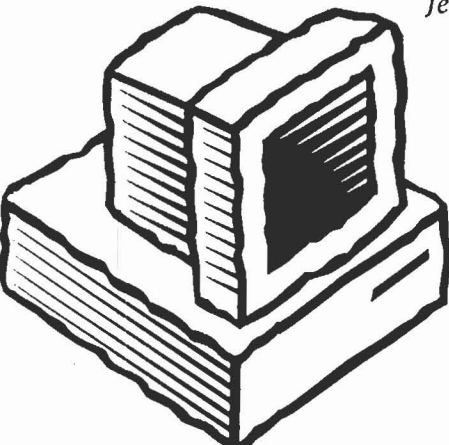


Role of Rehabilitation Agencies and Professionals

in Providing Computer and Adaptive Technologies to College and University Students With Disabilities

Jennison V. Asuncion, B.A., Maria Barile, M.S.W., and Catherine S. Fichten, Ph.D.
*Adaptech Project, Dawson College
 Montreal, Quebec, Canada
 September, 1999*



Computer technologies are rapidly becoming a part of our everyday lives: professionally, personally and academically. Because computer knowledge is a necessity for effective participation in the new Canadian knowledge-based economy, computer literacy and know-how are part of most postsecondary students' formal education. One need only look at Canadian colleges and universities to see this trend in action. The integration of computer-mediated and web-based learning into curricula are top priorities at schools nation-wide. Occurring in parallel with this trend is the evolution of both mainstream and adaptive computer technologies. Coupled together, these trends level the playing-field and provide Canadians with disabilities access to the same opportunities as their non-disabled peers. This outcome is, of course, conditional on persons with disabilities gaining timely access to the technologies and adaptations they need.

Our goal here is to make recommendations about what role rehabilitation agencies and professionals can play in ensuring that college and university students with disabilities receive appropriate and timely access to computer and adaptive technology. Before

Our goal here is to make recommendations about what role rehabilitation agencies and professionals can play in ensuring that college and university students with disabilities receive appropriate and timely access to computer and adaptive technology.

proceeding to do so, some background about who we are and what is the basis for the recommendations is in order.

Adaptech Project

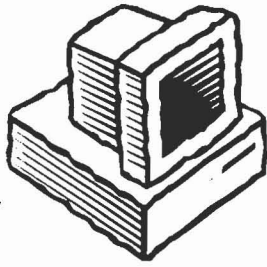
The Adaptech Project consists of a team of academics, researchers, students and consumers. Our goal is to deliver empirically based information to assist in decision making that ensures that new policies, software and hardware reflect the needs and concerns of a variety of individuals,

including both postsecondary students with disabilities as well as of professionals who make technological, adaptive, and other services available to the higher education community. Based at Dawson College in Montreal, Adaptech is funded by both federal and provincial grants.

We recently completed three studies examining the computer, information and adaptive technology needs and concerns of nearly 800 Canadian postsecondary students with a variety of disabilities (Fichten, Barile, & Asuncion, 1999a). Our goals in doing this research, which was funded by the Office of Learning Technologies, were twofold. First, we wanted to know how computer technologies were being used, or not used in some cases, by postsecondary students with disabilities. Second, we wanted to make empirical data available to better advise students as well as other stakeholders, including administrators, policy makers, planners, and disability service providers in higher education, government and the computer industry.

Research Findings

Our findings show that fewer than 1/2 (42%) of students who used a computer at home indicated that they had taken advantage of a government/agency program to obtain at least some of their technologies. In general, students who did so were pleased with the equipment obtained. They felt



Computer and Adaptive Technologies

that the equipment they received was up-to-date, that it met their needs, that the program was flexible in accommodating students' requirements, and that contacting the necessary people to discuss one's needs was easy. On the other hand, students also felt that there were many restrictive rules and regulations, that waiting periods were long, that the process for applying was complicated, and that they did not receive good training on the technology.

