

FACILITATORS AND OBSTACLES TO SUCCESS FOR STUDENTS WITH DISABILITIES

In North America, between 5 and 11% of students at postsecondary level in North America have one or more handicaps. These are the findings of a Pan-Canadian study carried out by our team. The research shows that almost all Canadian postsecondary institutions have handicapped students enrolled; that only one-third to one-half of students with disabilities are registered for services available for the handicapped at their college or university; and lastly, that there is a higher percentage of handicapped students enrolled in Canadian colleges (including cégeps) than in universities (3.74% versus 1.62%¹).

Québec has approximately ten times fewer students with disabilities enrolled at postsecondary level than all other provinces: 0.5% versus 5.5% for the remainder of the country (Fichten et al., 2003). These studies were recently reproduced for cégeps in 2004 (Fichten, Amsel, Barile, Fiset, Havel, Huard, James, Jorgensen, Juhel, Lamb, Landry and Tétreault, 2004). The latest studies also showed that these results cannot be explained exclusively by the lack of identification of learning disorders in Québec.

Given the small number of students with disabilities who reach postsecondary level in Québec, it is essential to ensure they have an environment that is as supportive as possible.

THE CONCEPT OF HANDICAP

In the Québec school system a student is considered handicapped if he is blind or has a visual deficiency, is deaf or has a hearing deficiency, has limited mobility or neuromuscular limitations, or if he has a neurological, medical, or psychiatric problem that interferes with his studies. More recently and under certain conditions, students with learning disorders such as dyslexia are also considered handicapped.

Fougeyrollas, Lippel, St-Onge, Gervais, Boucher, Bernard and Lavoie (1999) in their PPH model (Processus de production du handicap) point out that a “handicap situation”, or reduced ability to perform daily activities, results from the interaction between individual factors (the deficiency or problem) and the environment (consisting of obstacles and facilitators). Based on this model, if the barriers are eliminated, students no longer experience “handicap situations” but rather situations of “social participation”.

¹ Fichten, Asuncion, Barile, Robillard, Fossey and Lamb, 2003; Fichten, Barile, Robillard, Fossey, Asuncion, Généreux, Judd and Guimont, 2000.



(From top to bottom)
MAI N. NGUYEN
Adapttech Research Network
Université de Montréal
CATHERINE S. FICHTEN
Adapttech Research Network
Dawson College, McGill University



(From top to bottom)
MARIA BARILE
Adapttech Research Network
JO ANN LÉVESQUE
McGill University

WHY WE UNDERTOOK THIS STUDY

Given the small number of students with disabilities who reach postsecondary level in Québec, it is essential to ensure they have an environment that is as supportive as possible. Few studies have dealt with the needs of cégep students with disabilities. And yet, their numbers are growing (Bouchard and Veillette, 2005; Tremblay and Le May, 2005). It is important that their present situation in schools be looked into to identify intervention paths for the people involved in their academic success, that is, their professors and advisers in adaptation services for the handicapped.

By removing barriers and introducing conditions that are more favourable for their success, we can ensure greater access to higher education and help them succeed in their studies. The results of this research will allow us to provide answers to the following questions:

- According to handicapped students, what are the factors that make their studies easier or harder?
- What are the differences and the similarities between students with handicaps and those without?
- What can cégeps do to improve the quality of life and graduation rates for handicapped students?



► PARTICIPANTS

Dawson College asked all students with disabilities who were registered with Adaptation services for the handicapped to complete a questionnaire. Students without handicaps were also recruited as they waited in line at the school store or to register for identity cards and lockers. Recruitment was carried out during the first two weeks of courses, when there are many line-ups.

[...] the most frequently mentioned handicaps related to medical and mental problems followed by visual, auditory, and motor deficiencies.

The breakdown for the 213 Dawson College students who completed the questionnaire is as follows:

- 70 handicapped students (42 women and 28 men);
- 143 students without handicaps (98 women and 45 men).

Details of methods used are available in the report by Fichten, Jorgensen, Havel, Barile, Alapin, Fiset, Guimont, Juhel, James, Lamb and Nguyen (2005).

Characteristics of handicapped students

The majority of handicapped students have only one handicap (approximately 60%), almost one third has two (32%) and the remainder have 3 handicaps or more (8%). As the following list shows, the most frequently mentioned handicaps relate to medical and mental problems followed by visual, auditory, and motor deficiencies. It should be noted that even though we excluded all students who indicated they only had a learning disorder and/or attention

deficit disorder, 31% of handicapped students questioned, said they had one of these disorders. We therefore retained the latter in our analyses so that the other reported handicaps would not be overlooked.

