Fichten, C.S., Bourdon, C.V., Creti, L. & Martos, J.G. (1987). Facilitation of teaching and learning: What professors, students with a physical disability and institutions of higher education can do. Natcon, 14, 45-69.

FACILITATION OF TEACHING AND LEARNING: WHAT PROFESSORS, STUDENTS WITH A PHYSICAL DISABILITY AND INSTITUTIONS OF HIGHER EDUCATION CAN DO

Catherine S. Fichten
Dawson College
Montreal, Quebec

Claudia V. Bourdon
P.S.B.G.M
Montreal, Quebec

Laura Creti
Montreal, Quebec

John G. Martos
Montreal, Quebec

ABSTRACT

This report summarizes recommendations made by students with a physical disability and by professors who have taught them about what people and institutions can do to facilitate teaching and learning in institutions of higher education. Thirty-seven college and university students with various physical disabilities, 74 professors who have taught disabled students and 17 professors who have not done so answered 5 open-ended questions concerning what professors, disabled students, and institutions could do to make teaching and learning easier and more effective. The 1056 recommendations were grouped, categorized and ranked in order of frequency. Recommendations are presented in tabular form under the following headings: facilitative actions by professors, facilitative actions by students with a disability, needed services, facilities, and equipment and other recommendations. Consistencies as well as discrepancies among recommendations by the three groups are noted and the implications of the findings for teaching, learning and institutional practices are discussed.

FACILITATION OF TEACHING AND LEARNING: WHAT PROFESSORS, STUDENTS WITH A PHYSICAL DISABILITY AND INSTITUTIONS OF HIGHER EDUCATION CAN DO

Higher education for people with a physical disability is viewed by many as the key to maximizing their potential, to leading a more fulfilling life

becoming self-sufficient in a world that behaves harshly toward those who are "different" (McLoughlin, 1982; Penn & Dudley, 1980). Current government policies reflect the need to provide higher education to people with physical disabilities and emphasize that this is a priority issue (Office des Personnes Handicapées du Québec, 1984; Special Committee on the Disabled and the Handicapped, 1981). To assure quality higher education to people with disabilities a variety of concerns must be addressed. While there are other influential factors (cf. Fichten, 1985; Fichten & Bourdon, 1984; Fichten & Amsel, in press; Fichten, Compton & Amsel, in press; Fichten, Hines & Amsel, in press; Robillard & Fichten, 1985), knowing what professors, students with a disability and institutions of higher education can do to make teaching and learning easier and more effective is particularly important.

The Canadian Organizing Committee for the International Year of Disabled Persons recommended "That teachers in Canada facilitate access for disabled students to the public educational system..." (COC, 1981, Recommendation No. 20). But how is this to be done? As recently as 1980, Beatrice Wright, one of the best known researchers in the field of physical disabilities, in her review of the literature concluded that "regrettably, many change (mainstreaming) programs are ineffective and may even contribute to disabling myths about disability" (p. 274). Clearly, mainstreaming is both a costly and difficult process (Alexander, 1979).

Reasons for the ambivalent results of mainstreaming programs include not only lack of needed services, equipment and architectural modifications but also inadequate teacher (Hirshoren & Burton, 1979; Rauth, 1980; Reynolds, 1980) and disabled and able-bodied student preparation for integration (Delli Colli & MacDougall, 1983; English, 1971; Gresham, 1982; MacDougall, Munhall & Destounis, 1981). Although a variety of teacher preparation programs have been evolved, little empirical evidence of their effectiveness exists (cf. Bayne & Caton, 1979). Not only are these programs possibly ineffective, and perhaps even deleterious, but most were designed for teachers in the primary and secondary school system and are, therefore, inappropriate for college and university professors.

During recent years a number of architectural barriers to wheelchair users have been eliminated in colleges and universities. While this is a very important change, there are many other considerations which must be taken into account in order to make higher education truly accessible to people with physical disabilities (McLoughlin, 1982). These include the

availability of facilities, equipment and services as well as behavioural adaptations both by the disabled students and by the professors who teach them.