The majority of students surveyed (58%) did not turn to a government/agency program to obtain a computer or adaptive computer technologies. When asked why, the most common answer was that students were not aware that there were any programs out there for them. In fact, when students were invited to write additional comments (Fichten, Barile, & Asuncion 1999b), many spontaneously mentioned that now that they knew there were programs where they could apply, they would be sure to investigate their options. Students who chose not to apply, even though they knew about the availability of programs, indicated that there were too many restrictions or that their family income or the nature of their disability excluded them from existing initiatives.

What can rehab agencies and rehab professionals do to better meet the needs of postsecondary students with disabilities?

Our research clearly shows that both students with disabilities as well as the postsecondary personnel responsible for providing support services to them are poorly informed about programs which help students acquire computer and adaptive technologies. Specific rules and

eligibility criteria for programs are also not well known even by individuals who are aware of the existence of specific programs.

What follows are suggestions about what could be done to improve access to computer technologies for students with disabilities.

Our research clearly shows that both students with disabilities as well as the postsecondary personnel responsible for providing support services to them are poorly informed about programs which help students acquire computer and adaptive technologies. Specific rules and eligibility criteria for programs are also not well known even by individuals who are aware of the existence of specific programs.

• Clarify and make transparent the rules and regulations as well as eligibility criteria for funding and training programs.

• Make a concerted effort to network and to inform the postsecondary education community about the full range of programs. Two national organizations, the National Educational Association of Disabled Students (NEADS) and the Canadian Association of Disability Service Providers in Postsecondary Education

(CADSPPE) offer mechanisms through which information can be channelled.

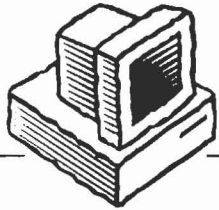
• Send information on a regular basis (e.g., in the spring prior to the beginning of the academic year) to national and provincial organizations for students with disabilities as well as to colleges and universities (to the attention of the Office for Services to Students with Disabilities) for broad based dissemination to students and concerned professionals at the institution (e.g., financial aid officers).

• Make materials available in alternate formats (i.e., Braille, tape, diskette, regular and large print). Post information on web sites and publicise the locations widely.

• Make on-campus visits to meet with students and with personnel responsible for providing services to students with disabilities. This could be informative for everyone concerned. Presentations at conferences for the postsecondary education community would also be helpful.

• Pay more attention to training on computer, information and adaptive technologies both in habilitation / rehabilitation training programs for people who are newly disabled as well as former clients. Such training could be developed jointly with colleges and universities or with organizations representing postsecondary disability service providers.

• Advocate on behalf of students with government agencies that fund the programs. At the interface between clients and the government, rehab agencies and profes-



Computer and Adaptive Technologies

sionals are in an excellent position to advise government to make modifications in programs to better meet the needs of postsecondary students.

- Shorten waiting periods and ensure that equipment and training are consistent with the needs of students. Courses at colleges and universities have firm start and end times. Exams and assignments are scheduled with fixed dates. Our data suggest that waiting periods in many programs are simply too long to meet the needs of many postsecondary students with disabilities.
- Involve students in decisions that affect their equipment and training. While rehabilitation professionals are the experts in their fields, it is students themselves who are best informed about their course related computing needs.
- Liaise with postsecondary educational institutions to help make their overall computer and information technology infrastructures accessible to students with all types of disabilities.

Our findings show that the potential of computer, information and adaptive technologies to remove barriers to students with disabilities is enormous. Nonetheless, environmental barriers are continually being created. It is imperative that solutions are identified and implemented while the technologies and infrastructures in postsecondary educational institutions are still in a developing stage.

Postsecondary education is the key for training a labour force ready to meet the challenges of the new knowledge-based economy. Computer-based knowledge will

soon be a necessity to secure employment. The argument that, "granting equality to the disabled population group is not justifiable because of the cost or because of the inconvenience to mainstream society" (Nagler, 1993, p. 33) is often made in this context. We contend that this type of argumentation needs to be rebutted wherever it surfaces. University and college graduates with and without disabilities have been shown to have better employment outcomes than people without postsecondary education. A small investment of time and money today will pay handsome dividends in the long run.

Jennison Asuncion, B.A, Research Associate of the Adaptech Project, is a Master's student in educational technology at Concordia University.

