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Department of Communications

Gouvernement du Canada
Ministère des Communications

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1990

REPORT OF THE

BLISS SURVEY

OF

SPEECH IMPAIRED CANADIANS

ed by Deborah A. Finn
ent of Communications

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BLISS SURVEY
OF
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Prepared by Deborah A. Finn
Department of Communications
1990

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Paid from Deb. Finn 19-07-90

REPORT OF THE BLISS SURVEY OF SPEECH IMPAIRED CANADIANS

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Background

The basic aim of the BlissTel project is "to create, for people who are severely physically handicapped and who use Blissymbols to communicate, a telecommunications system compatible with the ordinary phone system." BlissTel can be described as "a telephone system compatible, non-vocal, computer-based, text, graphics and Blissymbolics, data telecommunication workstation."

A survey was required to determine the needs and limitations of potential BlissTel users. The Department of Communications (DOC) was given this task, which was devised to meet the information requirements of its project partners: Blissymbolics Communications International (BCI), the body responsible for the development and standardisation of Blissymbols; IDON Corporation, which is developing the enabling software for the project; and researchers from the McKay Centre at McGill University (the Montreal Group), who tested the successful prototype system during 1986.

The BlissTel project has allowed all interested parties to participate in a four year project to take to market this prototype by contracting to have the necessary enhancements and new developments fulfilled. Two years remain in the project. The following are the general requirements:

1. To upgrade existing user and master dictionaries to include the complete Bliss vocabulary.
2. To enhance the current system to include both official languages.
3. To make the software more robust and suitable for operation outside the laboratory.
4. To establish a distribution, training and support mechanism for the software to Bliss users in Canada and abroad.

In December 1986, system testing began with the help of four Montreal-area cerebral palsied people in a laboratory setting. As part of the effort to get more speech impaired people involved in the project, there was a need to identify how many people there are in Canada who need such a system, can learn to use it and what are their computer equipment needs. Since this information was not available in any one place, information sources had to be identified in order to locate the speech impaired people who might participate in a needs survey. Following this survey, larger-scale testing of the Bliss telephone system can proceed.

The survey's intent was to locate the speech impaired and to identify the causes of their disabilities and their levels and modes of communications. As part of this exercise, it was necessary to gather information on their use of augmentative communications languages and systems other than Blissymbols (also referred to in this document as Blissymbolics). The survey also looked at the use of computers among these respondents, their methods of computer access and their capacities for computer-to-computer communications. Questionnaires were distributed throughout the provinces and the territories.

Genesis of the BlissTel Survey Project

The following is a chronological account of the planning and preparation of the BlissTel survey of speech impaired citizens:

July, 1987:

Meeting with (BCI) in Toronto to discuss need for survey.

Meeting at IDON to discuss survey content, overall strategy for all phases of BlissTel project.

Identification of preliminary information sources:

- i) list of provincial contacts in the various secretariats for disabled (or equivalent bodies), supplied by Secretary of State, Secretariat for the Disabled.
- ii) list of provincial government departments. Source: April-June/87 provincial government directory.

First drafts of questionnaire and covering letters to be sent to provincial bodies identified as likely information sources.

August, 1987:

Contact with Federal Information Collection Group (FIGG), Statistics Canada for advice on survey design: teleconference Aug. 19, meeting at DOC's Communications Research Centre (CRC), August 27.

Contact with DOC's Access to Information and Privacy Secretariat (ATIP) for assistance with obtaining necessary approvals to conduct the survey.

September, 1987:

Project description drafted (September 11).

First contact letters sent to provincial governments, disabled secretariats, etc. (September 17).

Formal written reply to FIGG concerns re: survey intent, project description and possible problems to be encountered during information collection (September 22).

First reply from a provincial government (Alberta) (September 23).

November, 1987:

dBase III Plus file set up to track outgoing correspondence and incoming replies.

December, 1987:

dBase is implemented, refined and first reports are run.

February, 1988:

Personal Information Bank Registration form is completed and forwarded to ATIP (February 26).

March, 1988:

Meeting with BCI to review progress, obtain new leads and source materials to assist in design of survey questions.

June, 1988:

Personal Information Bank Registration number obtained (June 8).

Meeting with IDON, BCI and representative from the Montreal Group to review overall progress of project, including a review of the survey preparation and necessary modifications to the questionnaire.

Summary of Methodology Employed

Contacts

After generating a preliminary list of possible information sources, the first wave of letters was mailed. Replies to these letters tended to fall into three broad categories:

1. Those referring us to other departments, agencies, institutions, etc.;
2. Those indicating a number of individuals who wished to participate. In some cases, a list of names and addresses was supplied, while in others, a general number of questionnaires was requested, to be distributed by the organization replying;
3. Those indicating that they were unable to help us in locating potential survey respondents.

Many of the responses received were a combination either of types 1 & 2 or 1 & 3. Copies of the letters sent may be found in Appendix A.

From September 1987 to September 1988, replies were received, both written and by telephone, from people who wished clarification of the survey's intent, the nature of the project, as well as advice on other organizations that could be of assistance. Many groups offered to spread the word on our behalf through such means as newsletters and letters to parents, teachers or clients and/or by offering to distribute the questionnaires for us. An announcement was prepared, which could be circulated by these organizations, in which interested parties were given general information about the survey and the project. The announcement included the departmental address for requesting copies of the questionnaire.

dBase Input

Two dBase databases were set up to track information related to this project. The first database was created to track the organizations and individuals who were contacted in the effort to compile a mailing list for the survey. The dBase file recorded the name of the institution (department, agency, school board, hospital etc. are all considered as "institutions" for this purpose), the name of the contact person, the address, city, province, postal code, reply (Yes or No), reply date, referrals, number of candidates identified and (where a reply was received from someone other than the original addressee) the name of the person written to first.

Input to this database was performed on an as-required basis, with record updating as replies were received. At its completion, the database contained 1390 records. One record = one letter sent and/or reply received.

Information in this database was arranged so that we could easily determine the number of organizations which were contacted in each province or territory, how many of these replied and how many possible respondents were located in each province. Notations were made wherever questionnaires were requested in French. In this way, we were able to calculate the minimum number of English and French copies of the questionnaire which would be required. (The questionnaire forms were printed in separate runs for the two languages, as the majority were needed in English.)

The database also simplified the cross-checking required to ensure that records were not duplicated and that appropriate actions were undertaken for all feasible referrals.

Questionnaire Development

At the same time the mailing list was being compiled from the first database, the questionnaire was being developed. With the assistance of the other project partners, questions were devised that would yield useful information and which were also easy to understand. The number of questions was kept as low as possible, as it was felt that respondents would be unlikely to answer a questionnaire that was longer than four pages. The questionnaire was given to IDON, BCI and the Montreal Group for final review at the beginning of July 1988. Revisions and adjustments to the questionnaire layout were required and it went to the printers in late September 1988.

Questionnaire Distribution

A total of 3,263 copies of the questionnaire (2860 English and 403 French) were distributed with post-paid envelopes between October 12 - 14, 1988 and responses were requested by November 30. By July 1989, when the last response was received, a total of 597 people had replied to the survey (536 English and 61 French).

Distribution lists were divided to accommodate the two types of mailouts to be handled: those copies which were sent to specific individuals who personally requested inclusion in the survey; and those copies which were sent to a third party for distribution to potential

respondents. This latter category included individuals whose names were supplied without addresses, as well as anonymous groups of people (ie, a request was made for X number of copies). These third-party distributions ranged in size from one to 200 copies requested.

Security

The best methods of ensuring the security of survey responses were investigated in consultation with DOC's Security and Communications Support (DSCS) personnel. At issue was the protection of information stored in electronic format. It was determined that the best method for maintaining security was to back up the database after each updating session, using alternating sets of high density disks, which were then kept in a locked cabinet. The computer on which the database was resident was locked each night and was housed in a locked room. Tape backups of the system were also made and kept in a secure location.

General Results

The second dBase database was created to record the survey responses and it follows the same format as the questionnaire. Copies of the questionnaire are attached, showing the number of respondents who replied to each question (Appendix C). Most questions required the respondent to put check marks in boxes beside pertinent data.

In the database, these responses were recorded as 0 when no answer was given and 1 where a check mark was placed. In some questions, eg., Question 4. a) (cause of disability), more than one box was often checked. Fields were therefore added to the database to indicate where multiple responses were given. If a respondent checked more than one disability as a cause of speech impairment, then the multiple disability box was marked with a 1. If a single disability was reported, the multiple disability box was marked with a 0.

Other special notations that were recorded in the database include codes to indicate when a respondent indicated no visual impairment, but reported the need for special adaptations for computer use. Question 12, which asks about access to phone lines, records the use of a private lines, switchboards and by special notation, party lines.

The survey responses have been broken down, province by province, into two versions: the overall results and the results by language group. The breakdowns progress from the general to the more specific kinds of information. They are appended to this report and cover the following areas:

1. a comparison of the number of questionnaires requested and replies received;
2. the number of responses per question in the survey;
3. breakdown of respondents by disability;
4. breakdown of respondents by type of residence;

5. respondents using communications boards (reports contents by number of respondents who identified a particular symbol language or system);
6. reading material reported by respondents, broken down by grade level;
7. breakdown of respondents by type of computer used;
8. reading material by grade level, computer and disability;
9. breakdown of applications of computers by disability;
10. summary of peripheral devices used by respondents;
11. printers identified by respondents;
12. input devices by computer and disability;
13. special adaptations required for computer use;
14. speech synthesizers reported by respondents;
15. modems being used by respondents;
16. communications board users by language/system and computer type;
17. respondents by type of phone line; and
18. the description of respondents' speech.

While this is by no means a definitive study of the speech impaired in Canada, we were able to discern particular characteristics of the responding group. The results are briefly summarized in the following pages. The detailed breakdowns are appended to this document.

In some cases, numbers may appear to be anomalous. For some of the multiple choice questions, the respondent indicated more than one answer, as in the case of question 4. a), "What disability(ies) caused your speech impairment". Therefore, the total number of responses to the overall question may exceed the total number of completed questionnaires returned to the Department. In other cases, a respondent who left a yes/no question unanswered has gone on to answer one or more supplementary questions in a section. Furthermore, respondents were instructed to leave blank any question that was non-applicable.

It should be noted that breakdown tables showing that no respondents met a specific set of criteria (eg., Reading Material by IBM PC Users Reading at Pre-school Level, by Disability) have not been included in this report.

List of Appendices

A - Letters to possible information sources

The first of the sample letters in this Appendix is typical of the request that was sent to various provincial government departments and agencies, asking for help in locating institutions, associations and in some cases, individuals who might be able to supply names and addresses for possible survey respondents. The second is an example of the request sent to contact people/organizations recommended by the departments we wrote to first.

B - Comparison of requests and replies

A total of 3,263 copies of the questionnaire were requested and 597 were returned. Of those sent out, 2,860 were in English and 403 in French. The returns were 536 English and 61 French.

C - Questionnaire

The copy of the questionnaire included as Appendix C shows in bold type the number of responses given for each question in the survey. The English and French responses are in parentheses.

D - Breakdown of responses by disability

Among the respondents who reported a single disability, most identified cerebral palsy as their primary cause of speech impairment (163 out of 595 who answered this question.) Among those who identified more than one disability, most respondents reported developmental delay and one or more additional disabilities (111 out of 137 multiple disabled respondents.) The "other" causes of speech impairment do not appear to show any one specific cause more often than others.

However, a variety of non-specific head and brain injuries have been termed for the purposes of this report as "neurological". Relatively few of the respondents who identified "other" causes were specific in their descriptions, using vague phrases such as "happened at birth" or "lack of oxygen". Where respondents reported Down Syndrome under "other", the information has been recorded as "developmentally delayed". Where autism was reported, it was included with "behaviour/learning" disability.

E - Breakdown of respondents by type of residence

55% not majority

Most respondents live in the family home (329 out of 595 who identified living arrangements), regardless of whether they reported a single or multiple disabilities. Only eight respondents said they live in residential schools.

F - Respondents using communications boards

A total of 211 respondents said they use or have used a communications board. Of these, the majority (87) use Blissymbols to communicate. Next most commonly used language or

35%
111%
da 211

system is Picture Communication Symbols (33). Forty of the respondents identified mixed contents on their boards. None reported the use of Spec or Rebus.

G - Reading material

The reading levels were divided into seven groupings: pre-school, which included nursery school, pre-kindergarten and kindergarten; grades 1 to 4; grades 5 to 8; secondary, which includes grades 9 to 13; post-secondary, including college and university; special training, where respondents identified reading level as "special class" or "trainable retarded", etc.; and unknown level. Most respondents were at the grade 1 to 4 reading level, with 93 reading picture books, 89 reading books, 52 reading newspapers and magazines and 23 reading "other" print material. The most commonly identified "other" material was simple words, sentences or letters (17 responses), followed by school work, flash cards or textbooks (14). Two Ontario respondents listed Blissymbolics as "other" reading material. The smallest number of respondents reported post-secondary reading levels, with 4 identifying books and newspapers and magazines and one reading picture books.

H - Breakdown of respondents by computer used

By far, the majority of respondents (152 out of 292 who reported past or present computer use) said they use or used the Apple IIe computer. This was true both of the respondents using only one and those using two or more makes or models of computer. Most of these Apple users report cerebral palsy as the cause of their speech impairment. Those who reported stroke as the cause of speech impairment were also the smallest group reporting computer use.

Next to the Apple IIe in popularity was the Commodore (79 reported). The IBM PC ranked third overall (32 reported) of the four makes named in the questionnaire. Under the "other" make/model category provided in this question [9.b)v)], 22 respondents identified Apple computers other than the Apple IIe, a further 7 IBM-compatibles and one Commodore Vic 20. Sixteen Ontario respondents identified Icon computers in this category. The rest were divided among various other and lesser-known makes, but 18 of the respondents who said they used computers did not identify any make at all. A list of "other" makes/models is included in Appendix H.

I - Reading material by level, computer and disability

The Apple IIe is the computer being used most frequently by readers at all levels. Most of these respondents are at the grade 1 to 4 reading level, with an overall total of 59 reading picture books and 43 reading books. Newspaper and magazine readers are close behind with 40. The lowest response was from Macintosh users, who do not tend to read at one particular level. A single response at each level from grade 1 - 4 to special training was recorded for Macintosh users.

J - Applications of computer, by disability

The majority of respondents who answered this section use computers to play games (255 responses). This is true for every make/model of computer identified in the questionnaire, with the single exception of the Macintosh, where games tied with communications and word

processing, with one response each. The second most popular application is communications (127) and the least used is online searches (5).

Most of the people using computers for games (91 out of 225) identified cerebral palsy as their primary cause of speech impairment. In fact, cerebral palsied respondents were the most frequent users of all applications listed in Question 11. Those reporting more than one disability as the cause of speech impairment were the second highest users of the various applications. Again, the respondents who reported stroke were the least likely to identify computer use and therefore reported the fewest computer applications.

K - Summary of peripheral devices used by respondents

The most frequently identified peripheral device used with computers is the printer (203 of 292 computer users reporting), followed by floppy disk drives (199), synthetic speech outputs (83) and hard disk drives (72).

L - Printers

The most popular printers in use are Imagewriter or Imagewriter II and the various models of Epson printers (31 identified for both these makes). Seventeen Panasonic printers were also identified.

M - Input devices for accessing computers

The keyboard is the most used method of accessing computers (188 responses), with adapted keyboards being the second most reported input device (65). Twenty respondents said they use a Unicorn keyboard, either alone or in conjunction with another device. Head or pillow switches were the most commonly identified switches, with 11 users. Fourteen of the 39 respondents who use "other" input devices did not specify what they are using. Among those who did, there was no one item that was reported more than twice. However, among the "other" devices were such items as Unicorn boards or overlays, joysticks, keyguards and interfaces for Touch Talkers and Light Talkers.

N - Special adaptations required for computer use

This question in the survey, Question 9. h), was intended as a follow-on to the preceding question, "Do you have a visual impairment". The respondents who said they had no visual impairment and then proceeded to indicate the special adaptations they needed for computer use outnumbered those respondents who are visually impaired and said they needed adaptations. Large print is needed by 19 visually impaired and 22 non-visually impaired respondents. A voice output was identified by 19 visually impaired and 52 of the non-visually impaired and "other" adaptations were reported by 8 and 9 respondents respectively. Where visual impairment was reported, the most common "other" adaptation was the use of glasses (5 responses). Among the non-visually impaired, the "other" adaptations tended to be input devices which were generally also reported in Question 9. f) ("How do you access your computer?")

O - Speech synthesizers

Ninety-four respondents report the use of speech synthesizers but only 78 of them also use computers. The tables in Appendix O show the breakdowns of speech synthesizers indicated by people who use one make/model of computer, more than one and no computer at all.