In the realm of higher education a number of compilations of suggestions for effective teaching and learning and needed services, equipment and architectural modifications exist (e.g., Alexander, 1979; Evans, Bissonnette, Tesler & Dorfman, undated; Kunc, 1981; Marion & Iovacchini, 1983; Smith, 1982; Stilwell & Schulker, 1973; Stilwell, Stilwell & Perrit, 1983). While a number of these documents also provide teaching and learning "tips" for college students who have a disability as well as for their professors, the recommendations, although informed and well meaning, are dramatically different from each other and often contradictory. Since experts, be they professionals or disabled students, do not always agree on what are and what are not effective student or professor behaviours, the determination of appropriate interpersonal behaviours between these two group must be effected empirically. The present investigation addresses this issue.

Method

Subjects

Thirty-seven college and university students with various physical disabilities, 74 college and university professors who have taught disabled students and 17 professors who have not done so served as subjects.

Subjects were selected in the following way. The first step was to contact as many college and university students with a physical disability as possible; this was done through personal contacts, coordinators of services for disabled students and associations for people with physical disabilities. Most of the students contacted agreed to participate and many provided us with the names of professors who have taught them. Professors on these lists were contacted and again most agreed to participate. An attempt was made to obtain a "matched" group of professors who had no experience teaching disabled students for comparison purposes. This was done by contacting, on a random basis, professors of the same gender from the same institutions and departments as the professors on the disabled students' lists.

When the "matched" professors were contacted an interesting difficulty arose; 62% of these professors had taught a student with a physical disability. These professors were reclassified and were asked to complete the questionnaire. While this upset the systematic

sampling procedure, a larger more diverse sample of professors who have taught students with disabilities appeared to warrant this decision. The composition of the final sample is as follows:

Students. The average age of the 37 students who participated was 26 years (range = 19-37). Twenty-four percent of the students were wheelchair users, 24% had a hearing impairment, 18% had a visual impairment, 18% had cerebral palsy, and 16% had other physical disabilities (mainly neuromuscular). Thirty-two percent of the students attended community college (CEGEP) and 68% attended university: 31% indicated that they were enrolled in Arts, 20% in Arts and Science, 11% in a Vocational Diploma Program, 9% in Science and 29% in other programs (e.g., Engineering, Social Work).

Professors Who Have Taught Disabled Students. Most of the 74 professors in this group have taught several students with physical disabilities; the average number of disabled students taught was 3 (range = 1-15). Fifty-seven percent of professors had taught at least one visually impaired student, 32% a hearing impaired student, 30% a wheelchair user, 11% a student who had epilepsy, 12% a student with cerebral palsy, 12% a student with a speech impairment (some of these students may also have had cerebral palsy or a hearing impairment), and 36% of professors had taught students with other disabilities (mainly neuromuscular). Sixty-one percent of the professors taught primarily at a community college and 39% at a university: 61% indicated that they taught in an Arts program, 15% in a Vocational Diploma Program, 9% in Arts and Science, 4% in Science and 11% in other programs.

Professors Who Have Not Taught Disabled Students. The 17 professors who have not taught disabled students were somewhat younger than those who had done so. Forty-seven percent of professors in this group taught at a community college and 53% at a university; 63% taught in an Arts program, 13% in Arts and Science, 13% in Science, 6% in a Vocational Diploma Program and 5% in other programs.

Procedure

All participants were mailed the same questionnaire; it consisted of three separate sections. The section relevant to this report consisted of five open-ended questions; question 1 asked participants what professors can do to make their courses more manageable for physically disabled students, question 2 asked what a disabled student could do to help the professor teach

disabled students more effectively, question 3 asked what a disabled student could do to make a course manageable for himself/herself, question 4 asked what equipment and/or resources are needed by disabled students and their professors and question 5 asked what institutions could do to make academic life more manageable for physically disabled students and their professors. Participants were asked to list, for each question, up to five suggestions, basing their responses on their own experiences whenever possible.

Results

The sample of participants, while by no means randomly selected, is reasonably large and diverse. The group of professors who have not taught disabled students, however, is quite small. The results should be interpreted cautiously given these limitations.

