circle)

Number of years of experience you have as a faculty member in a postsecondary setting:

Faculty of: Applied Health Science _____
 Business _____
 Education _____
 Humanities _____
 Mathematics & Science _____
 Social Sciences _____

B. Please answer the following questions as they pertain to your experience as a faculty member at Brock University:

1. In your experience what is the predominant type of disAbility for which students request accommodation? Please check all that apply.

- _____ physical (e.g., mobility issues)
- _____ medical (e.g., diabetes)
- _____ sensory (e.g., visual/hearing)
- _____ mental health (e.g., anxiety)
- _____ learning (e.g., reading, written expression)

2. Please think about a time when you accommodated a student with a disAbility in your class and the student completed the course successfully and answer the following.

a) What did you do that contributed to the student's success?

b) Do you feel you have a good understanding of students' disAbility related needs?

1

2

3

4

5

Not really

Very much so

c) Do you feel students are prepared to advocate for their learning needs with faculty?

1

2

3

4

5

Not really

Very much so

d) Did your interaction with students change how you approached your classroom and class participation?

3) Please think about a time when you tried to accommodate a student with a disAbility and the student was not successful in your course and answer the following?

a) What factors contributed to the student's failure?

b) Do you feel you had enough information about the needs of this student?

1	2	3	4	5
Not really			Very much so	

c) To what degree did you experience difficulty communicating with this student about the specific details of her/his accommodation needs?

1	2	3	4	5
No difficulty			Great difficulty	

d) How important is accommodation of students with disAbilities to your academic career success?

1	2	3	4	5
Not at all			Very important	

4. For each of the items in the following list of classroom accommodations for students with disAbilities please identify (please circle):

a) whether you have had a student in the past five years who has requested the identified accommodation; b) the degree to which the accommodation benefited the student; c) the degree to which the accommodation was an inconvenience to you as an instructor.

a) Accommodation Requested	b) Degree to which this benefits students	c) Degree of inconvenience to you
-------------------------------	--	--------------------------------------

Classroom accommodations

Note Taking

Yes/No	1____2____3____4____5	1____2____3____4____5
(e.g., having another student take notes for student with disAbilities)	Not at all Very	Not at all Very

Yes/No	1____2____3____4____5	1____2____3____4____5
Alternate Format (e.g., large print for visual disAbility)	Not at all Very	Not at all Very

Exam accommodations

Yes/No	1____2____3____4____5	1____2____3____4____5
Alternate Exam Location (e.g., writing exam alone or in a small group)	Not at all Very	Not at all Very

Other (please describe other accommodations you have used):

	1____2____3____4____5	1____2____3____4____5
	Not at all Very	Not at all Very

5. In your experience to what degree to you think these accommodation meet the educational needs of students with disAbilities (please circle)?

Classroom accommodations

Note Taking Yes/No
(e.g., having another student
take notes for student with
disAbilities)

1____2____3____4____5
Not at all Very Not at all Very

Alternate Format Yes/No
(e.g., large print for visual
disAbility)

1____2____3____4____5
Not at all Very Not at all Very

Exam accommodations

Alternate Exam Location Yes/No
(e.g., writing exam alone or
in a small group)

1____2____3____4____5
Not at all Very Not at all Very

Other (please describe other accommodations you have used):

1____2____3____4____5
Not at all Very Not at all Very

- | | | | | |
|------------|---|---|---|------------|
| 1 | 2 | 3 | 4 | 5 |
| Not at all | | | | Completely |

- | | | | | |
|--------------|---|---|---|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| No knowledge | | | | Extensive knowledge |

- | 1 | 2 | 3 | 4 | 5 |
|-----------|---|---|---|------------------|
| No skills | | | | Extensive skills |

- | | | | | |
|------------|---|---|---|--------------|
| 1 | 2 | 3 | 4 | 5 |
| Not really | | | | Very much so |

- 1 2 3 4 5
Not willing Very willing

- 1 2 3 4 5
Not really Very much so

- 1 2 3 4 5
Not really Very much so

13. Please rate your impression of students' attitudes toward accommodations

1 2 3 4 5
Mostly negative Mostly positive

14. Please rate your impression of the attitudes of faculty members as a whole toward accommodations?

1 2 3 4 5
Mostly negative Mostly positive

15. To what degree do you think having support from other faculty members regarding use of accommodations for students with disAbilities would foster your growth as a faculty member?

1 2 3 4 5
Not at all Very much so

16. To what degree do you think you would benefit from the following:

Having more information Regarding disAbilities

1 _____ 2 _____ 3 _____ 4 _____ 5
Not at all _____ Very much

Workshop/training

1 _____ 2 _____ 3 _____ 4 _____ 5
Not at all _____ Very much

Pamphlets

1 _____ 2 _____ 3 _____ 4 _____ 5
Not at all Very much

Hands on experience/ simulation

1 _____ 2 _____ 3 _____ 4 _____ 5
Not at all _____ Very much

Further information/comments:

Appendix F

CONSENT FORM STUDENT QUESTIONNAIRE

This project has been reviewed by, and received ethics clearance through the office of Research Ethics Board. (File #04-199)

Title of Research Project: Bridging the gap between post-secondary students with disabilities and faculty members with their perceptions of access and accommodation

Date: September 2006 – January 2007

This study is being conducted by Graduate Student, Krystine Donato (kdonato@cogeco.ca) under the supervision of Dr. Frances Owen (fowen@spartan.ac.brocku.ca) and Dr. Dorothy Griffiths (griffith@brocku.ca) of the Child and Youth Studies Department and Dr. Maureen Connolly of the Department of Physical Education and Kinesiology (mconnoll@brocku.ca) and Dr. Carol Sales (csales@brocku.ca) Department of Organizational Behavior, Human Resources, Entrepreneurship & Ethnics.