Touch Talkers were the most frequently reported speech synthesizers (20 responses), with Vo'ice a close second at 19. However, most of the people replying to this question indicate that they use "other" speech synthesizers, including Echo (6 responses), Handivoice (5) and Talking Bliss Apple (3). Of the speech synthesizers named in this question, Speech Pac is used the least frequently, with a total of 13 responses.

P - Modems

Only 27 respondents report the use of a modem, with 12 of these respondents in Ontario and 9 in British Columbia, 3 in Alberta and 1 each in Manitoba, New Brunswick and Northwest Territories. The most frequently identified modem (8 responses) is the Packard Bell. Where baud rate was identified, most are operating at 1200 bps (16 out of 27).

Q - Communication board contents by computer

As we stated previously, Bliss was the most frequently reported augmentative language or system and Apple IIe the most frequently used computer. Twenty-four Bliss users have Apple IIes. Five of the respondents using Picture Communication Symbols are also Apple IIe users. Seventeen of the people with mixed contents on their communications boards are also using Apple IIes.

R - Respondents by type of phone line

The overwhelming majority of respondents who could have access to a phone line or jack would be using a private line (294), with 64 respondents' lines going through a switchboard. There were also four respondents who said they were on party lines.

S - Speech

A total of 268 respondents reported that they are understood most of the time by people familiar with them. Of this group, 73 have cerebral palsy, 68 are developmentally delayed, 6 have had strokes and only one respondent in this category gave no indication of the cause of their speech impairment. Among the respondents who reported that their speech is never understood, 39 have cerebral palsy and developmental delay and multiple disabilities were both cited by 25 people. The smallest response in this category was from one person with a behaviour/learning disability.

Almost half of the 173 respondents who described their speech as "other" (97 responses) said that they were non-verbal and a further 32 said they were understood sometimes by people with whom they were familiar. Only one of these respondents declined to identify an underlying cause of speech impairment. The largest group of people who responded in this category (59) have multiple disabilities, while 37 have cerebral palsy and 28 identified the

cause of their disability as "other". Only 5 of those who described their speech as "other" said they were hearing impaired.

Conclusion

From the returns we received, we can determine that the people in our survey sample are most likely to have cerebral palsy, live in the family home and that it is unlikely they will be computer users. Their speech is likely to be understood by people who are familiar with them, eg., family and friends, although they may have difficulty in being understood by strangers.

Those respondents who use or have used computers tend to be Apple IIe users. They generally read at a grade 1 to 4 level, choosing picture books or books as their main reading material. Most of them will use a conventional keyboard to access their computer. If adaptations are required for access, a voice output is the one most likely required. If these people use an augmentative language or symbol system, it will probably be Blissymbolics. While they will generally have access to a private phone line or phone jack, they are less likely to have a modem.

APPENDIX A Letters to Possible Information Sources

Informatics Applications
Department of Communications
Communications Research Centre
3701 Carling Avenue
PO BOX 11490 Station H
Ottawa, Ontario
K2H 8S2

DAI 5025-8

September 24, 1987

Addressee

Dear :

In support of some current research conducted in conjunction with IDON Corporation of Ottawa, the Easter Seal Communications Institute and a group of researchers in Montreal, the Department of Communications (DOC) is planning a survey of speech impaired citizens. A description of the R&D project is enclosed.

I am compiling a list of people in each province who have a speech impairment, other than that which results from hearing impairment; from causes such as cerebral palsy, stroke and in some cases, the mentally retarded and I would appreciate your assistance. Could you provide me with names and addresses for people in your province who are speech-impaired? I am interested in locating both people who are in institutions and those who live at home, Bliss users and non-Bliss users.

It is our intention to identify and survey as many possible users as we can to determine the best computer equipment and transmission methods to effectively meet their needs. Any personal information about specific individuals will be kept strictly confidential, according to the provisions of the Privacy Act. However, DOC will be happy to share our general survey results with you.

I am also enclosing a draft of the survey questions, to give you a clearer idea of the kinds of information we are seeking. Please bear in mind that this questionnaire, which still needs to be translated into French, is in very rough form and is not intended as the final version.

Your cooperation in this matter would be greatly appreciated. If you have any questions about the information I am seeking, please don't hesitate to call me at (613) 990-4297, or write to me at the above address.

Yours truly,

Deborah Finn
Informatics Project Officer

Informatics Applications
Department of Communications
Communications Research Centre
3701 Carling Avenue
PO BOX 11490 Station H
Ottawa Ontario
K2H 8S2

DAI 5025-8

October 23, 1987

Addressee

Dear :

In support of some current research conducted in conjunction with IDON Corporation of Ottawa, the Easter Seal Communications Institute and a group of researchers in Montreal, the Department of Communications (DOC) is planning a survey of speech impaired citizens. A description of the R&D project is enclosed.

(Contact's name) of *(contact's organization)* suggested that I contact you for assistance in locating *(province)* who could benefit from this project. I am compiling a list of people in each province who have a speech impairment from causes such as cerebral palsy, stroke and in some cases, the mentally retarded, as well as those people who are hearing impaired and have a reading comprehension of less than a Grade 4 level.

Would it be possible for you to help us to locate these people in order to include them in a preliminary survey to identify as many possible users as we can to determine the best computer equipment and transmission methods to effectively meet their needs? I would like to assure you that any information we collect on individuals will be kept strictly confidential. In order to proceed with our actual survey, we must first obtain a Personal Information Bank registration number from the Treasury Board, in accordance with the Privacy Act. This is to ensure the confidentiality of survey responses. No information can be released outside of this department, save in the form of general findings. Individual respondents will be known to the project team, only if they become participants in the trial.

Anyone who is interested in taking part in the survey can write to me at the address listed above, or have someone call me at (613) 990-4297. I am interested in locating both people who are in institutions and those who live at home, Bliss users and non-Bliss users.

Your cooperation in this matter would be greatly appreciated. If you have any questions about the information I am seeking, please don't hesitate to call or write to me at the above address and phone number.

Yours truly,

Deborah Finn
Informatics Project Officer

APPENDIX B Comparison of Number of Questionnaires Requested and Replies Received.

	Requested	Received
Alberta	409	38
British Columbia	165	25
Manitoba	113 (111 Eng., 2 Fr.)	22 (all English)
Northwest Territories	5	3
New Brunswick	133 (66 Eng., 67 Fr.)	23 (20 Eng., 3 Fr.)
Newfoundland	446	73
Nova Scotia	248	27
Ontario	1316 (1272 Eng., 44 Fr.)	289 (284 Eng., 5 Fr.)
Prince Edward Island	6	4
Quebec	305 (15 Eng., 290 Fr.)	71 (18 Eng., 53 Fr.)
Saskatchewan	107	20
Yukon	20	2
TOTALS:	3263 (2860 Eng., 403 Fr.)	597 (536 Eng., 61 Fr.)

APPENDIX C Questionnaire - Number of Responses per Question

1. Name Total: 598 (537 English, 61 French)
2. Date of Birth / /
 month day year
3. Address
City/Town Province Postal Code Phone Number
4. a) What disability(ies) caused your speech impairment?
 - i) cerebral palsy **233 (206 E, 27 Fr)**
 - ii) developmentally delayed **240 (227 E, 13 Fr)**
 - iii) stroke **24 (23 E, 1 Fr)**
 - iv) hearing impairment **94 (79 E, 15 Fr)**
 - v) behaviour/learning **59 (55 E, 4 Fr)**
 - vi) other (please explain) **111 (107 E, 4 Fr)**

137 respondents (135 E, 2 Fr) identified more than 1 disability.
- b) What best describes your speech?
 - i) understood most of the time by people familiar to me **268 - (224 E, 44 Fr)**
 - ii) understood most of the time by everyone **45 (39 E, 6 Fr)**
 - iii) never understood by anyone **109 (105 E, 4 Fr)**
 - iv) other (please explain) **173 (166 E, 7 Fr)**
5. Do you live (check the one that best describes you):
 - i) in the family home **329 (290 E, 39 Fr)**
 - ii) independently **12 (12 E)**
 - iii) independently with attendant care **25 (23 E, 2 Fr)**
 - iv) in a group home **106 (95 E, 11 Fr)**
 - v) in a hospital **41 (39 E, 2 Fr)**
 - vi) in a residential school **8 (8 E)**
 - vii) other (please explain) **75 (68 E, 7 Fr)**

6. a) Grade level (if known) for reading print material: 425 (395 E, 30 Fr)
 b) What kind of print material do you read? (check as many as apply to you.)
- i) books 155 (136 E, 19 Fr)
 - ii) picture books 222 (204 E, 18 Fr)
 - iii) ewpapers, magazines 132 (115 E, 17 Fr)
 - iv) other (please describe) 55 (44 E, 11 Fr)

177 respondents (157 E, 20 Fr) identified more than 1 kind of print material. 25 respondents (8 E, 17 Fr) who indicated a reading level did not identify any print material.

- c) How many years did it take you to learn to read at your present level? 233 (204 E, 29 Fr)

7. Do you use sign language to help you communicate?
 Yes 210 (177 E, 33 Fr) No 355 (327 E, 28 Fr)

8. a) Do you or have you used a communication board?
 Yes 211 (182 E, 29 Fr) No 354 (322 E, 32 Fr) 59%

- b) How many symbols or words do you have on your board? 182 (158 E, 24 Fr)

- c) How many words or symbols from the following graphic systems appear on your board?

Blissymbolics 87 (78 E, 9 Fr)	Oakland Schools Pictures 2 (2 E)
Picsyms 20 (20 E)	Pictures Please! 6 (6 E)
Picture Comm. Symbols 33 (31 E, 2 Fr)	Core Picture Vocabulary 1 (1 E)
Worldsign 5 (1 E, 4 Fr)	Write 6 (4 E, 2 Fr)
Speec 0	PIC 15 (9 E, 6 Fr)
Rebus 0	other 61 (54 E, 7 Fr)

9. a) Do you or have you used a computer? Yes 292 (260 E, 32 Fr) No 275 (246 E, 29 Fr)

- b) What kind of computer is it? 49%

- i) IBM PC 32 (28 E, 4 Fr)
- ii) Apple IIe 152 (131 E, 21 Fr)
- iii) Macintosh 8 (6 E, 2 Fr)
- iv) Commodore 79 (70 E, 9 Fr)
- v) other 76 (70 E, 6 Fr)

51 respondents (41 E, 10 Fr) identified more than 1 computer.

c) Does your computer have (check as many as apply):

- i) a hard disk drive 72 (68 E, 4 Fr)
- ii) a floppy disk drive 199 (176 E, 23 Fr)
- iii) a printer 203 (182 E, 21 Fr)
- iv) a synthetic speech output 83 (76 E, 7 Fr)

d) What kind of printer is it ? (make/model): 185 (169 E, 16 Fr)

e) Is your printer connected to more than one computer?

Yes 25 (21 E, 4 Fr) No 203 (146 E, 57 Fr)

f) How do you access your computer? (check as many as apply to you):

- i) a computer keyboard 188 (165 E, 23 Fr)
- ii) a pointer (eg. head stick, mouth stick) 14 (10 E, 4 Fr)
- iii) an adapted keyboard (please describe): 65 (61 E, 4 Fr)
- iv) a switch (please describe): 37 (37 E)
- v) other (please explain) 39 (37 E, 2 Fr)

53 respondents (52 E, 1 Fr) identified more than 1 means of access.

g) Do you have a visual impairment? Yes 80 (75 E, 5 Fr) No 275 (219 E, 56 Fr)

h) What special adaptations do you require for computer use?

- i) large print 43 (41 E, 2 Fr)
- ii) voice output 77 (75 E, 2 Fr)
- iii) other (please describe): 20 (16 E, 4 Fr)

26 respondents (24 E, 2 Fr) identified more than 1 adaptation. 60 respondents (58 E, 2 Fr) who said they were not visually impaired identified adaptations.

10. Do you or have you used:

- i) Speech Pac 13 (13 E)
- ii) a Touch Talker 20 (20 E)
- iii) a Light Talker 14 (13 E, 1 Fr)
- iv) Voice 19 (17 E, 2 Fr)
- v) other 43 (37 E, 6 Fr)

11. In what ways do you use your computer? (check as many as apply to you.)
- i) communications 127 (117 E, 10 Fr)
 - ii) word processing 96 (77 E, 19 Fr)
 - iii) games 229 (202 E, 27 Fr)
 - iv) accounting 8 (7 E, 1 Fr)
 - v) online searches 5 (5 E)
 - vi) keeping records 12 (12 E)
 - vii) other (please explain): 96 (91 E, 5 Fr)
12. a) Could you have access to a phone line/jack? Yes 388 (359 E, 29 Fr) No 129 (97 E, 32 Fr)
- b) Is it (check one):
- i) a private line? 295 (273 E, 22 Fr)
 - ii) connected to a switchboard? 62 (56 E, 6 Fr)
- 4 respondents (3 E, 1 Fr) said they have party lines.
13. a) Do you have access to a modem? Yes 42 (41 E, 1 Fr) No 390 (330 E, 60 Fr)
- b) What kind is it (make, model and speed)? 43 (43 E)

This questionnaire was filled in by (if different from name and address on Page 1):

Name
 Address
 City/Town Province
 Postal Code Phone Number

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE.

CONFIDENTIAL WHEN COMPLETED.

Personal Information Bank registration number: DOC/BRT-150-02878

APPENDIX D Breakdown of Responses by Disability

	CP	Dev. Delay	Stroke	Hearing Impaired	Behaviour/ Learning	"Other"	Multiple Disabled
Alberta	15	11	0	11	0	9	7
British Columbia	21	0	1	2	0	4	3
Manitoba	12	3	0	4	0	8	4
N. B.	5	10	3	1	2	6	4
Nfld	20	35	0	5	9	14	11
NWT	3	0	0	0	0	0	0
N. S.	8	11	1	6	7	1	6
Ontario	112	135	16	43	26	62	85
PEI	2	2	0	0	0	0	0
Quebec	27	16	2	21	5	4	3
Saskatchewan	8	16	1	1	10	2	14
Yukon	0	1	0	0	0	1	0
TOTAL	233	240	24	94	59	111	137

Breakdown of Responses where Only 1 Disability is Reported

	CP	Dev. Delay	Stroke	Hearing Impaired	Behaviour/ Learning	"Other"
Alberta	13	5	0	9	0	4
British Columbia	18	0	1	0	0	3
Manitoba	9	2	0	1	0	6
N. B.	5	7	2	1	0	4
Nfld	17	27	0	4	1	12
NWT	3	0	0	0	0	0
N. S.	5	5	1	4	3	3
Ontario	64	63	13	18	7	38
PEI	2	2	0	0	0	0
Quebec	25	14	1	21	3	4
Saskatchewan	2	3	0	0	0	1
Yukon	0	1	0	0	0	1
TOTAL	163	129	18	58	16	74

Breakdown of Responses where More than 1 Disability is Reported

	CP	Dev. Delay	Stroke	Hearing Impaired	Behaviour/ Learning	"Other"	Multiple Disabled
Alberta	2	6	0	2	0	5	7
British Columbia	3	0	0	2	0	1	3
Manitoba	3	1	0	3	0	2	4
N. B.	0	3	1	0	2	2	4
Nfld	3	8	0	1	8	2	11
N. S.	3	6	0	2	2	0	6
Ontario	48	72	3	25	19	24	85
Quebec	2	2	1	0	2	0	3
Saskatchewan	6	13	1	1	10	1	14
TOTAL	70	111	6	36	43	37	137

Breakdown of "Other" Responses by Disability, where Only 1 Disability is Reported.

	Description		
Alberta	3 neurological 1 Rubella syndrome	Ontario	2 immature larynx 10 unspecified 10 neurological 1 alcohol syndrome 3 multiple sclerosis 2 brain tumour 1 hydracephalus 1 cerebellum ataxia 2 Apraxia 2 regressive mental disease 1 Saggittal Craniosynostosis 1 Rubella syndrome
Subtotal	4		
British Columbia	1 brain stem injury 1 birth 1 MS		1 jaw injury 1 degenerative disorder
Subtotal	3	Subtotal	38
Manitoba	1 congenital hypothyroidism 2 degenerative luko dystrophy 1 congenital 1 brain injury 1 Reye's syndrome	Quebec	1 car accident - head injuries? 1 cancer: tongue & larynx 1 encephalitis, part paralysis 1 microcephalic/psycho-motor ret
Subtotal	6	Subtotal	4
New Brunswick	1 throat cancer 2 MS 1 polio	Saskatchewan	1 degenerative disease
Subtotal	4	Yukon	1 birth defect
Newfoundland	4 unspecified 3 cleft palate 1 organic brain disease 1 blood disorder 1 impaired larynx 1 brain injury 1 surgery during childhood	TOTAL	74
Subtotal	12		
Nova Scotia	1 premature birth & cleft palate		

Breakdown of "Other" Responses by Disability, where More than 1 Disability is Reported.

