Ce que les décideurs doivent savoir sur les besoins des étudiants handicapés au postsecondaire : la recherche Adaptech (What Decision-Makers Need to Know about the Needs of Post-Secondary Students with Disabilities : The Adaptech Research)

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The goal of the *Adaptech Project* is to provide empirically based information to assist in decision making which ensures that new policies, software and hardware reflect the needs and concerns of Canadian postsecondary students with disabilities, the professors who teach them and the individuals responsible for providing services to them. We are based at Dawson College in Montreal. *Adaptech's* research is conducted bilingually. An active cross-Canada bilingual Advisory Board guides the project's research endeavours. The team consists of an interdisciplinary and multisectorial group of academics, researchers, students and consumers. Several of us have the personal experience of living with disabilities.

Our research during the past 5 years has been funded by major Canadian federal and provincial research granting organisations, including the Office of Learning Technologies (Human Resources Development Canada), the *Fonds pour la formation de chercheurs et l'aide à la recherche* (FCAR), the *Programme d'aide à la recherche sur l'enseignement et l'apprentissage* (PAREA), the Network for the Evaluation of Education and Training Technologies (EvNet) and the Social Sciences and Humanities Research Council of Canada (SSHRC). We run a moderated electronic discussion forum (listserv) with over 250 members. The goal of both the *listserv* and the *Adaptech* web site http://omega.dawsoncollege.qc.ca/adaptech is to encourage dialogue about our research and to serve as a resource to the Canadian postsecondary education community.

Projects and studies

Recently completed studies of interest are listed below. More information is available on our web page http://omega.dawsoncollege.qc.ca/adaptech.

> ¤ *AdaptCan* (completed in 1999: Fichten, Barile, & Asuncion, 1999a, 1999b). For this study, the goal was to obtain information about how computer technologies were being used – or not used – by postsecondary students with disabilities. Data from three studies that involved close to 800 Canadian postsecondary students with disabilities were obtained. The results of this investigation are in the process of being disseminated via refereed journals and conferences as well as through non-traditional means, including newsletters, web pages, electronic media, the ERIC database, etc.

- ◻ *ITAC Project* (informatique et technologies adaptées dans les cégeps pour les étudiant(e)s ayant des incapacités - completed in 2000: Fichten, Barile, Robillard, Fossey, Asuncion, Généreux, Judd, & Guimont, 2000). In this Quebec based project data from 97 college students and 71 individuals responsible for providing services to college students with disabilities were obtained using focus groups, interviews and closed-ended questionnaire. Here, too, we are currently engaged in both traditional and non-traditional forms of dissemination of the findings.

- ◻ *DSSFocus* (an ongoing cross-Canada study). In this study the focus turns from the students to the approximately 200 individuals at Canadian colleges and universities who directly oversee support services to students with disabilities. This structured interview study investigates: accessibility of computer technologies on campus and institutional and external factors that help or hinder access to these technologies.

- ◻ *Free and Inexpensive Technologies* (an ongoing exploration). This bilingual paper based and electronic series of publications is a response to a need, identified by both students with disabilities and professionals, for inexpensive and free software and hardware solutions. These low cost products allow people to experiment with technological solutions without having to make expensive purchases. This is our most popular publication. Additional details are available in English at http://omega.dawsoncollege.qc.ca/adaptech/adlinks.htm#5 and in French at http://omega.dawsoncollege.qc.ca/adaptech/adlinksf.htm.

Quebec College Students

Of specific interest in the Quebec milieu is the *ITAC Project*. This is a focused investigation consisting of three studies which examined the views and experiences with computer, information and adaptive technologies of three key stakeholder groups in Quebec's cegep (junior/community college) system : students with various physical, sensory and learning disabilities, the professors who teach them and the personnel who provide services to students with disabilities on campus.

- ◻ Study 1 used focus groups which included 60 participants: 21 cegep students with different disabilities (9 anglophones and 12 francophones), 25 individuals responsible for providing services to cegep students with disabilities (5 anglophones and 20 francophones), and 14 cegep professors (7 anglophones and 7 francophones). Separate unilingual focus groups were held for each of the 3 categories. Groups were held in Montreal, Sainte-Foy) and Trois-Rivières.

- ◻ Study 2 involved 76 cegep students with disabilities (21 anglophones and 55 francophones) who completed a written survey, which dealt with a variety of computer related issues.

- ◻ Study 3 consisted of structured telephone interviews with 46 individuals responsible for providing services to cegep students with disabilities (6 anglophones and 40 francophones) from public cegeps from both the eastern and western sectors of Quebec. This included 22 cegep service providers from large cities (Montreal, Quebec, Hull) and 24 from Quebec's outlying regions.

A key area of interest highlighted by the ITAC Project concerned funding for computer, information and adaptive technologies. Problems in this area were noted in three realms : (1) lack of recognition of all disabilities for technology-based funding support; (2) the problem of "not being disabled enough" faced by some students when they attempt to request funding for computers; and (3) widespread lack of information about provincial government funding programs.

We found that almost half of the respondents in our samples needed adaptations to use computers effectively. In addition, students often had multiple impairments, which required that different types of adaptive computer technologies be able to work together. These results partly explain our findings on problems related to the use of computer and adaptive computer technologies. These include : high cost, difficulties related to compatibility of needed adaptive software and hardware, the necessity for continual upgrading, poor technical support and lack of training.