The purpose of this research is to explore issues related to the accommodation of students with disabilities at Brock University. Issues explored by students will include your experience with accommodations that you have received at Brock University, what you, as a student, would like faculty members to know to assist students with disabilities effectively and what recommendations you have regarding ways in which more effective accommodations can be achieved. Faculty will also be asked to complete a version of the questionnaire.

You have volunteered to participate for approximately a 30 minutes to complete a questionnaire regarding issues of accommodation for students with disabilities. The questions will ask about issues you may face at the University regarding your academic experiences. Some questions that you may be asked include:

- How would you rate your knowledge of your disAbility as it applies to you in a post-secondary setting?

You may withdraw from this study at any time without penalty by advising the researcher of your decision. We want you to be aware of the possible risks/side effects associated with participation in this research. Although the risks are minimal, you may develop psychological or emotional risks associated with discussing issues surrounding your experiences at Brock University. In the event that you develop any of these reactions, or are concerned that you may, please contact the researcher, Krystine Donato, at (kdonato@cogeco.ca) or her supervisor, Frances Owen, (fowen@brocku.ca).

You may not benefit personally from your participation in this study. However, the information obtained from this research may assist in the education of faculty members regarding accommodations for students with disabilities. The researcher will keep information about you as confidential as possible, but complete confidentiality cannot be guaranteed. On rare occasions, research records have been subpoenaed by a court. In addition, significant threats of harm to self or others, and disclosure of abuse of minors must be reported to the appropriate authorities for intervention.

All information collected from participants in this study will be aggregated. Thus, your name will not appear in any report, publication or presentation resulting from this study. The data, with identifying information removed, will be retained for 1 year after the completion of the study and will be securely stored in a locked filing cabinet in the researchers' home.

As this research project is part of a Master's thesis, the completed report will be available in August, 2007. In addition, the results of this research will be shared with the Centre for Teaching, Learning and Educational Technologies and the Student Development Centre, Services for Students with DisAbilities. The results may also be included in presentations and publications. Please contact the researcher, Krystine Donato (kdonato@cogeco.ca) if you would like to receive a summary of the research results.

In the event you have any questions or concerns about your participation in this study, please contact the Research Ethics Officer at 905-688-5550 ext. 3035.

I, _____, have read and understood the purpose of this study on
(print name)

_____, 2006.
(date)

(signature)

(Witness)

(Date)

**PARTICIPANTS ARE REMINDED TO KEEP A COPY OF THIS CONSENT
FORM FOR THERE OWN RECORDS.**

Appendix G

CONSENT FORM **FACULTY MEMBER QUESTIONNAIRE**

This project has been reviewed by, and received ethics clearance through the office of Research Ethics Board. (File # 04-199)

Title of Research Project: Bridging the gap between post-secondary students with disabilities and faculty members with their perceptions of access and accommodation

Date: September 2006 – January 2007

This study is being conducted by Graduate Student, Krystine Donato (kdonato@cogeco.ca) under the supervision of Dr. Frances Owen (fowen@spartan.ac.brocku.ca) and Dr. Dorothy Griffiths (griffith@brocku.ca) of the Child and Youth Studies Department and Dr. Maureen Connolly of the Department of Physical Education and Kinesiology (mconnoll@brocku.ca)) and Dr. Carol Sales (csales@brocku.ca) Department of Organizational Behaviour, Human Resources, Entrepreneurship & Ethnics.

The purpose of this research is to explore issues related to the accommodation of students with disabilities at Brock University. Issues explored by faculty members will include your experience with accommodation of students with disabilities at Brock University, what you, as a faculty member, would like to know to assist students with disabilities effectively and what recommendations you have regarding ways in which more effective accommodations can be achieved. Students will also be asked to complete a version of the questionnaire.

You have volunteered to participate for approximately 30 minutes to complete a questionnaire regarding issues of accommodation for faculty members. The questions will ask about issues you may face at the University regarding your academic experiences. Some questions that you may be asked include:

How would you rate your knowledge of disability as it applies in a post-secondary setting?

The completed questionnaires will be secured in a locked filing cabinet. The raw data will be kept for one year at which time paper matter will be shredded.

You may withdraw from this study at any time without penalty by advising the researcher of your decision. We want you to be aware of the possible risks/side effects associated with participation in this research. Although the risks are minimal, you may develop psychological or emotional risks associated with discussing issues surrounding teaching style and experiences. In the event that you develop any of these reactions, or are

concerned that you may, please contact the researcher, Krystine Donato, at (kdonato@cogeco.ca) or her supervisor, Frances Owen, (fowen@brocku.ca).