	Description		
Alberta	1 submucosus cleft palate 1 physical abnormality 2 birth defect 1 hypotonic muscles	Ontario	1 chromosome defect 2 cong. rubella 1 from birth 1 convulsive disorder 1 tuberous sclerosis 2 epilepsy 2 neurological damage 1 Pradar-Willi Syndrome 1 heart trouble 1 hydrocephalus-meningocele 1 hyperkinetic 1 stuttering 2 seizure disorder 1 Muscular dystrophy 1 unspecified multiple handicaps 1 velo cardiofacial syndrome 1 illness due to ear infection 1 cleft palate 2 microcephalic 1 Reyes syndrome 1 meningitis 1 spina bifida
B. C.	1 near drowning		
Manitoba	1 lack of oxygen at birth 1 mucopolysaccharide disease		
N. B.	1 carotid occlusion 1 oral-motor disorder		
Nfld	1 undiagnosed birth defect 1 epilepsy		
		Subtotal	24
		Sask.	2 visual 1 unknown
		TOTAL	37

NOTE: Some respondents report more than one cause of speech impairment under "Other" disabilities.

APPENDIX E Breakdown of Respondents by Type of Residence

	Home	Independ- dently	Independ- dently w/Care	Group Home	Hospital	Residential School	"Other"
Alberta	22	0	4	9	0	0	2
British Columbia	9	0	0	4	10	0	2
Manitoba	15	1	1	0	1	0	4
New Brunswick	6	0	0	0	0	0	17
Newfoundland	56	1	1	7	1	0	7
NWT	3	0	0	0	0	0	0
Nova Scotia	23	0	0	1	0	2	1
Ontario	132	10	17	72	27	6	25
PEI	4	0	0	0	0	0	0
Quebec	47	0	2	11	2	0	9
Saskatchewan	11	0	0	2	0	0	7
Yukon	1	0	0	0	0	0	1
TOTAL	329	12	25	106	41	8	75

Breakdown of Respondents with Cerebral Palsy by Type of Residence

	Home	Independently	Independently with Care	Group Home	Hospital	Residential School	"Other"
Alberta	8	0	0	4	0	0	0
British Columbia	5 0	0 0	0 0	3 0	8 0	0 0	1 room & board 1 foster home
Manitoba	8	1	0	0	0	0	0
New Brunswick	3	0	0	0	0	0	2 nursing home
Newfoundland	14	0	0	1	0	0	2 foster home
NWT	3	0	0	0	0	0	0
Nova Scotia	3	0	0	1	0	0	1 foster home
Ontario	31 0	5 0	4 0	11 0	10 0	1 0	1 foster home 1 Oaklands Regional Centre
PEI	2	0	0	0	0	0	0
Quebec	17 0 0	0 0 0	0 0 0	1 0 0	1 0 0	0 0 0	1 foster home 2 foster home 3 rehabilitation centre
Saskatchewan	2	0	0	0	0	0	0
TOTAL	96	6	4	21	19	1	15

Breakdown of Developmentally Delayed Respondents by Type of Residence

	Home	Independently	Independently with Care	Group Home	Hospital	Residential School	"Other"
Alberta	1	0	2	1	0	0	1 approved home
Manitoba	0	0	0	0	0	0	1 supervised home
New Brunswick	0	0	0	0	0	0	7 nursing home
Newfoundland	21	0	0	2	1	0	3 foster home
Nova Scotia	4	0	0	0	0	1	0
Ontario	37	0	5	15	0	0	2 nursing home
	0	0	0	0	0	0	3 foster home
	0	0	0	0	0	0	1 supervised residence
PEI	2	0	0	0	0	0	0
Quebec	4	0	0	10	0	0	0
Saskatchewan	2	0	0	0	0	0	1 foster home
Yukon	0	0	0	0	0	0	1 permanent foster home
TOTAL	71	0	7	28	1	1	20

Breakdown of Respondents with Strokes by Type of Residence

	Home	Independently	Independently with Care	Group Home	Hospital	Residential School	"Other"
British Columbia	1	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	2 nursing home
Nova Scotia	1	0	0	0	0	0	0
Ontario	5	1	1	0	5	0	1 nursing home
Quebec	1	0	0	0	0	0	0
TOTAL	8	1	1	0	5	0	4

Breakdown of Hearing Impaired Respondents by Type of Residence

	Home	Independently	Independently with Care	Group Home	Hospital	Residential School	"Other"
Alberta	9	0	0	0	0	0	0
Manitoba	1	0	0	0	0	0	0
New Brunswick	1	0	0	0	0	0	0
Newfoundland	4	0	0	0	0	0	0
Nova Scotia	3	0	0	0	0	1	0
Ontario	1	1	8	6	0	2	0
Quebec	19	0	0	0	1	0	1 boarding house
TOTAL	38	1	8	6	1	3	1

Breakdown of Respondents with Behaviour/Learning Disabilities by Type of Residence

	Home	Independently	Independently with Care	Group Home	Hospital	Residential School	"Other"
Newfoundland	1	0	0	0	0	0	0
Nova Scotia	5	0	0	0	0	0	0
Ontario	5	0	0	1	0	0	1 unspecified
Quebec	3	0	0	0	0	0	0
TOTAL	14	0	0	1	0	0	1

Breakdown of Respondents with "Other" Disabilities by Type of Residence

	Home	Independently	Independently with Care	Group Home	Hospital	Residential School	"Other"
Alberta	2	0	0	2	0	0	0
British Columbia	2	0	0	1	0	0	0
Manitoba	3 0	0 0	0 0	0 0	1 0	0 0	1 foster home 1 nursing home
New Brunswick	0	0	0	0	0	0	4 nursing home
Newfoundland	9	1	1	0	0	0	1 foster home
Nova Scotia	1	0	0	0	0	0	0
Ontario	16	2	3	5	11	0	1 foster home
Quebec	1	0	2	0	0	0	1 nursing home
Saskatchewan	1	0	0	0	0	0	0
Yukon	1	0	0	0	0	0	0
TOTAL	36	3	6	8	12	0	9

Breakdown of Respondents with Multiple Disabilities by Type of Residence

	Home	Independently	Independently with Care	Group Home	Hospital	Residential School	"Other"
Alberta	2	0	2	2	0	0	1 foster & family home
British Columbia	1	0	0	0	2	0	0
Manitoba	2	0	1	0	0	0	1 foster home
New Brunswick	2	0	0	0	0	0	2 nursing home
Newfoundland	6	0	0	4	0	0	1 foster home
Nova Scotia	6	0	0	0	0	0	0
Ontario	37	1	5	33	1	3	1 foster home
	0	0	0	0	0	0	2 supervised residence
	0	0	0	0	0	0	1 Oaklands Rg'l Centre
	0	0	0	0	0	0	1 associate home
Quebec	2	0	0	0	0	0	1 foster home
Saskatchewan	6	0	0	2	0	0	6 foster home
TOTAL	64	1	8	41	3	3	17

APPENDIX F Respondents Using Communications Boards

	Bliss	Oakland Schools Pictures	Picsyms	Pictures Please!	Picture Comm. Symbols	Core Picture Vocab.	Worldsign	Write	Speec	PIC	Rebus	Other
Alberta	7	0	7	1	6	0	0	0	0	1	0	3
British Columbia	10	0	0	0	1	0	0	1	0	1	0	4
Manitoba	1	0	1	0	1	0	0	0	0	0	0	3
New Brunswick	0	0	0	0	0	0	0	0	0	0	0	2
Newfoundland	1	0	0	0	0	0	0	0	0	0	0	2
NWT	1	0	0	0	1	0	0	0	0	0	0	0
Nova Scotia	3	0	0	2	1	0	0	0	0	0	0	0
Ontario	54	2	12	3	20	1	1	3	0	6	0	35
PEI	1	0	0	0	0	0	0	0	0	0	0	2
Quebec	8	0	0	0	2	0	4	2	0	7	0	8
Saskatchewan	1	0	0	0	1	0	0	0	0	0	0	2
Yukon	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	87	2	20	6	33	1	5	6	0	15	0	61

Forty out of 184 respondents who identified communication board contents report mixed contents.

Respondents with Cerebral Palsy Using Communications Boards

	Bliss	Oakland Schools Pictures	Picsyms	Pictures Please!	Picture Comm. Symbols	Core Picture Vocab.	Worldsign	Write Spec	PIC Rebus	Other	Mixed		
Alberta	3	0	1	0	2	0	0	0	0	0	1	2	
British Columbia	6	0	0	0	1	0	0	0	1	0	1	2	
Manitoba	1	0	1	0	1	0	0	0	0	0	2	0	
New Brunswick	0	0	0	0	0	0	0	0	0	0	2	0	
Newfoundland	0	0	0	0	0	0	0	0	0	0	1	1	
NWT	1	0	0	0	1	0	0	0	0	0	0	0	
Nova Scotia	2	0	0	0	0	0	0	0	0	0	0	1	
Ontario	19	0	1	0	1	0	1	0	1	0	11	8	
PEI	0	0	0	0	0	0	0	0	0	0	2	0	
Quebec	5	0	0	0	1	0	0	2	1	0	3	4	
Saskatchewan	0	0	0	0	1	0	0	0	0	0	1	1	
Yukon	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	37	0	3	0	8	0	1	2	0	3	0	24	19

Developmentally Delayed Respondents Using Communications Boards

	Bliss	Oakland Schools Pictures	Picsyms	Pictures Please!	Picture Comm. Symbols	Core Picture Vocab.	Worldsign	Write	Speec	PIC	Rebus	Other	Mixed
Alberta	0	0	0	0	0	0	0	0	0	0	0	0	2
Newfoundland	0	0	0	0	0	0	0	0	0	0	0	1	0
Ontario	3	1	1	0	2	0	0	0	0	0	0	3	3
PEI	1	0	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	1	0	4	0	0	4	0	0	0
TOTAL	4	1	1	0	3	0	4	0	0	4	0	4	5

Respondents with Strokes Using Communications Boards

	Bliss	Oakland Schools Pictures	Picsyms	Pictures Please!	Picture Comm. Symbols	Core Picture Vocab.	Worldsign	Write	Speec	PIC	Rebus	Other	Mixed
Ontario	1	0	0	0	0	0	0	0	0	0	0	4	1
Quebec	0	0	0	0	0	0	0	0	0	1	0	0	0
TOTAL	1	0	0	0	0	0	0	0	0	1	0	4	1

Hearing Impaired Respondents Using Communications Boards

	Bliss	Oakland Schools Pictures	Picsyms	Pictures Please!	Picture Comm. Symbols	Core Picture Vocab.	Worldsign	Write	Speec	PIC Rebus	Other	Mixed
Ontario	0	0	1	0	0	0	0	0	0	0	0	0

Respondents with Behaviour/Learning Disabilities Using Communications Boards

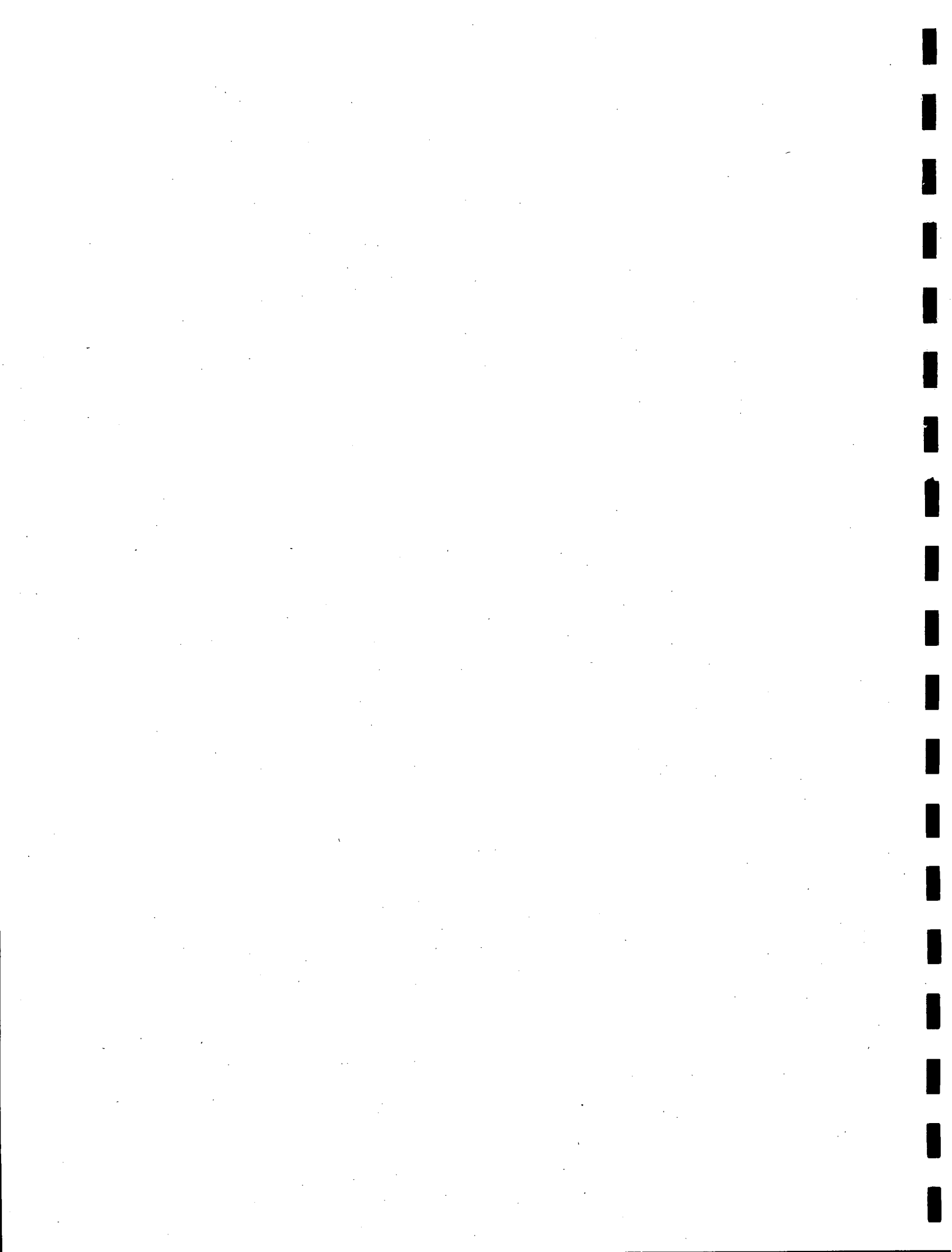
	Bliss	Oakland Schools Pictures	Picsyms	Pictures Please!	Picture Comm. Symbols	Core Picture Vocab.	Worldsign	Write	Speec	PIC Rebus	Other	Mixed
Ontario	0	0	1	0	0	0	0	0	0	0	0	1

Respondents with "Other" Disabilities Using Communications Boards

	Bliss	Oakland Schools Pictures	Picsyms	Pictures Please!	Picture Comm. Symbols	Core Picture Vocab.	Worldsign	Write	Spec	PIC	Rebus	Other	Mixed
Alberta	0	0	0	0	1	0	0	0	0	0	0	0	3
Ontario	0	0	1	0	4	0	0	0	0	2	0	4	2
Quebec	1	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	5	0	0	0	0	2	0	4	5

Respondents with Multiple Disabilities Using Communications Boards

	Bliss	Oakland Schools Pictures	Picsyms	Pictures Please!	Picture Comm. Symbols	Core Picture Vocab.	Worldsign	Write	Spec	PIC	Rebus	Other	Mixed
Alberta	1	0	0	0	0	0	0	0	0	1	0	0	0
British Columbia	1	0	0	0	0	0	0	0	0	0	0	1	1
Manitoba	0	0	0	0	0	0	0	0	0	0	0	1	0
Nova Scotia	0	0	0	1	0	0	0	0	0	0	0	0	0
Ontario	12	0	1	0	4	0	0	0	0	1	0	2	8
Quebec	0	0	0	0	0	0	0	0	0	0	0	1	0
TOTAL	14	0	1	1	4	0	0	0	0	2	0	5	9



APPENDIX G Reading Material Reported by Respondents

	Level	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Pre-school	0	2	0	0
	Grades 1 - 4	8	12	5	3
	Grades 5 - 8	0	1	1	0
	Secondary	2	4	1	1
	Unknown level	1	3	0	1
British Columbia	Grades 1 -4	6	9	6	1
	Grades 5 - 8	2	1	1	0
	Secondary	1	4	3	0
	Post-secondary	1	0	1	0
	Unknown level	1	2	0	0
Manitoba	Pre-school	0	1	0	0
	Grades 1 - 4	0	3	1	0
	Grades 5 - 8	1	1	2	2
	Secondary	0	1	0	0
	Unknown level	2	4	2	1
New Brunswick	Pre-school	1	1	0	0
	Grades 1 - 4	1	1	1	0
	Grades 5 - 8	2	2	2	0
	Secondary	1	1	1	0
	Unknown level	1	0	0	0
Newfoundland	Pre-school	0	1	0	0
	Grades 1 - 4	7	8	3	0
	Grades 5 - 8	4	2	4	0
	Secondary	3	3	1	0
	Special training	0	1	0	0
	Unknown level	2	4	1	0
NWT	Grades 1 - 4	1	1	1	0
	Secondary	0	0	0	0
Nova Scotia	Pre-school	1	3	0	0
	Grades 1 - 4	4	6	1	1
	Grades 5 - 8	1	1	1	1
	Secondary	3	4	0	1
	Unknown level	0	2	0	1