A total of 1056 suggestions were made by the participants. The 283 suggestions made in response to question 1 (what professors can do) were considered separately; these were grouped by members of the research team into 22 categories. Each suggestion mentioned by at least two participants formed a category. Categories were arranged in rank order of frequency; these are presented in Table 1. The ranks in Table 1 are based on the total number of responses made by students with a physical disability and by professors who have taught them (scores of professors who have not taught disabled students were not included in these ranks since their responses often differed considerably from those of the other two groups of participants). Figure 1 shows the proportion of responses made by each of the three groups in each category. Scores of the three groups of participants were prorated to compensate for unequal sample sizes. The most frequent recommendation made by students with a physical disability plus by professors who have taught them was made equal to 100. All other scores were adjusted appropriately.

There was considerable overlap in suggestions made by participants in response to questions 2 and 3 (what students can do). Therefore, responses to these two questions were combined; this resulted in 27 categories based on 367 responses. Table 2 and Figure 2 present information on suggestions made concerning what students can do.

TABLE 1

What Professors Can Do

In your opinion, what can a professor do to make his/her courses more manageable for physically disabled students?

Rank[1]	Recommendations
1.	Be flexible with content and format of assignments and exams (e.g., oral, braille, audiotaped, written) and give extra time if needed.
2.	For students with a hearing impairment give lectures slowly, loudly, with open mouth not covered by hand or book and repeat if necessary. Face class and not the blackboard, avoid standing behind student and walking back and forth in front of class. Write all important material on the blackboard or overhead and be sure that material is written clearly and is well organized.
3.	Be a good teacher in general (e.g., make lectures and notes easy to understand, be open minded when dealing with student, understand and adapt to the needs of individual students).
4.	For students with mobility impairments ensure that class, lab, building, field trip, etc. is in an accessible location.
5.	Hand out typed or printed notes.
6.	Be supportive but do not be overly solicitous; treat the student as any other student whenever possible.
7.	Meet with student regularly and give extra time outside class.
8.	Find out how the student's disability can affect learning in your course from: colleagues with experience, students, organizations, and the literature.
9.	Allow taping of lectures.
10.	Discuss teaching and learning alternatives with students, take strengths and weaknesses into account and make adjustments if these are needed.
11.	For visually impaired students, make sure required materials (e.g., assignments, handouts) are available on tape or in braille.
12.	Approach the student to ask if adjustments are necessary and to indicate that you are available to help.
13.	Arrange for other students to help (e.g., mobility, tutoring, study, readers, notes, etc.).
14.	Encourage other students to interact with disabled student (e.g., by assigning students to work in pairs, having students work in small groups).
15.	Give an outline of the course, explain course content and requirements clearly, be exact about necessary reading material and provide this information early in the term to allow for advance planning by the student.
16.	Make sure that classroom/lab furniture is appropriate for wheelchair users.
17.	Allow choice seating for disabled student.
18.	Individualize the course for the disabled student (e.g., offer a reading course or an individualized program, arrange special viewings of audio-visual materials for student.
19.	Know about services available for disabled students and tell them about these.

[1] Items are arranged in rank order from most to least frequent recommendation. Ranks are based on the responses of disabled students and of professors who have taught disabled students (scores of professors who have not taught disabled students were not included in these ranks since their responses often differed considerably from those of the other two groups of participants).