You may not benefit personally from your participation in this study. However, the information obtained from this research may assist in the education of faculty members regarding accommodations for students with disabilities. The researcher will keep information about you as confidential as possible, but complete confidentiality cannot be guaranteed. On rare occasions, research records have been subpoenaed by a court. In addition, significant threats of harm to self or others, and disclosure of abuse of minors must be reported to the appropriate authorities for intervention.

All information collected from participants in this study will be aggregated. Thus, your name will not appear in any report, publication or presentation resulting from this study. The data, with identifying information removed, will be retained for 1 year after the completion of the study and will be securely stored in a locked filing cabinet in the researchers' home.

As this research project is part of a Master's thesis, the completed report will be available in August, 2007. In addition, the results of this research will be shared with the Centre for Teaching, Learning and Educational Technologies and the Student Development Centre, Services for Students with DisAbilities. The results may also be in presentations and publications. Please contact the researcher, Krystine Donato (kdonato@cogeco.ca) if you would like to receive a summary of the research results.

In the event you have any questions or concerns about your participation in this study, please contact the Research Ethics Officer at 905-688-5550 ext. 3035.

I, _____, have read and understood the purpose of this study.
(print name)

_____, 2006.
(date)

(signature)

(Witness)

(Date)

PARTICIPANTS ARE REMINDED TO KEEP A COPY OF THIS CONSENT FORM FOR THEIR OWN RECORDS.

Appendix G:

INFORMATION LETTER FACULTY MEMBER QUESTIONNAIRE

This project has been reviewed by, and received ethics clearance through the office of Research Ethics Board. (File # 04-199)

Title of Research Project: Bridging the gap between post-secondary students with disabilities and faculty members with their perceptions of access and accommodation

Date: September 2006 – January 2007

This study is being conducted by Graduate Student, Krystine Donato (kdonato@cogeco.ca) under the supervision of Dr. Frances Owen (fowen@spartan.ac.brocku.ca) and Dr. Dorothy Griffiths (griffith@brocku.ca) of the Child and Youth Studies Department and Dr. Maureen Connolly of the Department of Physical Education and Kinesiology (mconnoll@brocku.ca)) and Dr. Carol Sales (csales@brocku.ca) Department of Organizational Behavior, Human Resources, Entrepreneurship & Ethnicities.

The purpose of this research is to explore issues related to the accommodation of students with disabilities at Brock University. Issues explored by faculty members will include your experience with accommodation of students with disabilities at Brock University, what you, as a faculty member, would like to know to assist students with disabilities effectively and what recommendations you have regarding ways in which more effective accommodations can be achieved. Students will also be asked to complete a version of the questionnaire.

If you chose to participate in this research project it will take approximately 30 minutes to complete a questionnaire regarding issues of accommodation for faculty members. The questions will ask about issues you may face at the University regarding your academic experiences. Some questions that you may be asked include:

- How would you rate your knowledge of disability as it applies in a post-secondary setting?

The completed questionnaires will be secured in a locked filing cabinet. The raw data will be kept for one year at which time paper matter will be shredded.

You may withdraw from this study at any time without penalty by advising the researcher of your decision. We want you to be aware of the possible risks/side effects associated with participation in this research. Although the risks are minimal, you may develop psychological or emotional risks associated with discussing issues surrounding teaching style and experiences. In the event that you develop any of these reactions, or are

concerned that you may, please contact the researcher, Krystine Donato, at (kdonato@cogeco.ca) or her supervisor, Frances Owen, (fowen@brocku.ca).

You may not benefit personally from your participation in this study. However, the information obtained from this research may assist in the education of faculty members regarding accommodations for students with disabilities. The researcher will keep information about you as confidential as possible, but complete confidentiality cannot be guaranteed. On rare occasions, research records have been subpoenaed by a court. In addition, significant threats of harm to self or others, and disclosure of abuse of minors must be reported to the appropriate authorities for intervention.

All information collected from participants in this study will be aggregated. Thus, your name will not appear in any report, publication or presentation resulting from this study. The data, with identifying information removed, will be retained for 1 year after the completion of the study and will be securely stored in a locked filing cabinet in the researchers' home.

As this research project is part of a Master's thesis, the completed report will be available in August, 2007. In addition, the results of this research will be shared with the Centre for Teaching, Learning and Educational Technologies and the Student Development Centre, Services for Students with DisAbilities. The results may also be in presentations and publications. Please contact the researcher, Krystine Donato (kdonato@cogeco.ca) if you would like to receive a summary of the research results.

In the event you have any questions or concerns about your participation in this study, please contact the Research Ethics Officer at 905-688-5550 ext. 3035.

**PARTICIPANTS ARE REMINDED TO KEEP A COPY OF THE ENCLOSED
CONSENT FORM FOR THEIR OWN RECORDS.**

Please return completed questionnaire in the manila envelope and the consent form in the white envelope via inter-office mail to:

Krystine Donato
Department of Child & Youth Studies
Brock University