Ontario	Pre-school	0	9	2	4
	Grades 1 - 4	37	34	29	11
	Grades 5 - 8	9	9	14	3
	Secondary	21	16	15	6
	Post-secondary	3	1	3	0
	Special training	0	4	1	0
	Unknown level	8	31	7	7
PEI	Grades 1 - 4	3	2	0	0
	Grades 5 - 8	1	1	1	0
	Secondary	2	1	0	0
Quebec	Pre-school	2	2	0	0
	Grades 1 - 4	22	16	5	7
	Grades 5 - 8	2	3	1	0
	Secondary	9	4	4	6
	Special training	0	0	1	1
	Unknown level	2	6	8	2
Saskatchewan	Grades 1 - 4	0	1	0	0
	Grades 5 - 8	1	0	1	0
	Secondary	0	1	0	0
Yukon	Pre-school	0	0	0	0
SUBTOTALS	Pre-school	4	19	2	4
	Grades 1 - 4	89	93	52	23
	Grades 5 - 8	23	21	28	6
	Secondary	42	39	25	14
	Post-secondary	4	1	4	0
	Special training	0	5	2	1
	Unknown level	17	52	18	12
	TOTAL	155	222	132	55

21% 39% 23% 9.8% 564

Other Reading Material

Alberta	1 comics 1 work sheets, flash cards 1 picks out letters 1 pamphlets
British Columbia	1 self printed stories
Manitoba	1 comics 1 recipes 1 simple word games
Nova Scotia	1 comics 1 name only 1 school work
Ontario	1 computer messages 1 manuals 2 comics 10 limited vocabulary, simple words 1 unspecified 2 Blissymbolics 1 Laubach Way to Reading - BK3 1 Laubach System Book I 1 menus, notes 7 school work or textbooks 1 own work, charts & labels 1 catalogues 1 flash cards 1 simple sentences 1 signs
Quebec	1 tableaux avec Image 1 circulars, pamphlets 5 school work or textbooks 1 unspecified 1 simple large-print text 1 simple phrases

Reading Material Reported by Respondents with Cerebral Palsy

	Level	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Grades 1 - 4	4	3	2	1
	Secondary	2	2	1	1
British Columbia	Grades 1 - 4	4	6	5	1
	Grades 5 - 8	2	1	1	0
	Secondary	1	3	2	0
	Unknown level	0	2	1	0
Manitoba	Grades 1 - 4	0	2	1	0
	Grades 5 - 8	0	0	1	1
	Secondary	0	1	0	0
	Unknown level	1	1	1	0
New Brunswick	Pre-school	1	1	0	0
	Unknown level	1	1	1	0
Newfoundland	Pre-school	0	1	0	0
	Grades 1 - 4	3	3	1	0
	Grades 5 - 8	1	1	1	0
	Secondary	1	1	0	0
	Unknown level	0	1	0	0
NWT	Grades 1 - 4	1	1	1	0
Nova Scotia	Grades 1 - 4	2	3	0	0
	Grades 5 - 8	0	0	0	1
	Secondary	2	2	0	0
Ontario	Pre-school	0	2	2	0
	Grades 1 - 4	17	10	12	3
	Grades 5 - 8	5	4	5	3
	Secondary	6	2	4	1
	Post-secondary	1	0	1	0
	Special training	0	2	1	0
	Unknown level	6	6	5	2
PEI	Grades 1 - 4	1	1	0	0
	Grades 5 - 8	1	1	1	0
Quebec	Grades 1 - 4	5	3	1	2
	Grades 5 - 8	2	2	0	0
	Secondary	1	1	0	1
	Special training	0	0	1	1
	Unknown level	2	6	2	4
Saskatchewan	Grades 1 - 4	0	1	0	0
	Grades 5 - 8	1	0	1	0
	Secondary	0	1	0	0
SUBTOTALS	Pre-school	1	4	2	0
	Grades 1 - 4	37	33	23	7
	Grades 5 - 8	12	9	10	5
	Secondary	13	13	7	3
	Post-secondary	1	0	1	0
	Special training	0	2	2	1
	Unknown level	10	17	10	6
TOTAL		74	76	55	22

Reading Material Reported by Developmentally Delayed Respondents

	Level	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Grades 1 - 4	0	1	1	0
	Unknown level	0	2	0	1
Newfoundland	Grades 1 - 4	2	3	1	0
	Secondary	1	2	0	0
	Special training	0	1	0	0
	Unknown level	1	5	0	0
Nova Scotia	Pre-school	0	1	0	0
	Secondary	0	1	0	0
	Unknown level	0	1	0	0
Ontario	Pre-school	0	1	0	2
	Grades 1 - 4	3	6	2	1
	Secondary	2	3	1	0
	Special Training	0	1	0	0
	Unknown level	0	15	1	1
PEI	Grades 1 - 4	2	1	0	0
	Secondary	2	1	0	0
Quebec	Pre-school	1	1	0	0
	Grades 1 - 4	1	1	0	0
	Secondary	1	1	0	0
SUBTOTALS	Pre-school	0	2	0	2
	Grades 1 - 4	8	12	4	1
	Secondary	6	7	1	0
	Special training	0	2	0	0
	Unknown level	1	23	1	2
TOTAL		15	46	6	5

Reading Material Reported by Respondents with Strokes

	Level	Books	Picture Books	Newspapers & Magazines	Other
British Columbia	Unknown level	1	1	1	0
New Brunswick	Grades 5 - 8	1	1	1	0
Ontario	Grades 1 - 4	2	2	2	0
	Grades 5 - 8	1	1	3	0
	Secondary	2	2	2	0
	Post-secondary	1	0	1	0
	Unknown level	1	1	0	1
SUBTOTALS	Grades 1 - 4	2	2	2	0
	Grades 5 - 8	2	2	4	0
	Secondary	2	2	2	0
	Post-secondary	1	0	1	0
	Unknown level	2	2	1	1
TOTAL		9	8	10	1

Reading Material Reported by Respondents with Hearing Impairment

	Level	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Grades 1 - 4	3	6	2	1
	Grades 5 - 8	0	1	1	0
	Secondary	0	1	0	0
	Unknown level	1	1	0	0
Manitoba	Grades 5 - 8	1	1	1	1
New Brunswick	Grades 1 - 4	0	1	0	0
	Secondary	0	1	0	0
Newfoundland	Grades 1 - 4	1	1	0	0
	Grades 5 - 8	2	1	2	0
	Unknown level	1	0	1	0
Nova Scotia	Pre-school	0	1	0	0
	Grades 1 - 4	1	1	1	0
Ontario	Grades 1 - 4	1	2	3	1
	Grades 5 - 8	2	3	3	0
	Secondary	1	1	1	1
	Unknown level	5	7	7	2
Quebec	Grades 1 - 4	12	8	4	4
	Grades 5 - 8	0	1	1	0
	Secondary	5	1	4	4
	Unknown level	1	1	5	0
SUBTOTALS	Pre-school	0	1	0	0
	Grades 1 - 4	18	19	10	6
	Grades 5 - 8	5	7	8	1
	Secondary	6	4	5	5
	Unknown level	8	9	13	2
TOTAL		37	40	36	14

Reading Material Reported by Respondents with Behaviour/Learning Disabilities

	Level	Books	Picture Books	Newspapers & Magazines	Other
Nova Scotia	Grades 1 - 4	0	1	0	1
	Grades 5 - 8	1	1	1	0
	Secondary	0	0	0	1
	Unknown	0	0	0	1
Ontario	Preschool	0	1	0	1
	Grades 1 - 4	1	1	0	0
	Unknown level	0	1	1	0
Quebec	Grades 1 - 4	2	2	0	0
	Secondary	1	1	0	0
	Unknown level	0	0	1	0
SUBTOTALS	Grades 1 - 4	3	4	0	1
	Grades 5 - 8	1	1	1	0
	Secondary	1	1	0	1
	Unknown level	0	1	3	0
TOTAL		5	7	4	2

Reading Material Reported by Respondents with "Other" Disabilities

	Level	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Pre-school	0	1	0	0
	Grades 1 - 4	0	1	0	0
	Secondary	0	1	0	0
British Columbia	Grades 1 - 4	2	2	0	0
	Post-secondary	1	0	1	0
Manitoba	Grades 1 - 4	0	1	0	0
	Unknown level	0	1	0	1
New Brunswick	Grades 1 - 4	1	0	1	0
	Grades 5 - 8	1	1	1	0
	Secondary	1	0	1	0
	Unknown level	1	2	2	0
Newfoundland	Grades 1 - 4	1	0	1	0
	Grades 5 - 8	1	0	1	0
	Secondary -	1	0	1	0
Nova Scotia	Secondary	0	0	0	1
Ontario	Grades 1 - 4	5	2	5	3
	Grades 5 - 8	0	0	2	0
	Secondary	4	1	3	2
	Post-secondary	1	0	1	0
	Special training	0	1	0	0
	Unknown level	3	5	5	2
Quebec	Grades 1 - 4	1	1	0	0
	Unknown level	0	1	1	0
SUBTOTALS	Pre-school	0	1	0	0
	Grades 1 - 4	10	7	7	3
	Grades 5 - 8	2	1	4	0
	Secondary	6	2	5	3
	Post-secondary	2	0	2	0
	Special training	0	1	0	0
	Unknown level	4	9	8	2
TOTAL		23	21	25	8

Reading Material Reported by Respondents with Multiple Disabilities

	Level	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Grades 1 - 4	0	1	0	0
	Unknown level	0	0	2	0
British Columbia	Grades 1 - 4	0	1	1	0
	Secondary	0	1	1	0
	Unknown level	1	1	0	0
Manitoba	Unknown level	2	2	2	0
Newfoundland	Grades 1 - 4	0	1	0	0
	Unknown level	1	0	0	0
Nova Scotia	Grades 1 - 4	1	1	0	0
	Secondary	1	1	0	0
	Unknown level	0	1	0	0
Ontario	Pre-school	0	1	0	0
	Grades 1 - 4	7	11	5	2
	Grades 5 - 8	1	1	1	0
	Secondary	4	6	3	2
	Post-secondary	0	1	0	0
	Unknown level	3	15	2	5
Quebec	Grades 1 - 4	1	1	0	1
SUBTOTALS	Pre-school	0	1	0	0
	Grades 1 - 4	9	16	6	3
	Grades 5 - 8	1	1	1	0
	Secondary	5	8	4	3
	Post-secondary	0	1	0	0
	Unknown level	7	19	6	5
TOTAL		14	47	17	11

APPENDIX H Breakdown of Respondents by Type of Computer Used

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"	
Alberta	3	20	1	3	4	
British Columbia	6	13	1	1	6	
Manitoba	1	5	0	2	5	
New Brunswick	1	2	1	2	0	
Newfoundland	1	1	0	3	2	
NWT	0	3	0	0	0	
Nova Scotia	1	2	1	3	3	
Ontario	16	76	4	43	49	
PEI	0	3	0	1	0	
Quebec	3	17	1	20	6	
Saskatchewan	0	9	0	1	1	
Yukon	0	1	0	0	0	
TOTAL	32 9.2%	152 44%	9 2.6%	79 23%	76 22%	348

Breakdown of Respondents by Type of Computer Used Where Only 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Alberta	1	15	1	1	1
British Columbia	0	6	0	0	6
Manitoba	1	5	0	1	4
New Brunswick	0	0	0	1	0
Newfoundland	1	1	0	3	2
NWT	0	3	0	0	0
Nova Scotia	0	2	1	2	3
Ontario	8	55	2	32	40
PEI	0	3	0	1	0
Quebec	2	11	1	15	4
Saskatchewan	0	7	0	0	0
Yukon	0	1	0	0	0
TOTAL	13	109	5	56	60

Breakdown of Respondents by Type of Computer Used (Where More than 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Alberta	2	5	0	2	3
British Columbia	6	7	1	1	0
Manitoba	0	0	0	1	1
New Brunswick	1	2	1	1	0
Nova Scotia	1	0	0	1	0
Ontario	8	21	2	11	9
Quebec	1	6	0	5	2
Saskatchewan	0	2	0	1	1
TOTAL	19	43	4	23	16

Breakdown of Cerebral Palsied Respondents by Type of Computer Used (Where Only 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Alberta	1	6	0	0	0
British Columbia	0	5	0	0	4
Manitoba	0	5	0	0	1
Newfoundland	0	1	0	2	1
NWT	0	3	0	0	0
Nova Scotia	0	1	0	1	1
Ontario	2	26	1	7	8
PEI	0	2	0	0	0
Quebec	2	6	1	5	3
Saskatchewan	0	1	0	0	0
TOTAL	5	56	2	15	18

**Breakdown of Developmentally Delayed Respondents by Type of Computer Used
(Where Only 1 Type of Computer is Used)**

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Alberta	0	3	0	0	0
Nova Scotia	0	1	0	0	0
Ontario	1	4	0	12	11
PEI	0	1	0	1	0
Saskatchewan	0	1	0	0	0
Yukon	0	1	0	0	0
TOTAL	1	11	0	13	11

**Breakdown of Respondents with Strokes by Type of Computer Used (Where Only 1
Type of Computer is Used)**

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
British Columbia	0	0	0	0	1
Nova Scotia	0	0	0	1	0
Ontario	0	1	0	0	2
TOTAL	0	1	0	1	3

**Breakdown of Respondents with Hearing Impairment by Type of Computer Used
(Where Only 1 Type of Computer is Used)**

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Alberta	0	3	0	1	0
Manitoba	1	0	0	0	0
Newfoundland	0	0	0	1	0
Nova Scotia	0	0	0	0	1
Ontario	0	0	0	0	1
Quebec	0	4	0	7	1
TOTAL	1	7	0	9	3

Breakdown of Respondents with Behaviour/Learning Disabilities by Type of Computer Used (Where Only 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Ontario	0	2	0	1	1
Quebec	0	1	0	2	0
TOTAL	0	3	0	3	1

Breakdown of Respondents with "Other" Disabilities by Type of Computer Used (Where Only 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Alberta	0	2	0	0	0
Manitoba	0	0	0	0	2
Newfoundland	1	0	0	0	0
Ontario	1	7	1	5	2
TOTAL	2	9	1	5	4

Breakdown of Respondents with Multiple Disabilities by Type of Computer Used (Where Only 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Alberta	0	1	1	0	1
British Columbia	0	1	0	0	1
Manitoba	0	0	0	1	1
New Brunswick	0	0	0	1	0
Newfoundland	0	0	0	0	1
Nova Scotia	0	0	1	0	1
Ontario	4	15	0	7	15
Quebec	0	0	0	1	0
Saskatchewan	0	5	0	0	0
TOTAL	4	22	2	10	20

Breakdown of Cerebral Palsied Respondents by Type of Computer Used (Where More than 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Alberta	1	3	0	1	3
British Columbia	6	7	1	1	0
Manitoba	0	0	0	1	1
New Brunswick	1	2	1	1	0
Ontario	2	8	0	4	2
Quebec	0	0	0	1	1
Saskatchewan	0	1	0	0	1
TOTAL	10	21	2	9	8

Breakdown of Developmentally Delayed Respondents by Type of Computer Used (Where More than 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Nova Scotia	1	0	0	1	0
Ontario	0	2	1	0	0
TOTAL	1	2	1	1	0

Breakdown of Respondents with Strokes by Type of Computer Used (Where More than 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Ontario	1	2	0	1	0

Breakdown of Respondents with Hearing Impairment by Type of Computer Used (Where More than 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Alberta	0	1	0	1	0
Ontario	0	2	0	2	1
Quebec	1	6	0	4	1
TOTAL	1	9	0	7	2

Breakdown of Respondents with "Other" Disabilities by Type of Computer Used (Where More than 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Alberta	1	1	0	0	0
Ontario	3	4	1	2	2
TOTAL	4	5	1	2	2

Breakdown of Respondents with Multiple Disabilities by Type of Computer Used (Where More than 1 Type of Computer is Used)

	IBM PC	Apple IIe	Macintosh	Commodore	"Other"
Ontario	2	3	0	1	4
Saskatchewan	0	1	0	1	0
TOTAL	2	4	0	2	4

Description of Make/Model Where Computer is Described as "Other"

Alberta	1 unspecified 1 Radio Shack Color III 2 Apple II GS 1 Zenith AT clone	Ontario	16 Icon 11 unspecified 1 IBM XT Compatible 1 Radio Shack TRS-80 64K 3 Apple II + 1 Heathkit H19 1 Epson Speech 6 Apple II GS 1 Tandy 102 portable 1 Zenith/IBM PC 1 Vic 20 1 Alltalk 1 Apple II 2 Apple IIc 1 Laser Turbo XT 1 Casio SF3000 pocket comp. 1 TRS80 Colour Computer
British Columbia	1 Sanyo MBC 555 1 Toshiba Laptop 1 Epson w/ACS Speech Pac 2 unspecified 1 Apple IIc		
Manitoba	2 unspecified 2 Apple II + 1 Apple II GS		
Newfoundland	1 Sanyo MCB 555 PC 1 TRS 80		
Nova Scotia	1 Apple IIGS 1 Apple IIgE 1 unspecified	Quebec	1 Apple II Plus 1 Tandy 1000 EX 1 unspecified 1 Ogivar 1 Comterm Matra 1 Tandy
		Saskatchewan	1 Apple II GS
		TOTAL	77

NOTE: In some cases, respondents identified more than one "other" make/model of computer. These are identified separately.