A key finding of our cross Canada and Quebec based studies is that Quebec has a much lower proportion of postsecondary students with disabilities - 1/10 as many - as the rest of Canada. For example, using the identical methodology (i.e. asking individuals responsible for providing services to students with disabilities at postsecondary educational institutions about the number of students registered to receive services from them or their office), we found that only 0.5% of students enrolled in Quebec's cegeps have a disability compared to the 5.5% of college students in other parts of Canada. Similarly, only 0.2% of Quebec's university students have a disability compared to 2% in other parts of Canada. We examined the possibility that this was due to the lack of recognition of specific learning disabilities (e.g. dyslexia) as disabilities in Quebec (these are considered a disability in the rest of Canada). Our analyses show that although learning disabilities account for some of the discrepancies, these by no means explain all of the differences found.

Recommendations

Our studies show that when in comes to postsecondary education, technology is the future and a MUST for students with disabilities. Therefore, it is imperative that students with disabilities have good access to computer, information and adaptive computer technologies. Based on the findings of the *ITAC Project*, we make the following policy recommendations for Quebec government, organizations, agencies and programs, which fund and provide computer equipment and subsidies.

Inform the postsecondary community about programs and any changes

Our research clearly shows that both cegep students with disabilities as well as cegep personnel responsible for services to students with disabilities are poorly informed about government programs, which help students acquire computer and adaptive computer technologies. To rectify the situation, we recommend that all government programs, organizations and agencies make an effort to inform the cegep community about the full range of programs, the rules and regulations, and the eligibility criteria.

Information packages should also be sent both to the Quebec and to the Canada-wide associations of students with disabilities (i.e., AQEIPS - located at Université de Montréal and NEADS located at Carleton University in Ottawa) as well as to cegep personnel responsible for services to students with disabilities for broad based dissemination to students and other concerned college personnel (e.g. financial aid officers). Material should be made available, of course, in alternate formats (i.e. Braille, tape, diskette, regular and large print). Information should also be posted on accessible web sites, and the locations widely publicised.

On-site visits by program officials to meet with students and with personnel responsible for services to cegep students with disabilities would also be useful. An orientation to government assistance programs, which relate to computer technologies at conferences for the postsecondary education community would also be helpful. In addition, informing the general community can also be useful. If more potential students know about available programs, perhaps more would enrol.

Define eligibility rules and criteria more clearly

The criteria concerning what constitutes a disability are unclear. It can be seen in our results that depending on whose definition is used, the number of postsecondary students with disabilities in Quebec varies by more than 100%. This is important, because definitional issues determine whether students are eligible for subsidy programs for computer, information and adaptive technologies and whether the cegep receives funding for providing services, including computer supports, for these students.

Simplify the application process and make application forms and information available in alternative formats

Students need to be able to apply for equipment and equipment subsides without resorting to assistance from others. This includes students with print impairments, who need to have application forms and information in alternative formats (e.g., audiotape, large print, electronic text).

Provide flexibility to allow for upgrading and updating equipment

As noted by cegep professor participants in our ITAC Project, the useful life of a computer is between 3 and 5 years. Students with disabilities often spend long periods in cegeps because they are taking a reduced course load. Because of rapid changes in the computer industry and incompatibilities between newer and older technologies many students indicated that they had to acquire a second computer, since their first one had become obsolete. Yet, certain programs fail to provide students with either updated equipment or with subsidies to update or replace obsolete hardware and software.

Treat different impairments on equal terms

Our findings show that many cegep students were unable to benefit from subsidy programs either because their impairments or disabilities were excluded from the eligibility criteria or because their impairment or disability was not deemed to be sufficiently severe.

Thus, students with certain types of impairments are denied access to government programs. Similarly cegep personnel working with students who have disabilities are often limited in their ability to provide computer, information and adaptive technologies and support due to lack of funding for students with specific disabilities. In fact, our data show that cegeps are funded for providing services to only 1/3 of the students whom they actually serve. This puts an undue burden on the cegep, the service providers, and rehabilitation centres, as well as the students concerned and limits students with "unrecognized" impairments in the pursuit of higher education.

Limit the share of parents' income when determining eligibility for funding

The average age of cegep students with disabilities was 23 - considerably older than that of cegep students in general. It is often the case that adult students with disabilities live with their parents to assist with aspects of daily living. To take the situation to an extreme, it is certainly inappropriate to take the income of a 30-year-old student's parents into account when determining his or her eligibility for a bursary. In this context it is important to remember that identical treatment is not equal treatment.

Shorten waiting periods to receive equipment

Courses at cegeps have firm start and end times. Exams and assignments are scheduled with fixed dates. Students who need to use computer and adaptive computer technologies must be able to access these in a timely manner. Our data suggest that waiting periods in many government programs are simply too long to meet the needs of cegep students with disabilities.

Fund training

If students do not know how to use computer equipment, or if they can only use the most rudimentary features, they will not be well served. Nondisabled cegep students are taught how to use needed software. Similarly, students who use adaptive computer equipment need to be taught to use these to allow them to keep up with their nondisabled peers. It would also be important to provide training sessions across the province for service providers.

Resources

Anglophone Resources

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Francophone Resources

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- Association nationale des étudiants handicapés au niveau postsecondaire (NEADS) (http://www.neads.ca/).
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- Association de l'industrie des appareils et accessoires fonctionnels du Canada (CanADIA) (http://www.starlingweb.com/adp/index.htm).
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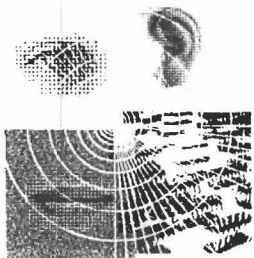
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