Student handicaps and disorders fall under various categories:

• Medical problems/physical health (ex: diabetes)	34%
• Mental health problems (ex: depression)	34%
• Visual impairment	16%
• Hearing impairment	8%
• Motor deficiency (ex: use of a cane)	7%
• Functional limitations in hands/arms	5%
• Deafness	4%
• Speech difficulties/communication	4%
• Blindness	1%
• Use of a wheelchair	1%
• Other	11%

MEASUREMENT TOOL

The questionnaire contained the following two open questions: "What factors facilitated your studies at cégep?" and "What obstacles made your cégep studies more difficult?".

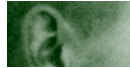
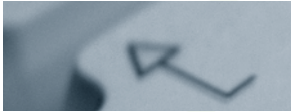
Classification of answers

A handbook containing sixty categories of facilitators and obstacles was prepared. Here are a few examples: Adaptation services for handicapped students; the cégep environment; professors; finances ... Each category could be considered a facilitator or an obstacle, depending on the student's situation. For example, when asked "What factors facilitated your studies at cégep?", if a student indicated that his parents paid his tuition fees and school books, his reply would be classified under the "finances" category as a facilitator.

On the contrary, if the student is solely responsible for his school expenditures, his answer would be classified under "finances" as an obstacle. Each answer was classified according to context.

► STUDY RESULTS

Data on handicapped students was compared to data on students without handicaps to see if needs and difficulties of the two groups were similar. Let us emphasize that several factors relative to disabilities are not applicable to students without handicaps, more specifically the adaptation services (interpreters, private examination rooms, note takers, etc.).



FACILITATORS

Approximately half the facilitators mentioned most frequently by handicapped students were not handicap related and students without a handicap also mentioned these. For example, some of the facilitators identified were: Professors who are receptive to course adjustments, the cégep environment, the availability and accessibility of computer technologies (computers and adaptive software), the availability of support and assistance at the cégep and the learning centre at Dawson College (study and writing techniques and tutors available).

Handicapped students

The various disability-related services for handicapped students provide the most important facilitators. Among these, the most impressive are the general adaptation services for the handicapped as well as specific services: Pre-registration (handicapped students can register in advance for courses); a private examination room to minimize noise disturbance; additional time to complete the examination or the work; note takers and lastly, policies that allow handicapped students to be assigned a reduced workload (decreased number of courses per session) yet maintain their full-time status as students.

Students without handicaps

Facilitators characteristic of students without handicaps are: Friends, library resources, time management, a favourable financial situation, the possibility of choosing their schedule and the presence of a large variety of course choices that match their interests.

Approximately half the facilitators mentioned most frequently by handicapped students were not handicap related and these were also mentioned by students without a handicap.

OBSTACLES

Obstacles are generally the same for all students. In the first place, both groups identified professors who lack teaching skills. This was followed by course workload (considered too heavy), the level of course difficulty and inadequate schedules (courses that are too long; courses that begin too early in the day).

Handicapped students

For handicapped students, time management (procrastination and lack of motivation) is seen as a significant obstacle, in addition to the difficulties they experience as a result of their handicap, disorder, or health issue.

Students without handicaps

These students identified financial difficulties and the need to have a job during the academic year (limiting their study time) as obstacles that hinder their success.

They also included language barriers: Professors with heavy accents and a lack of fluency in the language of instruction hinder their course comprehension.

The following tables (1 and 2) list the facilitators and obstacles for students with and without handicaps and their respective percentages.

Tableau 1

Key facilitators

Students with handicaps

Adaptation services for the handicapped:	
• General	33%
• Pre-registration	20%
Good professors	20%
Adaptation services for the handicapped:	
• Private examination room	18%
• Additional time	17%
• Note takers	15%
Computer availability	13%
Courses: Reduced workload	10%
Cégep environment	7%
Learning Centre	7%
Availability of support / assistance at the cégep	7%

Students without handicaps

Good professors	34%
Friends	13%
Library	11%
Cégep environment	9%
Computer availability	8%
Adequate schedule	8%
Variety of course choices	7%
Learning Centre	6%
Finances	5%
Time management/organization	5%
Availability of support / assistance at the cégep	4%

* Items in bold are factors common to both groups



Tableau 2

List of main obstacles

Students with handicaps

Bad professors	29%
Courses: Heavy workload	19%
Difficulties caused by the handicap/ disability	10%
Courses: Level of difficulty	9%
Time management/organization	9%
Inadequate schedule	7%
Poor health	6%

Students without handicaps

Bad professors	22%
Courses: Heavy workload	19%
Language barriers	10%
Inadequate scheduling	9%
Finances	8%
Employment	8%
Courses: Level of difficulty	6%

* Items in bold are factors common to both groups

[...] the needs and difficulties of handicapped students vary according to the type of handicap.