Description of Make/Model Where Computer is Described as "Other" and is the Only Make/Model Used by the Respondent

Alberta	1 unspecified	Ontario	14 Icon 11 unspecified
British Columbia	1 Sanyo MBC 555 1 Toshiba Laptop 1 Epson w/ACS Speech Pac 2 unspecified 1 Apple IIc		1 IBM XT Compatible 1 Radio Shack TRS-80 64K 1 Apple II + 1 Heathkit H19 4 Apple II GS 1 Zenith/IBM PC 1 Vic 20 1 Alltalk 1 Apple II 1 Apple IIc 1 TRS80 Colour Computer 2
Manitoba	2 unspecified 1 Apple II + 1 Apple II GS		
Newfoundland	1 Sanyo MCB 555 PC 1 TRS 80		
Nova Scotia	1 Apple II GS 1 Apple IIgE 1 unspecified	Quebec	1 Apple II Plus 1 Tandy 1000 EX 1 unspecified 1 Comterm Matra
		TOTAL	59

NOTE: In some cases, respondents identified more than one "other" make/model of computer. These are identified separately.

Description of Make/Model Where Computer is Described as "Other" and is Used in Addition to Other Makes/Models

Alberta	1 Radio Shack Color III 2 Apple II GS 1 Zenith AT clone
Manitoba	1 Apple II Plus
Ontario	1 Epson Speech 2 Apple II GS 1 Tandy 102 portable 2 Apple II + 2 Icon 1 Laser Turbo XT 1 Apple IIc 1 Casio SF3000 pocket comp
Quebec	1 Ogivar 1 Tandy
Saskatchewan	1 Apple II GS
TOTAL	19

NOTE: In some cases, respondents identified more than one "other" make/model of computer. These are identified separately.

APPENDIX I Reading Material, by Level, Computer and Disability

Reading Material by Apple IIe Users Reading at Pre-school Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Alberta	"Other"	0	2	0	0
Ontario	Cerebral Palsy	0	2	2	0
TOTAL		0	4	2	0

Reading Material by Commodore Users Reading at Pre-school Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	Developmentally Delayed	0	0	0	2
	Behaviour/Learning	0	1	0	1
	Multiple	0	1	0	0
TOTAL		0	2	0	3

Reading Material by "Other" Computer Users Reading at Pre-school Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Manitoba	"Other"	0	1	0	0
Ontario	Developmentally Delayed	0	1	0	0
	"Other"	0	1	0	1
TOTAL		0	3	0	1

Reading Material by Multiple Computer Users Reading at Pre-school Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
New Brunswick	Cerebral Palsy	1	1	0	0

Reading Material by IBM Users Reading at Grade 1 - 4 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	"Other"	0	1	1	1
	Multiple	0	1	1	0
Quebec	Cerebral Palsy	1	0	1	1
TOTAL		1	2	3	2

Reading Material by Apple Iie Users Reading at Grade 1 - 4 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Cerebral Palsy	2	1	1	1
	Developmentally Delayed	0	1	1	0
	Hearing Impairment	0	3	0	1
British Columbia	Cerebral Palsy	1	3	3	0
	Multiple	0	1	1	0
Manitoba	Cerebral Palsy	0	1	0	0
Newfoundland	Cerebral Palsy	1	0	1	0
NWT	Cerebral Palsy	1	1	1	0
Nova Scotia	Cerebral Palsy	1	1	0	0
Ontario	Cerebral Palsy	10	6	8	1
	"Other"	0	0	2	1
	Multiple	2	3	1	0
PEI	Cerebral Palsy	1	1	0	0
	Developmentally Delayed	1	1	0	0
Quebec	Cerebral Palsy	1	1	0	1
	Hearing Impairment	2	0	2	2
Saskatchewan	Cerebral Palsy	0	1	0	0
TOTAL		23	25	21	7

Reading Material by Macintosh Users Reading at Grade 1 - 4 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Nova Scotia	Multiple	1	1	0	0

Reading Material by Commodore Users Reading at Grade 1 - 4 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Hearing Impairment	1	1	1	0
Newfoundland	Cerebral Palsy	1	1	0	0
Ontario	Cerebral Palsy	2	0	1	0
	Developmentally Delayed	0	3	0	1
	Multiple	1	3	1	0
PEI	Developmentally Delayed	1	0	0	0
Quebec	Cerebral Palsy	2	1	0	0
	Hearing Impairment	7	7	0	0
	Behaviour/Learning	2	2	0	0
	Multiple	1	1	0	0
TOTAL		18	19	3	1

Reading Material by "Other" Computer Users Reading at Grade 1 - 4 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Multiple	0	1	0	0
British Columbia	Cerebral Palsy	1	1	0	0
Manitoba	Cerebral Palsy	0	1	1	0
Nova Scotia	Cerebral Palsy	1	1	0	0
	Hearing Impairment	1	1	1	0
Ontario	Cerebral Palsy	3	2	0	2
	Developmentally Delayed	2	2	1	0
	Stroke	1	1	1	0
	Behaviour/Learning	1	1	0	0
	Multiple	2	2	0	1
Quebec	Cerebral Palsy	0	1	0	0
	Hearing Impairment	1	1	0	0
TOTAL		13	15	4	3

Reading Material by Multiple Computer Users Reading at Grade 1 - 4 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Cerebral Palsy	2	2	1	0
	"Other"	0	1	0	0
British Columbia	Cerebral Palsy	2	2	2	1
Ontario	Cerebral Palsy	0	1	0	0
	Hearing Impairment	0	0	1	1
	"Other"	4	0	1	1
	Multiple	1	0	1	1
Quebec	Hearing Impairment	2	0	2	2
TOTAL		11	6	8	6

Reading Material by IBM Users Reading at Grade 5 - 8 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Manitoba	Hearing Impairment	1	1	1	1

Reading Material by Apple Iie Users Reading at Grade 5 - 8 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	Cerebral Palsy	2	1	2	1
	"Other"	0	0	1	0
PEI	Cerebral Palsy	1	1	1	0
Quebec	Cerebral Palsy	1	1	0	0
TOTAL		4	3	4	1

Reading Material by Macintosh Users Reading at Grade 5 - 8 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	Cerebral Palsy	0	1	1	0

Reading Material by Commodore Users Reading at Grade 5 - 8 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Newfoundland	Hearing Impairment	1	0	1	0
Nova Scotia	Cerebral Palsy	0	0	0	1
Ontario	"Other"	0	0	1	0
Quebec	Cerebral Palsy	1	1	0	0
TOTAL		2	1	2	1

Reading Material by "Other" Computer Users Reading at Grade 5 - 8 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
British Columbia	Cerebral Palsy	1	0	0	0
Ontario	Multiple	1	1	1	0
TOTAL		2	1	1	0

Reading Material by Multiple Computer Users Reading at Grade 5 - 8 Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Hearing Impairment	0	1	1	0
British Columbia	Cerebral Palsy	1	1	1	0
Ontario	Cerebral Palsy	2	2	1	1
	Stroke	1	1	1	0
Saskatchewan	Cerebral Palsy	1	0	1	0
TOTAL		5	5	5	1

Reading Material by Apple Iie Users Reading at Secondary School Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Cerebral Palsy	1	1	0	1
	Hearing Impairment	0	1	0	0
British Columbia	Cerebral Palsy	1	3	2	0
	Multiple	0	1	1	0
Manitoba	Cerebral Palsy	0	1	0	0
Nova Scotia	Cerebral Palsy	1	1	0	0
Ontario	Cerebral Palsy	4	1	3	0
	"Other"	0	0	1	1
PEI	Developmentally Delayed	1	1	0	0
Quebec	Hearing Impairment	2	0	2	2
Saskatchewan	Cerebral Palsy	0	1	0	0
TOTAL		10	11	9	4

Reading Material by Macintosh Users Reading at Secondary School Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Nova Scotia	Multiple	1	1	0	0

Reading Material by Commodore Users Reading at Secondary School Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Newfoundland	Cerebral Palsy	1	1	0	0
Ontario	Cerebral Palsy	2	0	1	0
	Developmentally Delayed	0	1	0	0
	Multiple	0	2	1	0
PEI	Developmentally Delayed	1	0	0	0
Quebec	Cerebral Palsy	1	0	0	0
	Hearing Impairment	1	1	0	0
	Behaviour/Learning	1	1	0	0
TOTAL		7	6	2	0

Reading Material by "Other" Computer Users Reading at Secondary School Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Nova Scotia	Cerebral Palsy	1	1	0	0
Ontario	Cerebral Palsy	1	1	0	1
	Developmentally Delayed	2	2	1	0
	Stroke	1	1	1	0
	Multiple	2	2	0	1
Quebec	Cerebral Palsy	0	1	0	0
TOTAL		7	8	2	2

Reading Material by Multiple Computer Users Reading at Secondary School Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Cerebral Palsy	1	1	1	0
	"Other"	0	1	0	0
Nova Scotia	Developmentally Delayed	0	1	0	0
Ontario	"Other"	3	0	1	1
	Multiple	1	0	1	1
Quebec	Hearing Impairment	2	0	2	2
TOTAL		7	3	5	4

Reading Material by IBM PC Users Reading at Post-Secondary School Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	Multiple Disabilities	0	1	0	0

Reading Material by Apple IIe Users Reading at Post-Secondary School Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	Stroke	0	0	1	0
	"Other"	1	0	1	0
TOTAL		1	0	2	0

Reading Material by Macintosh Users Reading at Post-Secondary School Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	"Other"	1	0	1	0

Reading Material by "Other" Computer Users Reading at Post-Secondary School Level, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	Cerebral Palsy	1	0	1	0
	Stroke	1	0	0	0
TOTAL		2	0	1	0

Reading Material by Apple Iie Users in Special Training Classes, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	Stroke	0	2	2	0

Reading Material by Macintosh Users in Special Training Classes, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Quebec	Cerebral Palsy	0	0	1	1

Reading Material by Commodore Users in Special Training Classes, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	Cerebral Palsy	0	1	0	0

Reading Material by "Other" Computer Users in Special Training Classes, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	Cerebral Palsy	0	1	1	0

Reading Material by IBM PC Users with Unknown Reading Levels, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Ontario	Cerebral Palsy	1	0	1	0
	Multiple	0	0	0	1
TOTAL		1	0	1	1

Reading Material by Apple Iie Users with Unknown Reading Levels, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Alberta	Developmentally Delayed	0	2	0	1
Manitoba	Cerebral Palsy	0	1	0	0
	Stroke	0	1	0	0
Ontario	Cerebral Palsy	2	3	2	2
	Developmentally Delayed	0	2	0	0
	Stroke	2	3	2	2
	Behaviour/Learning	0	0	0	1
	"Other"	1	1	1	0
	Multiple	0	1	0	1
Quebec	Cerebral Palsy	1	1	1	2
	Stroke	1	1	1	2
	Hearing Impairment	1	0	1	0
	Behaviour/Learning	0	0	1	0
TOTAL		8	16	9	11

Reading Material by Commodore Users with Unknown Reading Levels, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
Manitoba	Multiple	1	1	1	0
Quebec	Cerebral Palsy	1	1	1	1
TOTAL		2	2	2	1

Reading Material by "Other" Computer Users with Unknown Reading Levels, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
British Columbia	Stroke	1	1	1	0
	Multiple	1	1	0	0
Manitoba	Multiple	1	1	1	0
Ontario	Cerebral Palsy	0	1	0	0
	Developmentally Delayed	0	4	0	0
	Hearing Impairment	0	1	1	0
	Multiple	1	2	0	2
Quebec	Cerebral Palsy	0	1	0	1
TOTAL		4	12	3	3

Reading Material by Multiple Computer Users with Unknown Reading Levels, by Disability

	Disability	Books	Picture Books	Newspapers & Magazines	Other
British Columbia	Cerebral Palsy	0	1	1	0
Manitoba	Cerebral Palsy	1	0	1	0
New Brunswick	Cerebral Palsy	1	0	0	0
Nova Scotia	Developmentally Delayed	0	1	0	0
Ontario	Cerebral Palsy	2	2	0	0
	Developmentally Delayed	0	2	0	0
	Stroke	0	1	0	0
	Hearing Impairment	0	1	0	1
	"Other"	0	1	0	0
	Multiple Disabilities	0	2	0	0
Quebec	Hearing Impairment	0	1	4	0
TOTAL		4	12	6	1

APPENDIX J Applications of Computers by Disability

Applications of IBM PCs by Disability

	Disability	Communications	Word Processing	Games	Accounting	Online Searches	Keeping Records	"Other"
Alberta	Cerebral Palsy	0	1	0	0	0	0	0
Manitoba	Hearing Impaired	0	1	1	0	0	1	0
Newfoundland	"Other"	0	0	1	0	0	0	0
Ontario	Cerebral Palsy	1	1	1	0	0	0	0
	Developmentally Delayed	0	0	1	0	0	0	0
	"Other"	0	0	1	0	0	0	0
	Multiple	1	1	2	0	0	0	2
Quebec	Cerebral Palsy	1	2	2	0	0	0	1
TOTAL		3	6	9	0	0	1	3

Applications of Apple Iie by Disability

	Disability	Communications	Word Processing	Games	Accounting	Online Searches	Keeping Records	"Other"
Alberta	Cerebral Palsy	1	1	5	0	0	0	4
	Developmentally Delayed	2	0	3	0	0	0	2
	Hearing Impaired	0	3	2	0	0	0	0
	"Other"	1	2	2	1	0	1	0
British Columbia	Cerebral Palsy	3	2	5	0	0	0	2
	Multiple	0	0	1	0	0	0	0
Manitoba	Cerebral Palsy	1	2	5	0	0	0	2
Newfoundland	Cerebral Palsy	0	0	0	0	0	0	1
NWT	Cerebral Palsy	3	1	2	0	0	0	0
Nova Scotia	Cerebral Palsy	1	1	0	0	0	0	1
	Developmentally Delayed	1	0	0	0	0	0	1
Ontario	Cerebral Palsy	20	13	22	2	0	3	6
	Developmentally Delayed	4	0	4	0	0	0	3
	Stroke	1	0	0	0	0	0	0
	Behaviour/Learning	1	0	2	0	0	0	0
	"Other"	7	3	6	0	0	0	1
	Multiple	8	4	12	0	0	0	7
PEI	Cerebral Palsy	1	2	2	0	0	0	0
	Developmentally Delayed	0	0	1	0	0	0	0
Quebec	Cerebral Palsy	2	4	5	0	0	0	1
	Hearing Impaired	2	3	4	1	0	0	0
	Behaviour/Learning	0	1	1	0	0	0	0
Saskatchewan	Cerebral Palsy	0	1	1	0	0	0	0
	Developmentally Delayed	0	0	1	0	0	0	0
	Multiple	1	0	5	0	0	0	0
Yukon	Developmentally Delayed	0	0	1	0	0	0	0
TOTAL		60	43	92	4	0	4	31

Applications of Macintoshes by Disability

	Disability	Communications	Word Processing	Games	Accounting	Online Searches	Keeping Records	"Other"
Nova Scotia	Multiple	1	0	1	0	0	0	0
Ontario	"Other"	0	1	0	0	0	0	0
TOTAL		1	1	1	0	0	0	0