<j_asunc@alcor.concordia.ca> (e-mail)

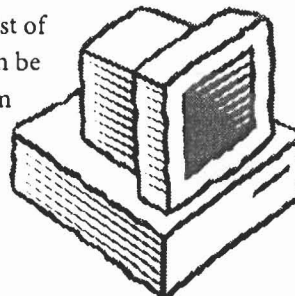
Maria Barile, M.S.W, Co-Director of the Adaptech Project, is a social worker and disability activist based at Dawson College.

<j_asunc@alcor.concordia.ca> (e-mail)

Catherine Fichten, Ph.D., Director of the Adaptech Project, is a professor of psychology at Dawson College and a clinical psychologist at the Jewish General Hospital in Montreal

<md71@musica.mcgill.ca> (e-mail)

A complete list of references can be obtained from any of the authors. ▼



Career Planning And Labour Market Information

BC Workinfontet

<http://workinfontet.bc.ca/>

An on-line labour market and career information website. Put together by the Labour Market and Career Information Association of B.C.—a non-profit society which has a broad professional membership and partnerships with the BC Ministry of Education, Skills, Training and YES Canada. Many hot links to other useful sites.

Career Development Manual

<http://www.adm.uwaterloo.ca/infocecs/CRC/manual-home.html>

Put together by Career Services at the University of Waterloo, this excellent guide to career/life planning includes Self Assessment, Occupational Research, Decision Making, Employment Contacts, Work, Career/Life Planning for SNDs, Employment Counsellors and other in the helping professions. Highly recommended for anyone doing career/life planning.

Career Exchange

<http://www.careerexchange.com>

A job seeker recommended this site claiming she had received several good leads from it. Check it out for yourself!

Career Paths On Line

<http://careerpathsonline.com>

Click on the opening text to enter this inspirational, interactive career resource which helps students and youth make relevant and informed career plans. Career paths On-line is the Internet version of Career Paths Newspaper, the Official Career Planning Guide for BC and the Yukon. Published by YES Canada with funding support from MOEST and HRDC.

Continued on page 30

References

- Fichten, C.S. Barile, M. & Asuncion, J.V. (1999a). **Learning technologies: Students with disabilities in postsecondary education** / Projet Adaptech : L'Utilisation des technologies d'apprentissage par les étudiant(e)s handicapé(e)s au niveau postsecondaire (190 pages). ISBN 2-9803316-4-3. Final report to the Office of Learning Technologies. Ottawa: Human Resources Development Canada. Abstracted and available September 7, 1999 on the World Wide Web in English: <http://olt-bta.hrdc-drhc.gc.ca/publicat/Dawson79160exe.html> and in French at <http://olt-bta.hrdc-drhc.gc.ca/francais/publicat/Dawson79160exf.html>
Full text version available in English September 7, 1999 on the World Wide Web: <http://olt-bta.hrdc-drhc.gc.ca/download/Dawson79160.pdf>
- Fichten, C.S. Barile, M. & Asuncion, J.V. (1999b). **Appendix to: Learning technologies: Students with disabilities in postsecondary education - Final report to the Office of Learning Technologies**. (107 pages). ISBN 2-9803316-5-1. Ottawa: Human Resources Development Canada. Available September 23, 1999 on the World Wide Web: <http://www.omega.dawsoncollege.qc.ca/adaptech/olt99app.pdf>
- Nagler, M. (1993). The disabled: The acquisition of power. In M. Nagler (Ed.), **Perspectives on disability** (2nd. Edition) (pp. 33-36). Palo Alto, CA: Health Markets Research.

Additional Information

Catherine S. Fichten, Ph.D. <md71@musica.mcgill.ca> (e-mail)
Maria Barile, M.S.W. <mdb2@musica.mcgill.ca> (e-mail)
Jennison V. Asuncion, B.A. (with distinction) <j_asunc@alcor.concordia.ca> (e-mail)

Adaptech Project
Dawson College
3040 Sherbrooke St. West
Montreal, Quebec, Canada H3Z 1A4
(514) 931-8731 (voice)
(514) 931-3567 (fax)
<http://omega.dawsoncollege.qc.ca/adaptech> (Adaptech Project Web Site)