STUDY IMPACT

It is clear that the needs and difficulties of handicapped students vary according to the type of handicap. For example, a blind student and a student living through a depression are two different situations. And even if the majority of handicapped students have reduced workloads and additional time to complete their examinations, it is usually only those with visual handicaps who require teaching material in alternate formats (audiocassette, large font, Braille). Also,

it is generally students with hearing impairments who use the services of interpreters. On the opposite side, other handicaps such as mental health problems do not need these services.

This is why a new approach was established: Universal accessibility in education.

IMPORTANCE OF THE ROLE PLAYED BY THE PROFESSOR

When it comes to facilitators, results show that professors play a determining role for the majority of participants. They are the third most important factor for handicapped students and the most important factor for students without handicaps. Professors also top the list of obstacles identified by the two groups, which suggests that good instruction may be the one key factor that demands our attention. Control is in the hands of professors when it comes to bringing about change and adapting courses to specific student needs.

Elsewhere, both groups indicated that heavy workloads, the difficulty level of courses, and inadequate schedules often cause them problems. These factors are probably aggravated by financial concerns and the need to work. It is important for professors to take these obstacles into consideration while structuring their courses.

IMPORTANCE OF ADAPTATION SERVICES FOR THE HANDICAPPED

The most obvious difference between students with handicaps and students without is their use of adaptation services for the handicapped. It goes without saying that handicapped students consider these services essential to learning, which should motivate governments to maintain or increase financing for these services. However as an obstacle to success, handicapped students rate problems caused by a handicap as third on their list. Teaching personnel must be understanding in this respect and keep an open mind.

THE NEED FOR UNIVERSAL ACCESSIBILITY IN EDUCATION

If professors were to adopt the nine principles of universal accessibility in education, teaching would be more effective. These principles take into account the vast diversity of postsecondary students including, among others, students whose mother tongue differs from the language of instruction, immigrants, and handicapped students. In the past, institutions ensured equal accessibility to studies by providing services to handicapped students only as the need arose. This was not effective as unforeseen circumstances often delayed the required changes or modifications. This is why a new approach was embraced: Universal accessibility in education. Its paradigm consists in making education accessible to all (not only the handicapped) by anticipating the varied needs of the population and focusing on accessibility from the get-go (Barile, 2003; McGuire, Scott and Shaw, 2003; Universal Design, undated). These principles are based on the concept of universal accessibility in architecture, which expresses



Tableau 3

Nine principles of universal accessibility in education

Principle	Definition	Recommendations
1. Equitable use	The concept does not favour any student group; the means are available and accessible to all.	Various presentation methods for pedagogical material (ex: written and verbal) (can help decrease language barriers).
2. Flexibility of use	This concept is designed to adapt to many types of skills and personal differences.	Provide choices on how to complete course workload (ex: exams with multiple-choice or developmental questions; oral or written work) (can help decrease course difficulty and lighten workload).
3. Simple and intuitive use	The instructions are easy to understand and follow, regardless of student's level of experience, knowledge, or skills.	Eliminate all that is unnecessarily complex; use diagrams or figures (can help decrease language barriers and course difficulty).
4. The use of information that is easy to grasp	Essential information is communicated effectively, independent of the student's sensory skills.	Use PowerPoint or a projector (large font and good contrast); provide hard copies of presentation content and/or make it available on-line, (in adaptable formats such as Word and Excel) before each course.
5. Tolerance for mistakes	Anticipation of possible variations in student learning rates and skills; conceptualization provides for accidental occurrences.	Design examinations available on computer. Ensure the examination will not be invalid if a person accidentally hits the wrong key.
6. Requires little physical effort	Conceptualization minimizes the need for physical effort while maximizing the learning objective.	Avoid examinations that are lengthy (foresee several mini-tests); authorize students to carry out projects close to school or at home.
7. An open approach and use of space	Space is organized so that every student has the space he requires, regardless of size, posture, and mobility.	Classrooms must consider the number of students in the classroom to avoid opportunities for plagiarism; reserve seats in front for those with mobility, hearing, and vision problems.
8. A learning community	The environment supports interaction and communication among students and between students and professors	Place students in groups. Teamwork so that exchanges and inclusion can occur.
9. A climate favourable to learning	The environment is supportive and facilitates the inclusion of students.	Confirm availability for all students and display openness to discuss any specific needs.

the fundamental idea that a good concept takes into account the needs of all individuals. In addition, planning for general application from the very start, including the accessibility issue, is the most effective long-term strategy there is (Falta, 1992). For example, access ramps initially constructed for those with wheelchairs also benefited people with baby carriages.