20. Lobby colleagues and administrators for equipment and tell students to demand equipment.

21. For students with a visual impairment, use models, visual relief maps, replicas, etc. to convey ideas.

22. Use an amplification system with hearing impaired students.

FIGURE 1

WHAT PROFESSORS CAN DO

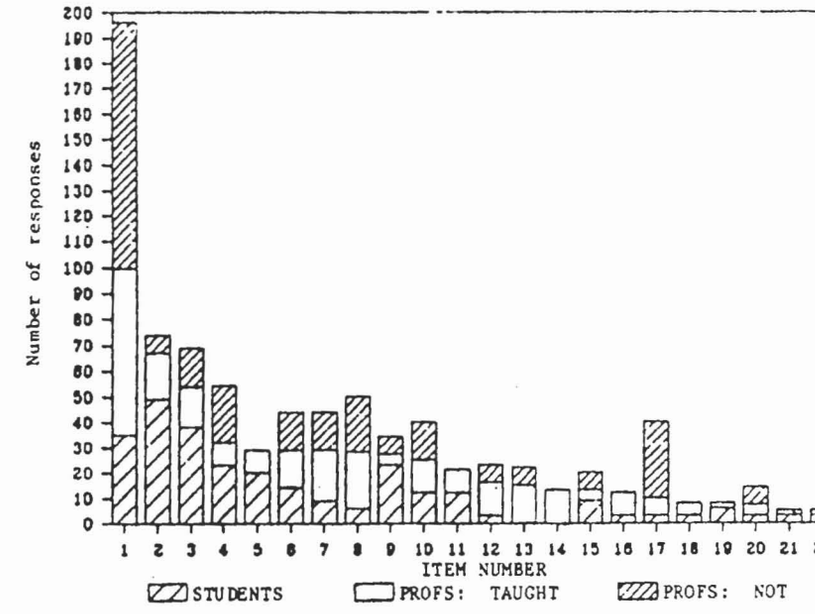


Figure 1. Recommendations made by disabled students, by professors who have taught disabled students and by professors who have not done so.

TABLE 2

What Students Can Do

In your opinion, what can a physically disabled student do to help the professor teach disabled students more effectively and to make a course more manageable for him/herself?

Rank[1]	Recommendations
1.	Educate professor about the needs of disabled students so that needed course adjustments could be made (e.g., talk to the professor about the disability, equipment used, limitations, problems, help needed, potential medical problems, etc.).
2.	Befriend other students in the class, work with them and ask for their help (i.e., set up a support system).
3.	Give professor suggestions concerning what he/she could do to make the course more manageable for you (i.e., give feedback on test design, grading and evaluation, state your opinions, keep in regular contact and talk to professor concerning previous teaching methods, problems and solutions).
4.	See the professor before the term starts to make special arrangements and to find out about course requirements and evaluation methods.
5.	Accept and know your limits when they are there (e.g., take a lighter workload if necessary).
6.	Work harder and take a keen interest in the course.
7.	Don't ask for special treatment unless it is necessary.
8.	Plan ahead and be organized; start studying and preparing assignments early.
9.	Be sure that you have adequate lecture notes (e.g., tape lectures, ask other students to take notes in class for you, borrow good notes, check your notes with others).
10.	Be aware of technology that supports learning and use it both in and out of class.
11.	Be insistent and don't be shy; make the professor listen to your view of what can and what can't help.
12.	Consult periodically with professor in his/her office.
13.	Ask questions during or after class.
14.	Be a good student (i.e., be attentive in class, attend class regularly, do your reading assignments, etc.).
15.	Get volunteer help or a study-buddy.
16.	The student should help the professor to feel comfortable with him/her (e.g., tell professor that it's ok to use words such as "disabled", "see you", "do you see my point", "let's go for a walk", etc.).
17.	Give the professor feedback (i.e., let the professor know if your needs are not being met and remind the professor to make adjustments when he/she forgets).
18.	Sit in the best physical location (e.g., in front of teacher).
19.	Ask professor to outline what will be covered in each lecture and to give lectures slowly and clearly and to point out what is important.
20.	Use the learning centers or get a tutor if necessary.

[1] Items are arranged in rank order from most to least frequent recommendation. Ranks are based on the responses of disabled students and of professors who have taught disabled students (scores of professors who have not taught disabled students were not included in these ranks since their responses often differed considerably from those of the other two groups of participants).