Applications of Commodores by Disability

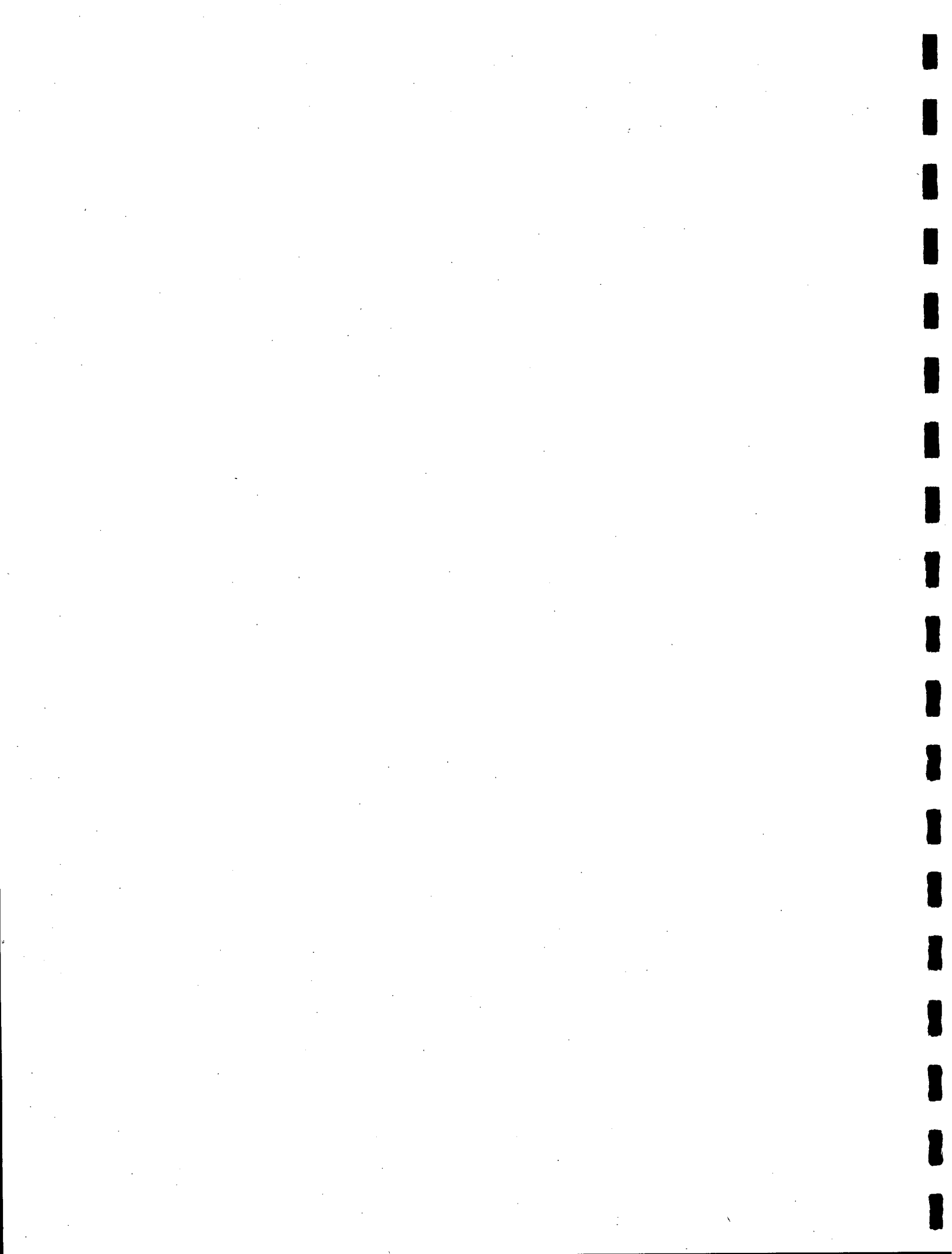
	Disability	Communications	Word Processing	Games	Accounting	Online Searches	Keeping Records	"Other"
Manitoba	Multiple	1	1	1	0	0	0	0
New Brunswick	Multiple	1	0	1	0	0	0	0
Newfoundland	Cerebral Palsy	1	1	1	0	0	0	1
	Hearing Impaired	0	1	0	0	0	0	0
Nova Scotia	Cerebral Palsy	0	0	1	0	0	0	1
	Developmentally Delayed	0	0	1	0	0	0	0
Ontario	Cerebral Palsy	3	1	4	0	0	1	2
	Developmentally Delayed	1	1	12	0	0	0	2
	Behaviour/Learning	0	1	1	0	0	0	1
	"Other"	1	1	3	0	0	0	2
	Multiple	2	1	5	0	0	0	2
PEI	Developmentally Delayed	1	0	1	0	0	0	0
Quebec	Cerebral Palsy	1	1	5	0	0	0	1
	Hearing Impaired	7	0	7	0	0	0	6
	Behaviour/Learning	2	2	0	0	0	0	0
TOTAL		21	11	43	0	0	1	18

Applications of "Other" Computers by Disability

	Disability	Communications	Word Processing	Games	Accounting	Online Searches	Keeping Records	"Other"
Alberta	Cerebral Palsy	1	1	1	0	0	0	0
	Hearing Impaired	0	1	1	0	0	0	0
	Multiple	1	1	1	0	0	0	1
British Columbia	Cerebral Palsy	3	3	2	0	0	0	1
	Stroke	0	0	0	0	0	0	1
	Multiple	0	0	1	0	0	0	1
Manitoba	Cerebral Palsy	0	1	1	0	0	0	1
	"Other"	0	0	1	0	0	0	0
	Multiple	0	0	1	0	0	0	1
Newfoundland	Cerebral Palsy	0	0	0	0	0	0	1
	Multiple	0	1	1	0	1	0	0
Nova Scotia	Cerebral Palsy	1	0	1	0	0	0	1
	Hearing Impaired	0	0	1	0	0	0	0
	Multiple	0	0	1	0	0	0	1
Ontario	Cerebral Palsy	6	2	5	0	0	0	4
	Developmentally Delayed	3	1	10	0	1	0	3
	Stroke	1	0	0	0	0	0	0
	Behaviour/Learning	0	0	1	0	0	0	0
	"Other"	2	0	2	0	0	0	2
	Multiple	2	4	8	1	1	2	6
Quebec	Cerebral Palsy	1	0	0	0	0	0	2
	Hearing Impaired	0	1	1	0	0	0	0
TOTAL		21	16	40	1	3	2	26

Applications of More than 1 Make/Model of Computer by Disability

	Disability	Communications	Word Processing	Games	Accounting	Online Searches	Keeping Records	"Other"
Alberta	Cerebral Palsy	3	1	3	1	1	1	2
	Hearing Impaired	0	0	1	0	0	0	0
	"Other"	0	0	0	0	0	0	1
	Multiple	1	0	1	0	0	0	0
British Columbia	Cerebral Palsy	2	3	7	1	0	1	2
Manitoba	Cerebral Palsy	1	0	1	0	0	0	1
New Brunswick	Cerebral Palsy	2	1	2	0	1	0	0
Ontario	Cerebral Palsy	5	5	6	0	0	0	5
	Developmentally Delayed	0	0	2	0	0	0	1
	Stroke	2	0	1	0	0	0	0
	Hearing Impaired	0	1	2	0	0	0	1
	"Other"	3	2	1	0	0	2	3
	Multiple	2	1	4	0	0	0	2
Quebec	Cerebral Palsy	0	0	1	0	0	0	1
	Hearing Impaired	0	5	6	0	0	0	0
	Multiple	0	0	1	0	0	0	0
Saskatchewan	Multiple	0	0	1	0	0	0	0
TOTAL		21	19	40	2	2	4	19



APPENDIX K Summary of Peripheral Devices Used by Respondents

	Hard Disk Drive	Floppy Disk Drive	Printer	Synthetic Speech Output
Alberta	5	17	13	9
British Columbia	4	15	15	7
Manitoba	3	7	9	1
New Brunswick	0	2	1	0
Newfoundland	0	4	3	0
NET	0	3	2	1
Nova Scotia	3	4	6	1
Ontario	51	103	122	49
PEI	1	2	2	0
Quebec	3	31	17	7
Saskatchewan	1	8	9	6
Yukon	0	1	1	0
TOTAL	71	197	200	81

Summary of Peripheral Devices Used by Respondents with IBM PCs

	Hard Disk Drive	Floppy Disk Drive	Synthetic Speech Output	Printer
Alberta	1	0	0	0
Manitoba	1	0	0	0
Newfoundland	1	1	0	1 Tandy DMP 105
Ontario	2 6	1 3	0 0	1 Epson FX-1050 6 unspecified
Quebec	2	2	0	2 unspecified
TOTAL	13	7	0	10

Summary of Peripheral Devices Used by Respondents with Apple IIe's

	Hard Disk Drive	Floppy Disk Drive	Synthetic Speech Output	Printer
Alberta	1	0	1	0
	1	0	0	1 Epson
	1	1	0	1 Panasonic
	3	3	0	0
	3	3	2	3 Imagewriter II
	3	3	1	3 unspecified
	2	0	0	0
	1	1	1	1 Seikosha SP1000AP
British Columbia	6	5	6	5 Imagewriter
Manitoba	1	1	0	1 Okidata Microline 182
	2	2	1	2 Imagewriter
	1	1	0	1 Epson LX800
	1	0	0	1 unspecified
Newfoundland	1	0	0	0
NWT	2	2	1	2 Imagewriter
	1	1	0	0
Nova Scotia	2	1	1	2 unspecified
Ontario	1	1	0	1 Epson LX90
	1	1	0	1 Imagewriter
	1	1	0	1 Apple IIe
	2	2	2	2 Imagewriter II
	16	9	2	8 unspecified
	4	4	4	4 Epson RX-80
	2	2	2	2 Epson 80
	1	1	1	1 Epson FX + Series
	2	2	2	2 Epson Spectrum LX-80
	2	1	2	2 Epson
	1	0	1	1 Epson SpeechPac mini
	5	5	4	5 Panasonic KX-P1091
	4	2	1	4 Panasonic KX P1080
	4	4	4	4 Panasonic
	1	1	1	1 Roland dot matrix
	1	1	1	1 Roland DG PR-1011
	1	1	0	1 Roland DG PR-1111A
2	2	0	2 Apple	
1	1	1	1 Apple IIe	
1	0	1	1 Mannesmann Tally	
1	1	0	1 HP Think Jet	

	Hard Disk Drive	Floppy Disk Drive	Synthetic Speech Output	Printer
PEI	2 1	1 0	0 0	2 Imagewriter 0
Quebec	3 2 2 3 1	2 2 2 3 1	0 2 1 0 0	0 2 Centronic 2 unspecified 3 Apple 2 1 Epson
Saskatchewan	1 6	0 6	0 6	1 6 Imagewriter II
Yukon	1	1	0	1 Apple
TOTAL	108	84	52	87

Summary of Peripheral Devices Used by Respondents with Macintoshes

	Hard Disk Drive	Floppy Disk Drive	Synthetic Speech Output	Printer
Alberta	1	1	1	1
Nova Scotia	1	0	0	1
Ontario	2	1	0	2 Imagewriter (1)
Quebec	1	0	0	0
TOTAL	5	2	1	4

Summary of Peripheral Devices Used by Respondents with Commodores

	Hard Disk Drive	Floppy Disk Drive	Synthetic Speech Output	Printer
Alberta	1	0	0	0
Manitoba	1	0	0	1 Commodore
New Brunswick	1	1	0	0
Newfoundland	2 1	1 1	0 0	0 1 Martex
Nova Scotia	2	1	0	1 MPS 801
Ontario	4 11 1 2 1 1 10 1 1	4 0 1 0 1 1 5 1 1	0 0 1 0 0 0 0 0 0	1 Commodore XL 0 0 2 C-64 1 Epson, Star NX1000 1 Panasonic KX-P1091 10 unspecified 1 Epson Supergraphic 1 Star - NXC10
PEI	1	1	0	0
Quebec	15	13	1	2
TOTAL	56	32	2	22

Summary of Peripheral Devices Used by Respondents with Other Makes/Models of Computer

	Hard Disk Drive	Floppy Disk Drive	Synthetic Speech Output	Printer	"Other" Computer
Alberta	1	0	0	0	unspecified
B.C.	1	1	0	1 Epson Spec. LX-80	Sanyo MBC 555
	1	1	1	1 Epson Hush	Toshiba Laptop
	1	0	0	1 unspecified	Epson w/ACS Speech Pac
	2	0	0	0	unspecified
	1	1	0	0	Apple IIc
Manitoba	2	0	0	0	unspecified
	1	1	0	1 Epson MX80	Apple II +
	1	1	0	1	Apple II GS
Newfoundland	1	1	0	1 Star SG10 dot matrix	Sanyo MCB 555 PC
	1	0	0	0	TRS 80
Nova Scotia	1	1	0	1 Apple	Apple IIGS
	1	1	0	1 Imagewriter II	Apple IIgE
	1	0	0	0	unspecified
Ontario	1	0	0	1 unspecified Icon	
	8	7	2	8 unspecified	Icon (3)
	1	1	1	1 Roland L012	IBM XT Compatible
	1	1	0	1 Epson, Star NX1000	Icon
	1	0	1	1 Panasonic	Icon
	5	5	2	5 Panasonic KX P1091	Icon
	1	0	0	0	Radio Shack TRS-80 64K
	1	1	0	1 Epson Spec. LX-80	Apple II +
	1	1	0	1 Teletype model 43	Heathkit H11
	1	1	1	1 Roland DG PR1112	Apple II GS
	8	1	0	0	unspecified
	2	2	1	2 Panasonic	Apple II GS (2)
	1	0	0	1 Epson LX-100	Zenith/IBM PC
	1	1	0	1 Epson Lexicon	Icon

	Hard Disk Drive	Floppy Disk Drive	Synthetic Speech Output	Printer	"Other" Computer
(Ont.)	1	0	0	0	Vic 20
	1	0	1	0	Alltalk
	1	1	0	1 unspecified	Apple II
	1	1	0	1 Seikosha SP-1000 AP	Apple IIGS
	1	1	0	1 Panasonic KX-P1080	Apple
	1	0	0	0	TRS80 Colour Computer 2
Quebec	1	0	0	0	Comterm Matra
	1	0	1	1	Apple II Plus
	1	1	0	1 Tandy DMP 130	Tandy 1000 EX
	1	0	0	0	unspecified
TOTAL	59	33	11	37	

Summary of Peripheral Devices used by Respondents Using More than 1 Make/Model of Computer

	Hard Disk Drive	Floppy Disk Drive	Synthetic Speech Output	Printer	IBM	Apple Ile	Mac	Commodore	Other
Alberta	1	1	1	1 Imagewriter	1	1	0	0	
	1	1	1	1 Tandy DMP 130 & Imagewriter	0	0	0	0	Radio Shack Color III Apple IIGS
	1	1	0	1 Epson	0	1	0	0	Apple II GS
	1	1	0	0	0	1	0	1	
	1	1	1	1 Imagewriter Roland DGPR1111	1	1	0	0	Zenith AT clone
	1	1	1	0	0	1	0	1	
B.C.	2	2	0	2	2	2	1	0	
	2	2	0	2 Apple	1	2	0	1	
	1	1	0	1 Imagewriter	1	1	0	0	
	2	2	0	2 unspecified	2	2	0	0	

	Hard Disk Drive	Floppy Disk Drive	Synthetic Speech Output	Printer	IBM	Apple Ile	Mac	Commodore	Other
Manitoba	1	1	0	1 Epson X70	0	0	0	1	Apple II Plus
N.B.	2	1	0	1	1	2	0	1	
Ontario	1	1	0	1 Seikosha SP1006	1	0	0	1	
	4	2	1	4 unspecified	0	4	0	4	Icon (1)
	2	2	0	2 Apple	0	2	0	2	
	1	1	0	1 Roland 1011	1	1	0	0	
	1	1	0	1 Roland DG PR-102	1	1	0	0	
	2	2	1	2 Epson Sp. LX-80	0	2	0	0	Epson Speech, Apple II +
	1	0	0	1 laser	0	1	1	0	
	1	0	0	1 Matrix NX15 & Panasonic KX-P1091	1	1	0	0	
	1	1	1	1 Epson MX	0	1	0	0	Apple II GS
	2	2	2	2 Panasonic KX P1080	2	2	0	0	
	1	1	1	1 Hewlett Packard	0	1	0	1	
	1	1	1	1 Epson	0	1	0	1	
	1	0	1	1 KX-P1091C	0	1	0	0	Tandy 102 portable
	1	1	1	1 Imagewriter II & Epson Spec LX80	0	1	0	0	Apple II GS/Apple II +
	1	0	0	0	1	0	1	0	
	2	2	0	2 Star SL 10C	0	2	0	2	Icon (1)
	1	1	0	1 Mannesmann Tally	1	0	0	0	Laser Turbo XT
	1	1	1	1 Imagewriter	0	0	0	0	Apple IIc/Casio SF3000
Sask.	1	1	0	1 Imagewriter II	0	1	0	0	Apple II GS
	1	1	0	1	0	1	0	1	
Quebec	2	2	2	2 Centronic	0	2	0	1	Tandy (1)
	4	2	0	1	0	3	0	4	Ogivar (1)
	1	1	0	1 IBM	1	1	0	0	
TOTAL	50	41	16	43	18	43	4	22	