One of our studies that provides recommendations to help professors increase their teaching effectiveness, shows that most suggestions for adapting courses for handicapped students also apply to the rest of the student population. (Fichten, Goodrick, Tagalakakis, Amsel and Libman, 1990).

For example, using PowerPoint to teach subject matter (with the professor facing the classroom) benefits students with hearing difficulties, but also the other students in the classroom.

[...] planning a general application from the very start, including the accessibility issue, is the most effective long-term strategy there is.

Table 3 represents the principles of universal accessibility in education. Examples illustrate how each principle can be applied in concrete situations.

When we become aware of problems caused by course material that is not adapted, we realize that significant time and effort is required to complete this task. However, including accessibility issues during the conceptualization of pedagogical material, helps decrease or eliminate this effort.



BENEFITS OF AVAILABLE CÉGEP RESOURCES

All students are aware of the benefits of the cégep environment, computer availability, support and the learning centre at Dawson College. For example, one student states that “extra-curricular activities helped me make new friends”, another indicates that the availability of various computer software helped him complete his work, and a third student thanks his tutors for helping him improve his grammar. These examples clearly illustrate the need to provide adequate resources for these services.

Certain obstacles are out of the hands of professors but in many cases, positive changes are still possible.

THE EXTENT OF LEARNING DISORDERS

Approximately one third of students with multiple handicaps state that they also have a learning disorder. This problem affects English-speaking students and also a third of students enrolled in French cégeps (Fichten *et al.*, 2004, 2005).

Currently, learning disorders are not included in financing projects for adaptation services for the handicapped in Québec. The conclusions of our study suggest that students with learning disorders are more numerous—and more inclined to require services—than we originally thought.

In light of this data, professors, personnel and administrative staff must work together to find ways of increasing students' chances for success. Helping handicapped students also benefits the entire student body. Our study shows that both groups have many of the same facilitators and obstacles. It is therefore doubly important to continue financing

adaptation services for the handicapped and educating professors on the different types of handicaps and problems. In this way, professors will be able to provide for the needs of this growing student population thereby increasing the odds that these students will continue their studies.

RECOMMENDATIONS

- Ensure the financing of adaptation services for the handicapped in cégeps.
- Improve accessibility to financial resources for all students.
- Ensure accessibility to computers, training on their use and support for learning (tutoring).
- Recognize learning disorders as real handicaps and ensure adequate financing for adaptation services for these disorders.
- Consider including the principles of universal accessibility in education in teacher training programs.

CONCLUSION

Certain obstacles are not under the professors' control, however in many cases, positive changes are still possible. All that is needed to ensure that handicapped students have an equal chance for success at cégep is to consult someone responsible for providing adaptation services for the handicapped at your institution. The learning support and tutoring centres can also be sources of relevant information. In addition, the students often already know which services are appropriate for them. Just as professors are experts in their field of instruction, handicapped students know their own needs best. Don't hesitate to ask them questions and everyone will benefit! ◀

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Mai N. NGUYEN recently completed her bachelor's degree at Université de Montréal and is currently pursuing higher studies in psychology. She has been a member of the Adaptech Research Network for several years now.

mnguyen@dawsoncollege.qc.ca

Catherine S. FICHTEN holds a Ph. D. in psychology. She is a professor at the Faculty of Psychology at Dawson College and associate professor at the Faculty of Psychiatry at McGill University. She co-chairs the Adaptech Research Network and works at the Jewish General Hospital in Montréal.

catherine.fichten@mcgill.ca

Maria BARILE holds a master's degree in social service and has been involved in issues dealing with the handicapped for several years now. She co-chairs the Adaptech Research Network.

mbarile@dawsoncollege.qc.ca

Jo Ann LÉVESQUE holds a Ph. D. in Education. She is currently Director of Research for the Faculty of Arts at McGill University and also assistant professor, Faculty of Education.

joann.levesque@staff.mcgill.ca