21. Point out problems before they arise or whenever you anticipate one and not when it's too late.

22. Be patient and keep your cool.

23. Understand the needs of other students in your class (i.e., think of others' needs too).

24. Demand equality if evidence of discrimination exists.

25. Inform the class about your disability.

26. Learn to type.

27. Inform the professor of your resources (e.g., braille materials) and of the services available to you.

FIGURE 2

WHAT DISABLED STUDENTS CAN DO

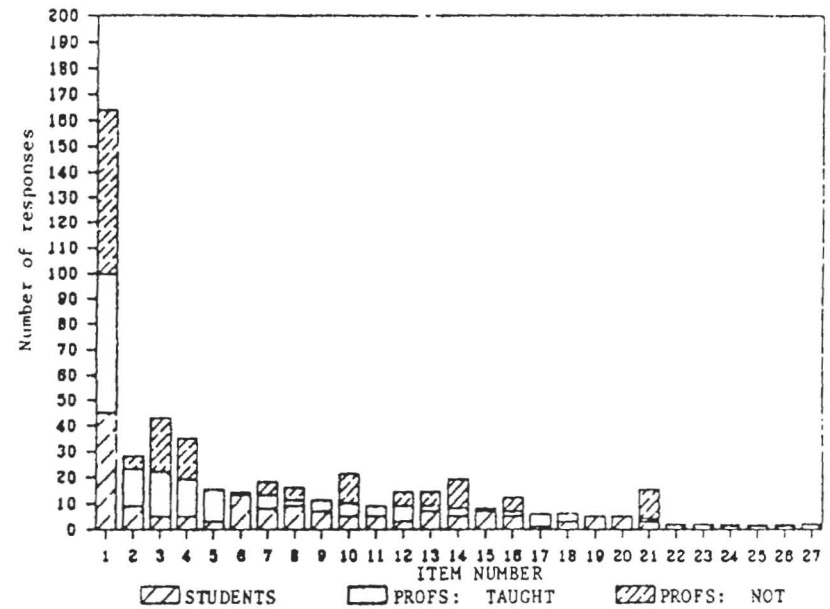


Figure 2. Recommendations made by disabled students, by professors who have taught disabled students and by professors who have not done so.

The 406 responses to questions 4 and 5 (what institutions can do) were also combined; these yielded 35 categories which were grouped as follows: services, facilities, equipment/resources, and other suggestions. Recommendations concerning what institutions can do are provided in Table 3 and in Figure 3.

TABLE 3

What Institutions Can Do

In your opinion, what equipment and/or resources are needed by physically disabled students and their professors and what can institutions (i.e. colleges, universities, organizations for disabled people) do to make academic life more manageable for physically disabled students and their professors?

Rank[1]	Recommendations
Services	
S1.	Establish and maintain a center for disabled students which 1) serves as a drop-in center for disabled students and their professors, 2) provides services (e.g., resources, counselling, resource people, specialized services, a liaison person for disabled students and their professors, contact with professionals familiar with various disabilities), 3) disseminates information (e.g., on various disabilities, on teaching methods) and 4) sponsors "awareness" and "sensitization" programs.
S2.	Ensure the availability of volunteers (or paid personnel) such as readers, note takers, helpers with library access, typists, Braille translators, aides for help with washrooms, lockers and mobility in general.

[1] Items are arranged in rank order from most to least frequent recommendation. Ranks are based on the responses of disabled students and of professors who have taught disabled students (scores of professors who have not taught disabled students were not included in these ranks since their responses often differed considerably from those of the other two groups of participants).

S3.	Give support to help establish and operate a viable disabled student group.
S4.	Provide tutors.
S5.	Provide help with transportation (e.g., inter-campus, from home to institution).
S6.	Set up scholarships and help with bursaries.
S7.	Make available a professional support system (e.g., audiologist, medical advisor, counsellor, academic advisor).
S8.	Improve fire-safety procedures to take into account the presence of disabled students.
S9.	Set up designated study areas with appropriate equipment in labs and in libraries (with easy access to frequently used resource materials and references).
Facilities	
F1.	Ensure wheelchair accessibility in libraries, classrooms, labs, buildings, etc. (i.e., ground floor rooms if possible, replace unnecessary impediments such as stairs with ramps, make accessible: doorways, telephones, door handles, toilets, fountains, food, light switches, pencil sharpeners, lockers, elevator buttons, etc.).
F2.	Provide ramps appropriate for disabled students.
F3.	Ensure that elevators and escalators are approachable by disabled students and that there is easy access to these (reserved if necessary).
F4.	Provide desks, chairs, tables, easels, studio equipment and lab equipment etc. at proper levels to accommodate wheelchairs.
F5.	Provide quiet, well lit rooms for study and exams, [i.e., carpeted (to deaden sound), no buzzing or flickering lights (needed by hearing and visually impaired students)].
F6.	Provide flexible classroom seating arrangements.

F7. Allocate a room to secure wheelchairs for times when these are not in use.

F8. Make physical adjustments for visually impaired students (e.g., elevators with a floor sound indicator, Braille menus in cafeteria).

F9. Provide specially equipped meeting areas.

Equipment/Resources

E1. Tape recorders (regular, high volume, small, etc.)