APPENDIX L Printers Identified by Respondents Using Only 1 Make/Model of Computer

Alberta	3 unspecified 2 Imagewriter II 1 Epson 1 Panasonic 1 Seikosha - SP - 1000AP 1 Imagewriter	Ontario	35 unspecified 11 KX P1091 7 Panasonic 5 Panasonic KX P1080 4 Epson RX-80 3 Epson Spectrum LX-80 2 C-64 2 Epson 80 2 Imagewriter II 2 Apple IIe 3 Epson 2 Apple 1 Epson LX90 1 Imagewriter 1 Commodore XL print-out 1 Roland L012 dot matrix 1 Star NX1000 1 Epson FX-1050 1 Epson FX + Series 1 Roland dot matrix 1 Teletype model 43 1 Macintosh Imagewriter 1 Roland DG PR-1011 1 Epson Supergraphic 1 Roland DG PR1112 1 Epson Speech Pac mini printer 1 Mannesmann Tally 1 Epson LX-100 1 Epson Lexicon 1 HP Think Jet 1 Seikosha SP-1000 AP dot matrix 1 Star - NXC10 1 Roland DG PR-1111A
British Columbia	5 Imagewriter 1 Epson Spectrum LX-80 1 Epson Hush printer 1 unspecified	PEI	2 Imagewriter
Manitoba	2 unspecified 2 Imagewriter 1 Epson MX80 1 Okidata Microline 182 1 Epson LX800 1 Commodore	Quebec	7 unspecified 3 Apple II 2 Centronic 1 Tandy DMP 130 1 Epson
Newfoundland	1 Tandy DMP 105 1 Star SG-10 dot matrix 1 Martex	Saskatchewan	6 Imagewriter II 1 unspecified
NWT	1 Imagewriter 1 Imagewriter II	Yukon	1 Apple
Nova Scotia	3 unspecified 1 Apple 1 Imagewriter II 1 MPS 801	TOTAL	159

Printers Identified by Respondents Using More than 1 Make/Model of Computer

Alberta	3 Imagewriter 1 HP Laserjet 1 Tandy DMP 130 1 Epson dot matrix 1 Roland DGPR1111..	Ontario	1 Seikosha SP1006 dot matrix 3 unspecified 2 Apple 1 Roland 1011 3 Epson Spectrum LX-80 1 laser 1 Matrix NX15 2 Panasonic KX-P1091 1 Epson MX 2 Panasonic KX P1080 1 Hewlett Packard 1 Epson 1 Roland DG PR-1012 1 Imagewriter II 2 Star SL 10C 1 Mannesmann Tally 1 Imagewriter
British Columbia	4 unspecified 2 Apple 1 Imagewriter		
Manitoba	1 Epson X70		
New Brunswick	1 unspecified		
		Quebec	2 Centronic 1 unspecified
		Saskatchewan	1 Imagewriter II 1 unspecified
		TOTAL	44

Printers Identified by IBM PC Users

Newfoundland	1 Tandy DMP 105
Ontario	5 unspecified 1 Epson FX-1050
Quebec	2 unspecified
TOTAL	10

Printers Identified by Apple IIe Users

Alberta	3 unspecified 2 Imagewriter II 1 Epson 1 Panasonic 1 Seikosha - SP - 1000AP 1 Imagewriter
British Columbia	5 Imagewriter
Manitoba	2 Imagewriter 1 Okidata Microline 182 1 Epson LX800 1 unspecified
NWT	1 Imagewriter 1 Imagewriter II
Nova Scotia	2 unspecified

Ontario	8 unspecified 5 Panasonic KX-P1091 4 Epson RX-80 4 Panasonic 4 Panasonic KX P1080 2 Epson LX-80 2 Epson 2 Epson 80 2 Imagewriter II 2 Apple IIe 2 Apple 1 Epson LX90 1 Imagewriter 1 Epson FX + Series 1 Roland dot matrix 1 Roland DG PR-1011 1 Epson Speech Pac mini printer 1 Mannesmann Tally 1 HP Think Jet 1 Roland DG PR-1111A
PEI	2 Imagewriter
Quebec	3 Apple II 2 Centronic 2 unspecified 1 Epson
Saskatchewan	6 Imagewriter II 1 unspecified
Yukon	1 Apple
TOTAL	87

Printers Identified by Macintosh Users

Alberta	1 unspecified
Nova Scotia	1 unspecified
Ontario	1 Imagewriter 1 unspecified
TOTAL	4

Printers Identified by Commodore Users

Manitoba	1 Commodore
Newfoundland	1 Martex
Nova Scotia	1 MPS 801
Ontario	10 unspecified 2 C-64 1 Commodore XL print-out 1 Epson 1 Star NX1000 1 Panasonic KX-P1091 1 Epson Supergraphic 1 Star - NXC10
Quebec	2 unspecified
TOTAL	23

Printers Identified by Users of "Other" Makes/Models of Computers

British Columbia	1 Epson Spectrum LX-80 1 Epson Hush printer 1 unspecified	Ontario	10 unspecified 5 KX P1091 3 Panasonic 1 Roland L012 dot matrix 1 Epson 1 Star NX1000 1 Epson Spectrum LX-80 1 Teletype model 43 1 Roland DG PR1112 1 Epson LX-100 1 Epson Lexicon 1 Seikosha SP-1000 AP dot matrix 1 Panasonic KX-P1080
Manitoba	1 Epson MX80 1 unspecified		
Newfoundland	1 Star SG-10 dot matrix		
Nova Scotia	1 Apple 1 Imagewriter II		
		Quebec	1 unspecified 1 Tandy DMP 130
		TOTAL	37

APPENDIX M Input Devices for Accessing Computers

Input Devices by IBM PC Users, by Disability

	Disability	Keyboard	Pointer	Adapted Keyboard	Switch	Other
Alberta	Cerebral Palsy	0	0	0	0	1
Manitoba	Hearing Impairment	1	0	0	0	0
Newfoundland	"Other"	1	0	0	0	0
Ontario	Cerebral Palsy	1	0	0	1	0
	"Other"	1	0	0	0	0
	Multiple Disabilities	1	0	1	0	0
		0	0	1	0	0
Quebec	Cerebral Palsy	1	1	0	0	0
TOTAL		6	1	2	1	2

Input Devices by Apple IIe Users, by Disability

	Disability	Keyboard	Pointer	Adapted Keyboard	Switch	Other
Alberta	Cerebral Palsy	4	0	2	0	0
	Developmental Delay	3	0	0	0	1
	Hearing Impairment	3	0	0	0	0
	"Other"	2	0	0	0	0
	Multiple	1	0	0	0	0
British Columbia	Cerebral Palsy	1	1	2	2	1
	Multiple	1	0	0	0	0
Manitoba	Cerebral Palsy	3	0	2	2	0
Newfoundland	Cerebral Palsy	1	0	1	0	0
Nova Scotia	Cerebral Palsy	1	0	0	0	0
	Developmental Delay	1	0	1	0	0
NWT	Cerebral Palsy	2	0	2	0	0
Ontario	Cerebral Palsy	12	0	10	6	3
	Developmental Delay	3	0	1	1	0
	Stroke	1	0	0	0	0
	"Other"	6	0	6	4	1
	Multiple	7	0	3	1	5
PEI	Cerebral Palsy	2	0	1	1	0
Quebec	Cerebral Palsy	5	0	0	0	1
	Hearing Impairment	4	0	0	0	0
	Behaviour/Learning	1	0	0	0	0
Saskatchewan	Cerebral Palsy	0	1	0	0	0
	Developmental Delay	1	0	1	1	0
	Multiple	3	0	4	5	0
Yukon	Developmental Delay	1	0	0	0	0
TOTAL		70	2	36	23	13

Input Devices by Macintosh Users, by Disability

	Disability	Keyboard	Pointer	Adapted Keyboard	Switch	Other
Alberta	Multiple	1	0	0	0	0
Nova Scotia	Multiple	0	0	1	0	0
Ontario	Cerebral Palsy	1	1	0	0	0
	"Other"	1	0	0	0	0
Quebec	Cerebral Palsy	0	0	1	0	0
TOTAL		3	1	2	0	0

Input Devices by Commodore Users, by Disability

	Disability	Keyboard	Pointer	Adapted Keyboard	Switch	Other
Alberta	Hearing Impairment	0	0	0	0	1
Manitoba	Multiple	1	1	0	0	0
New Brunswick	Multiple	1	0	0	0	0
Newfoundland	Cerebral Palsy	1	0	0	0	0
	Hearing Impairment	1	0	0	0	0
Nova Scotia	Cerebral Palsy	1	0	0	0	0
	Stroke	1	0	0	0	0
Ontario	Cerebral Palsy	6	1	1	1	0
	Developmental Delay	7	0	0	0	4
	"Other"	6	0	0	0	1
	Multiple	6	0	1	0	3
PEI	Developmental Delay	1	0	0	0	0
Quebec	Cerebral Palsy	3	1	1	0	0
	Hearing Impairment	7	0	0	0	0
	Behaviour/Learning	2	0	0	0	0
TOTAL		44	3	3	1	9

Input Devices by "Other" Computer Users, by Disability

	Disability	Keyboard	Pointer	Adapted Keyboard	Switch	Other
Alberta	Multiple	1	0	0	0	0
British Columbia	Cerebral Palsy	1	0	2	3	0
	Stroke	1	0	0	0	0
	Multiple	0	0	1	0	0
Manitoba	Cerebral Palsy	0	0	0	1	0
	Multiple	1	0	1	0	0
Newfoundland	Cerebral Palsy	1	0	0	0	0
	Multiple	1	0	0	0	0
Nova Scotia	Cerebral Palsy	0	0	1	0	0
	Multiple	0	0	1	1	0
Ontario	Cerebral Palsy	4	2	3	0	2
	Developmental Delay	8	0	1	0	2
	Stroke	0	1	0	1	0
	"Other"	1	0	0	0	1
	Multiple	8	0	3	0	4
Quebec	Cerebral Palsy	1	1	0	0	1
	Hearing Impairment	1	0	0	0	0
TOTAL		29	4	13	5	10

Input Devices by Multiple Computer Users, by Disability

	Disability	Keyboard	Pointer	Adapted Keyboard	Switch	Other
Alberta	Cerebral Palsy	4	0	2	1	1
	Hearing Impairment	1	0	0	0	0
	"Other"	1	0	1	0	0
British Columbia	Cerebral Palsy	4	1	1	0	0
Manitoba	Cerebral Palsy	0	0	1	0	0
New Brunswick	Cerebral Palsy	1	0	0	0	0
Nova Scotia	Developmental Delay	1	0	0	0	0
Ontario	Cerebral Palsy	3	0	3	3	2
	Developmental Delay	1	0	0	0	0
	Stroke	1	0	0	1	0
	Hearing Impairment	2	0	0	0	0
	"Other"	5	0	0	2	0
	Multiple	4	0	0	0	2
Quebec	Cerebral Palsy	1	1	1	0	0
	Hearing Impairment	6	0	0	0	0
Saskatchewan	Cerebral Palsy	1	0	0	0	0
	Multiple	1	0	0	0	0
TOTAL		37	2	9	7	5

Adapted Keyboards Identified by Respondents

Alberta	1 Bliss touchpad 1 Unicorn keyboard 1 keyguard 1 Bliss touchpad 1 mini keyboard	Ontario	3 keyguard 2 2 templates 1 enlarged keyboard 8 Unicorn keyboard 4 King keyboard 4 Muppet keyboard 1 Touch 1 large keys 1 Unicorn w/keyguard 3 Unicorn expanded kbd 1 Letra set on kbd 1 pictures on membrane 1 activity layout 1 Unicorn & King kbd 1 unspecified 1 expanded keyboard
British Columbia	1 Unicorn board 1 4 adapted keys 1 expanded keyboard 1 unspecified 1 Zygo Tetrascan 1 larger keys	Subtotal	34
Manitoba	1 expanded 2 Unicorn keyboard 1 expanded keyboard	PEI	1 Unicorn expanded kbd
Newfoundland	1 keyguard	Quebec	1 used w/head stick 1 custom adaptation 1 w/help from others
NWT	1 Ten Key Board/AEK 10 1 Narwhale Board	Subtotal	3
Nova Scotia	1 Unicorn 1 2X2 square 1 expanded keyboard 1 large extended kbd	Saskatchewan	5 Unicorn board
		TOTAL	65

Switches Identified by Respondents

Alberta	1 power bar
British Columbia	2 head switch 1 pillow switch 1 unspecified
Manitoba	1 single switch 1 unspecified 1 single
Nova Scotia	1 square pad
Ontario	1 mouth switch 4 head switch 1 2 head switches 1 paddle switch 1 single 1 eyebrow switch 1 pressure pad 2 membrane 2 foot switch 1 cap switch 1 3 head switches 1 pillow switches 1 touch 1 single switch 1 toggle 1 cap & plate sws
PEI	1 TASH Ultra4
Saskatchewan	6 toggle
TOTAL	37

"Other" Computer Input Devices Identified by Respondents

Alberta	1 hand-held keyboard 2 unspecified 1 Unicorn board
British Columbia	1 fist-controlled switch
Ontario	11 unspecified 8 joystick 1 mouse 1 trackball 1 pointer in hand 1 teacher assisted 1 3 switches & a Mod. 2 Unicorn overlay 1 Touchtalker w/AK1 interface 1 Light Talker, AK1 interface 1 keyguard 1 Epson used as remote keybd 1 via Light Talker 1 mouse, tablet, joystick
Quebec	1 unspecified 1 Licorne
TOTAL	39

**APPENDIX N
Respondents**

Special Adaptations Required for Computer Use by Visually Impaired

	Large Print	Voice Output	"Other"
Alberta	1 0	0 0	0 1 keyguard for computer
British Columbia	2	0	0
Newfoundland	0	1	0
NWT	1 0	0 1	0 0
Nova Scotia	1 1	0 0	0 0
Ontario	6 0 0 0 0 0 4 1	0 9 0 0 0 1 4 1	0 0 2 glasses 1 unspecified 1 colour monitor 1 glasses 0 1 glasses
Quebec	1 1	0 1	0 1 keyguard
Saskatchewan	0	1	0
TOTAL	19	19	8

Special Adaptations Required for Computer Use by Respondents Without Visual Impairment

	Large Print	Voice Output	"Other"
Alberta	2	0	0
	0	5	0
	2	2	0
British Columbia	0	4	0
Manitoba	1	0	0
	0	1	0
Newfoundland	0	0	1 keyguard
	0	1	0
NWT	0	1	1 unspecified
Nova Scotia	0	1	0
	1	1	0
Ontario	4	0	0
	0	21	0
	0	0	3 Blissapple software
	0	0	1 adaptive firmware card & switches
	0	0	1 keyguard
	11	11	0
Quebec	0	1	0
	0	0	1 licorne
	0	0	1 large buttons
	1	1	0
Saskatchewan	0	2	0
TOTAL	22	52	9

APPENDIX O Speech Synthesizers Reported by Respondents

Speech Synthesizers Reported by English Respondents with IBM PCs, by Disability

	Disability	Speech Pac	Touch Talker	Light Talker	Voīce	"Other"
Ontario	Multiple	0	0	0	0	1 Voīs 136

Speech Synthesizers Reported by Respondents with Apple Ile's, by Disability

	Disability	Speech Pac	Touch Talker	Light Talker	Voīce	"Other"
Alberta	Cerebral Palsy	0	1	0	0	0
		0	0	0	0	1 Handi-Voice
	Developmentally Delayed	0	0	0	0	1 Language Master
	Hearing Impaired	1	0	1	0	0
British Columbia	Cerebral Palsy	0	1	0	1	0
Newfoundland	Cerebral Palsy	0	1	0	0	0
NWT	Cerebral Palsy	0	0	0	0	1 Echo Speech Board
Nova Scotia	Cerebral Palsy	0	0	0	0	1 Wolf talking computer
Ontario	Cerebral Palsy	1	1	0	1	0
		4	0	0	0	0
		0	4	0	0	0
		0	0	2	0	0
		0	0	0	1	0
		0	0	1	1	0
		0	0	0	0	1 Tomey Talker

	Disability	Speech Pac	Touch Talker	Light Talker	Voice	"Other"
(Ont.)	"Other"	0	0	0	0	1 Type 'n Talk Votrax
		0	0	0	0	1 voice amplifier
		1	1	1	0	0
		0	0	0	0	1 Sharp Memowriter, All Talk
	Multiple	0	0	0	1	1 Echo
		0	0	0	0	1 Voxcom
		0	2	0	0	0
		0	0	0	2	0
PEI	Cerebral Palsy	0	0	0	0	1 Talking Bliss Apple
		0	0	1	0	1 Express 3
Quebec	Hearing Impaired	0	0	0	0	2 Handivoice
Saskatchewan	Multiple	0	0	0	0	2 Echo II
		0	0	0	0	1 power pad, unicorn board
TOTAL		0	0	0	0	1 power pad
		7	11	6	7	18