E2. Miscellaneous specialized equipment [e.g., dictating machines, talking calculators, tailon slates, computers (with symbolic mathematics capability and/or voice synthesis), note taking paper, special telephones with amplifier].

E3. Audio-visual equipment for classrooms (e.g., microphones, FM system, sound amplication system, transmitters/receivers, good facilities for taping, opaque projectors, clear over-head transparencies, overhead projectors).

E4. Braille books and audiotaped (talking) books.

E5. Typewriters.

E6. Braille writers.

E7. Equipment for emergencies and breakdowns (e.g., spare wheelchairs, crutches, canes, hearing aid batteries, wheelchair battery charger, audiotapes, etc.).

E8. Optacon (magnifying equipment).

E9. Audio-visual equipment (miscellaneous).

E10. Other resources: films or slides for deaf students (e.g., words on film), tactile models (biology, chemistry).

Other Recommendations

O1. Hold programs and seminars to sensitize the student population and others to the problems of disabled students.

O2. Make some changes in admission and registration procedures (e.g., accept more disabled students, keep a record of disabled students, grant priority at registration, help to arrange manageable schedules, provide on site orientation, try to ensure courses on a single campus, inform professors ahead of time if student needs special help or facilities, set up meeting between professor and student to allow professor to tell the student in advance what books are required, allow the student to take a reduced load of courses without loss of full time status, facilitate the admission of disabled students into specific courses).

O3. Try to provide a welcoming, open minded atmosphere and an administration which provides swift response to professors' and disabled students' needs.

O4. Provide a forum for research and discussion (i.e., encourage professors and professionals to share experiences and solutions to problems encountered in teaching disabled students).

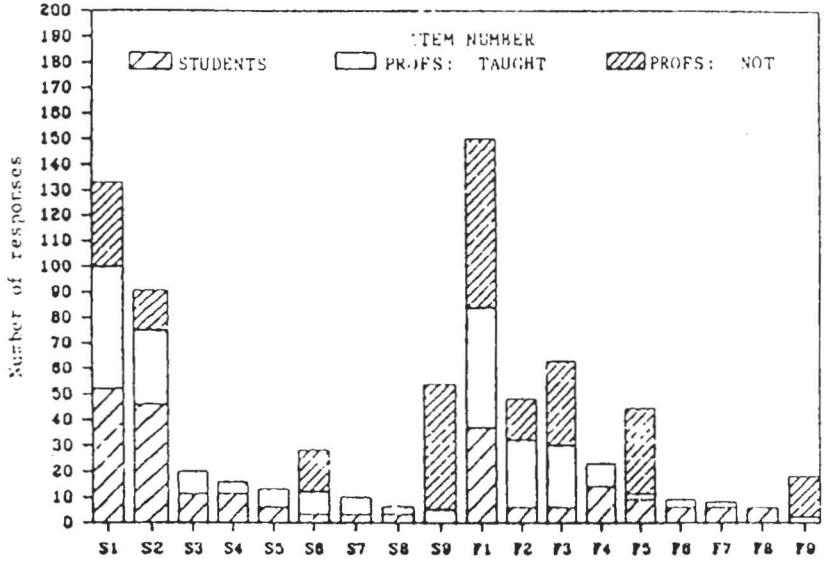
O5. Suggest to teachers that they have an obligation to search for ways to help the physically disabled students who take their courses.

O6. Advocate for improved resources and human rights at all levels.

O7. Offer complementary courses in sign language and braille for non-disabled students.

FIGURE 3

WHAT INSTITUTIONS CAN DO
SERVICES AND FACILITIES



WHAT INSTITUTIONS CAN DO
EQUIPMENT/RESOURCES AND OTHER

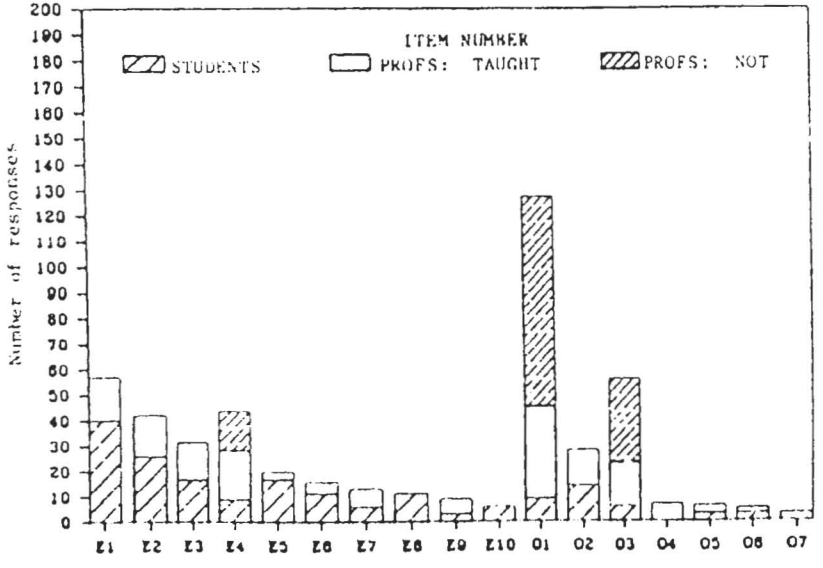


Figure 3. Recommendations made by disabled students, by professors who have taught disabled students and by professors who have not done so. Item numbers preceded by the letter S refer to services, those preceded by F refer to facilities, those preceded by E refer to equipment/resources, and those preceded by O refer to other recommendations.

Discussion

We believe that the most valuable component of this report consists of the findings presented in Tables 1-3. It should be noted, however, that the ranks provided in the tables can serve only as a general indication of the importance of each recommendation. First of all, the sample was by no means random. Secondly, while the ranks are based on responses by students with a physical disability and by the professors who have taught them, it must be remembered that participants were asked to base their suggestions on their own experiences whenever possible. Thus, in the case of needs and concerns specific to a particular disability, the ranking of a recommendation may be low not only because few people believe that it is important but also because only a subset of the participants have had experience with the disability in question. However, since many of the recommendations are common to most disabilities this restriction does not pose a serious problem for the interpretation of the findings.

While there were many commonalities among the three groups of participants' views, there were also a number of interesting differences; both have implications for students and professors alike.

What Professors Can Do

The most remarkable aspect of the recommendations made concerning what professors could do to make teaching and learning easier and more effective for students with a physical disability is that most of these suggestions apply equally well to the teaching of non-disabled students. For example, the most frequently made recommendations in response to the question about what professors could do to facilitate learning were: flexibility with the content and format of assignments, delivering lectures clearly and making effective use of the blackboard or over-head projector. In addition to such recommendations, a variety of suggestions were also made concerning teaching students with specific disabilities.

While most recommendations listed in Table 1 appear to be "common sense" suggestions, discrepancies among the responses of the three groups of participants show that what is common sense to members of one group is not necessarily so for members of another group. For example, the most frequent responses of students concerned lecture style, written handouts, permission to audiotape lectures, and blackboard organization.

Professors, on the other hand, especially those who have had no experience teaching students with a disability, did not consider these to be key issues. While many professors in both groups recommended that teachers meet with their physically disabled students regularly outside class time and that they inform themselves about how the student's disability affects learning in their courses, few students felt that this was important. Similarly while the suggestion that professors should arrange for able-bodied classmates to help the physically disabled student ranks in the middle for professors who have taught students with a physical disability, not one of the disabled students made this recommendation. It appears, thus, that priority items for students with physical disabilities include suggestions which would benefit able-bodied students as well. Furthermore, their priority items do not require additional time or energy from the professor.

What Disabled Students Can Do

The most frequent recommendation of all three groups of respondents to the questions which dealt with what students could do to facilitate teaching and learning concerned educating the professor about the needs of students with a physical disability. However, in many of their recommendations concerning what students with disabilities could do to improve the process of education, students and professors differed substantially. For example, as Figure 2 shows, while the students recommended working harder, planning ahead and obtaining good lecture notes, few professors made these suggestions. Many professors but few students recommended that students give specific suggestions and feedback concerning their courses, that students meet with professors before the beginning of term and that they identify potential course problems before they arise. Here, it appears that students stressed what they could do for themselves while the professors focused more on what the student could do to help them to be better teachers. Students with disabilities may want to heed both types of suggestions.

What Institutions Can Do

In response to the questions concerning what institutions could do to facilitate teaching and learning the most frequent recommendation made by both the disabled students and by the professors who taught them was that the institution establish and maintain a center

for disabled students which serves as a drop-in center, provides services, disseminates information and sponsors "awareness" and programs. Other frequently made recommendations concerned wheelchair accessibility, availability of volunteers (or paid personnel) as readers, note takers, etc., and availability of tape recorders for student use.

As Figure 3 shows, while there were some glaring discrepancies among the three groups, in many of the 35 categories there was reasonably good agreement between students with a disability and the professors who have had experience teaching them concerning what services, facilities, and equipment are needed. Suggestions made by professors who have not taught students with disabilities, however, were often unrelated to recommendations made by the other two groups. This was especially true in the areas of services and equipment.

As for needed facilities, while everyone agrees that campuses should be accessible to wheelchairs, it seems as though professors are more likely to focus on specific architectural modifications for wheelchair users while the students seem to be more concerned about adequate table heights, a place to locate wheelchairs when these are not in use and about physical changes to accommodate students with visual impairments. The differences highlight that professors generally think of wheelchair accessibility while the students are more concerned about the environment within the institution as well as about the facilities needs of students with disabilities other than those which require the use of a wheelchair. The students' recommendations should sensitize college and university communities to the reality that facilities for students with sensory impairments also should be given attention. These changes can usually be effected with minimal cost (cf. Evans, Bissonnette, Tesler & Dorfman, undated).

There is not very good agreement among the three groups in the "other recommendations" category. For example, many professors but few students feel that the institution should provide a "welcoming atmosphere" and that it should sponsor "awareness and sensitization" programs. Professors who have taught students with disabilities, but not those who have no experience with disabled students, also recommend that the institution provide a forum for research and discussion. Students, on the other hand, appear to be more concerned with changes in registration and admissions procedures. Not surprisingly, both students and faculty alike have proposed institutional changes which would make their own lives easier.

The discrepancies among the three groups underscore an axiom which many espouse but few follow. First of all, professors and students need to be informed about each other's concerns and needs. Because of their different vantagepoints, these do not always coincide. Secondly, professors who have not taught students with disabilities are often unaware of what is actually needed by disabled students and their professors. Third, students with different disabilities have differing needs and concerns.

Since professors, able-bodied students and students with a physical disability often have different views and priorities (cf. Barile, 1985), institutions planning changes to better accommodate and educate students with disabilities should involve and listen both to students with various disabilities as well as to the professors who have taught them. Only in this way will well-meaning institutions effect needed modifications and changes.

Other Findings

An interesting although unexpected finding of the study is that most experienced college and university professors have taught at least one disabled student. While this phenomenon accounts for one of the most troublesome deficiencies of this study, since it upset the systematic sampling and also resulted in a small comparison group of professors who have not taught disabled students, nevertheless, we feel that it is an important finding. While many institutions recognize the need to provide adequate services, equipment, resources and facilities for students with physical disabilities, the argument is frequently made that the cost of meeting these needs is not warranted by the number of disabled students on campus. Humanitarian considerations aside, knowing that more than half of the faculty are also affected by lacunae in these areas may encourage educational institutions to reexamine their funding priorities.

Conclusions

While the methodology of this investigation has a number of limitations, many of the recommendations listed were of considerable priority to all groups of participants. Since it is important to provide higher education to people with physical disabilities and since, as the Office des Personnes Handicapées du Québec noted, it is an unsupportive environment which makes a person with a physical disability handicapped (OPHQ, 1984), the

suggestions made by those most intimately involved with the education of disabled students deserve careful and detailed examination by professors, students with a disability, and college and university professionals and administrators.

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AUTHOR NOTES

This research was funded by a grant from Fonds F.C.A.R. pour l'aide et le soutien à la recherche. Reprints are available from Catherine Fichten, Department of Psychology, Dawson College, 350 Selby St., Montreal, Quebec, HEZ 1W7.

Completion of this study required the collaboration of many people. A log kept throughout the project indicates that in addition to the 128 people who took the time to complete our questionnaire at least 25 others made significant contributions during various phases of the study. We are grateful to the participants and to those who helped in other ways with the realization of this project.