Speech Synthesizers Reported by Respondents with Commodores, by Disability

	Disability	Speech Pac	Touch Talker	Light Talker	Voice	"Other"
Newfoundland	Hearing Impaired	0	0	0	0	1 Phonic Ear Audio System
Ontario	Cerebral Palsy	0	1	0	0	0
		0	0	0	1	0
	1	0	0	1	0	
	Developmentally Delayed	0	0	0	0	1 Touch & Tell, Speak & Spell
	"Other"	0	1	0	0	0
Quebec	Multiple	0	1	0	0	0
		0	0	1	0	0
TOTAL		1	2	1	3	2

Speech Synthesizers Reported by Respondents with "Other" Makes/Models of Computers, by Disability

	Disability	Speech Pac	Touch Talker	Light Talker	Voice	"Other"
British Columbia	Cerebral Palsy	1	0	0	0	0
		1	0	0	0	1 Real Voice
	Multiple	0	1	0	0	1 110 Handivoice
Ontario	Cerebral Palsy	0	0	0	0	1 Speak & Spell
		0	0	1	0	0
	Stroke	0	0	1	0	0
	Multiple	0	0	0	0	1 Dr. Peet's Talkwriter
Quebec	Cerebral Palsy	0	0	0	0	1 unidentified
TOTAL		2	1	2	0	5

Speech Synthesizers Reported by Respondents with More than 1 Make/Model of Computer, by Disability

	Disability	Speech Pac	Touch Talker	Light Talker	Voice	"Other"
Alberta	Cerebral Palsy	0	0	0	0	1 Talking Bliss Apple
		1	0	0	0	0
	"Other"	0	0	0	0	1 Tash Talking 100
		0	0	0	0	1 Talking Bliss Apple
British Columbia	Cerebral Palsy	0	0	0	0	1 Canon Communicator
		0	0	1	0	0
		0	1	0	0	0
Ontario	Cerebral Palsy	0	0	0	3	0
		0	0	1	0	0
		0	0	0	0	1 Talk-O Digital Audio Recorder
	Stroke	0	0	1	0	0
		0	0	1	0	1 Visual Ear, Memowrite
	"Other"	0	0	0	0	1 voice amplifier
		1	0	0	0	0
		0	1	0	0	0
Multiple	0	0	0	0	1 Vois 135	
	0	0	0	0	1 Talking Textwriter, Echo board	
	0	0	0	0		
Quebec	Hearing Impaired	0	0	0	0	1 Echo II
		0	0	0	1	1 Echo II
Saskatchewan	Cerebral Palsy	0	0	0	0	1 Handivoice
TOTAL		2	2	4	4	11

Speech Synthesizers Reported by Respondents with No Computer, by Disability

	Disability	Speech Pac.	Touch Talker	Light Talker	Voice	"Other"
Alberta	Hearing Impaired	0	0	0	1	0
	"Other"	0	0	0	0	1 voice box
British Columbia	Cerebral Palsy	0	0	0	0	1 Yes/No Voice Box
	"Other"	0	0	0	1	0
Manitoba	Cerebral Palsy	0	1	0	0	0
Newfoundland	Multiple	0	0	0	0	1 unspecified
Nova Scotia	Hearing Impaired	0	2	0	0	0
Ontario	Developmentally Delayed	0	0	0	1	0
	Stroke	0	0	1	0	0
	"Other"	0	0	0	0	1 Canon Communicator M.
		1	0	0	0	0
	Multiple	0	0	0	1	0
		0	1	0	0	0
Quebec	Cerebral Palsy	0	0	1	0	0
	"Other"	0	0	0	1	1 Telescripteur
TOTAL		1	4	2	5	5

"Other" Speech Synthesizers Reported by Respondents

Alberta	2 Talking Bliss Apple 1 Language Master 1 Handi-Voice 1 voice box 1 Tash Talking 100
British Columbia	1 Canon Communicator 1 Real Voice 1 110 Handivoice 1 Yes/No Voice Box
Newfoundland	1 unspecified 1 Phonic Ear Audio System
NWT	1 Echo Speech Board
Nova Scotia	1 Wolf talking computer
Ontario	1 Visual Ear, Memowrite 1 Speak & Spell 1 Type 'n Talk Votrax 2 voice amplifier 1 Canon Communicator M. 1 Vois 136 1 Talking Bliss Apple 1 Express 3 1 Sharp Memowriter, All Talk 1 Dr. Peet's Talkwriter 1 Echo 1 Voxcom 1 Talk-O Digital Audio Recorder 1 Touch & Tell, Speak & Spell 1 Vois 135 1 Tomey Talker 1 Talking Textwriter, Echo board
PEI	2 Handivoice
Quebec	4 Echo II 1 unidentified 1 Telescripteur
Saskatchewan	1 Handivoice 1 power pad & unicorn board 1 power pad
TOTAL	43

APPENDIX P Modems Being Used by Respondents Reporting the Use of 1 Make/Model Computer

	IBM PC	Apple IIe	Macintosh	Commodore	"Other" Make/Model	Modem Make/Model
Alberta	0	1	0	0	0	Sportster 1200
B. C.	0	1	0	0	0	Packard Bell 300/1200 baud (2)
	0	0	0	0	1 Sanyo MBC 555	TAIHALO Lynker 212A & 103 1200b
	0	1	0	0	0	unspecified
	0	4	0	0	0	Packard Bell 300/1200 baud
	0	0	0	0	0	Packard Bell IS/EM 300/1200bd
	0	0	0	0	1 Apple IIc	Packard Bell 300/1200 baud
Manitoba	0	1	0	0	0	Packard Bell PB1200+
NWT	0	1	0	0	0	Hewlett Packard 1200 baud
Ontario	0	1	0	0	0	Capetronic 1200 baud
	1	0	0	0	0	Hayes Smartmodem 2400 baud
	0	1	0	0	1 Apple 2C, Vic 20	unspecified
	0	0	0	0	6 Icon	GVC 1200 bps
	0	1	0	0	0	Winmodem 1200 1200/300/100bps
	0	3	0	0	0	unspecified
	0	0	0	0	1 Zenith/IBM PC	Packard Bell
	0	1	0	0	0	EMP Auto 1200A
TOTAL	1	16	0	0	10	

Modems Being Used by Respondents Reporting the Use of More than 1 Make/Model Computer

	IBM PC	Apple IIe	Macintosh	Commodore	"Other" Make/Model	Modem Make/Model
Alberta	0	0	0	0	1 Radio Shack Color III, Apple II GS	300 baud in Radio Shack Mdl 102,
	1	1	0	0	1 Zenith AT clone	Hayes Smart 1200, Switchcom 212A
B.C.	3	3	0	0	0	Hayes compatible 1200 baud
	2	2	0	0	0	Packard Bell 300/1200 baud
New Brunswick	0	1	1	0	0	unspecified
Ontario	1	0	0	1	0	Commodore 1600(300)
	1	1	0	0	0	unspecified
	2	2	0	0	0	unspecified
	0	1	0	0	1 Tandy 102	unspecified
TOTAL	10	11	1	1	3	

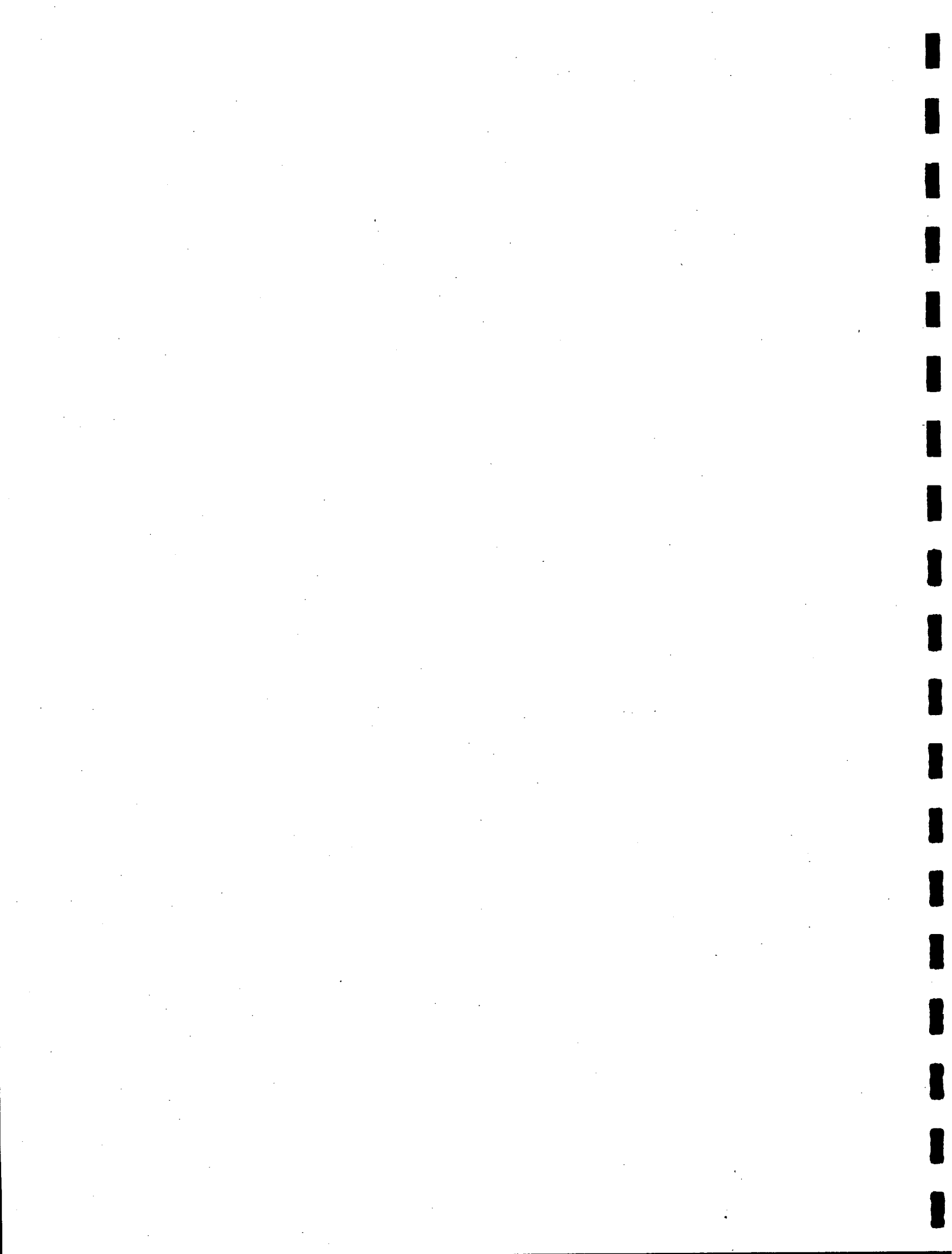
APPENDIX Q Communications Board Users by Language/System and Computer Type

	Language/System	IBM PC	Apple IIe	Macintosh	Commodore	"Other"	More than 1 Make/Model
Alberta	Bliss	1	1	1	0	0	2
	Picsyms	0	0	0	0	0	1
	Picture Comm. Symbols	0	2	0	0	0	0
	"Other"	0	0	0	0	0	1
	Mixed Contents	0	4	0	0	0	1
British Columbia	Bliss	0	3	0	0	0	2
	Picture Comm. Symbols	0	0	0	0	1	0
	PIC	0	0	0	0	1	0
	"Other"	0	1	0	0	1	0
	Mixed Contents	0	1	0	0	1	1
Manitoba	Bliss	0	0	0	0	1	0
	Picsyms	0	1	0	0	0	0
	Picture Comm. Symbols	0	1	0	0	0	0
	"Other"	0	1	0	1	0	1
New Brunswick	"Other"	0	0	0	0	0	1
Newfoundland	Mixed Contents	0	1	0	0	0	0
NWT	Bliss	0	1	0	0	0	0
	Picture Comm. Symbols	0	1	0	0	0	0
Nova Scotia	Bliss	0	1	0	0	0	0
	Pictures Please!	0	0	1	0	0	0
	Mixed Contents	0	0	0	0	1	0
Ontario	Bliss	4	16	0	1	5	5
	Oakland Schools	0	0	0	1	0	0
	Picsyms	0	4	0	0	0	0
	Picture Comm. Symbols	1	3	0	1	2	2
	Worldsign	0	0	0	0	1	0
	PIC	0	0	0	3	0	0
	"Other"	1	9	1	4	4	5
Mixed Contents	1	10	0	3	2	4	

	Language/System	IBM PC	Apple IIe	Macintosh	Commodore	"Other"	More than 1 Make/Model
PEI	Bliss	0	0	0	1	0	0
	"Other"	0	2	0	0	0	0
Quebec	Bliss	0	1	1	0	0	0
	Write	0	2	0	0	0	0
	PIC	1	0	0	0	0	0
	"Other"	1	2	0	0	0	0
	Mixed Contents	0	0	0	3	1	0
Saskatchewan	Mixed Contents	0	1	0	0	0	1
TOTAL		10	69	4	18	21	27

APPENDIX R Respondents by Type of Phone Line

	Private Line	Switchboard	Party Line
Alberta	24	3	0
British Columbia	14	10	0
Manitoba	15	0	1
New Brunswick	15	0	0
Newfoundland	33	1	0
NWT	2	0	0
Nova Scotia	13	1	0
Ontario	154	27	2
PEI	2	0	0
Quebec	17	5	1
Saskatchewan	3	15	0
Yukon	2	0	0
TOTAL	294	62	4



APPENDIX S Description of Respondents' Speech, by Disability

	Disability	Understood by Familiar People	Understood by Everyone	Never Understood	Other
Alberta	13 Cerebral Palsy	6	2	3	2
	5 Developmentally Delayed	4	0	1	0
	9 Hearing Impaired	3	1	3	2
	4 "Other"	0	0	0	4
	7 Multiple	4	0	0	3
British Columbia	18 Cerebral Palsy	7	0	7	4
	1 Stroke	0	0	0	1
	3 "Other"	3	0	0	0
	3 Multiple	1	0	2	0
Manitoba	9 Cerebral Palsy	3	0	1	5
	2 Developmentally Delayed	0	0	0	2
	1 Hearing Impaired	0	0	1	0
	6 "Other"	2	0	1	3
	4 Multiple	1	0	1	2
New Brunswick	5 Cerebral Palsy	2	0	2	1
	7 Developmentally Delayed	0	0	7	0
	2 Stroke	1	0	1	0
	1 Hearing Impaired	1	0	0	0
	4 "Other"	3	0	0	1
	4 Multiple	0	0	0	4
Newfoundland	17 Cerebral Palsy	8	4	3	2
	27 Developmentally Delayed	16	2	6	3
	4 Hearing Impaired	0	4	0	0
	1 Behaviour/Learning	0	0	0	1
	12 "Other"	4	4	1	3
	11 Multiple	7	0	1	3
	1 No reply	1	0	0	0
NWT	3 Cerebral Palsy	0	1	1	1

	Disability	Understood by Familiar People	Understood by Everyone	Never Understood	Other
Nova Scotia	5 Cerebral Palsy	1	3	1	0
	5 Developmentally Delayed	2	0	1	2
	1 Stroke	1	0	0	0
	4 Hearing Impaired	2	1	0	1
	5 Behaviour/Learning	2	1	1	1
	1 "Other"	1	0	0	0
	6 Multiple	2	0	3	1
Ontario	64 Cerebral Palsy	29	2	16	17
	63 Developmentally Delayed	31	6	7	15
	13 Stroke	3	3	2	4
	18 Hearing Impaired	5	0	4	9
	7 Behaviour/Learning	3	0	0	4
	39 "Other"	17	2	5	14
	84 Multiple	29	2	17	34
1 No reply	0	0	0	1	
PEI	2 Cerebral Palsy	1	0	0	1
	2 Developmentally Delayed	2	0	0	0
Quebec	25 Cerebral Palsy	16	2	4	0
	14 Developmentally Delayed	13	0	1	0
	1 Stroke	1	0	0	0
	21 Hearing Impaired	17	4	0	0
	3 Behaviour/Learning	3	0	0	0
	4 "Other"	2	0	1	1
	4 Multiple	2	0	0	1
Saskatchewan	2 Cerebral Palsy	0	0	1	1
	3 Developmentally Delayed	0	0	0	3
	1 "Other"	0	0	0	1
	14 Multiple	2	0	1	11
Yukon	1 Developmentally Delayed	0	0	1	0
	1 "Other"	0	0	0	1
TOTAL		268	45	109	173

APPENDIX Q Communications Board Users by Language/System and Computer Type

	Language/System	IBM PC	Apple IIe	Macintosh	Commodore	"Other"	More than 1 Make/Model
Alberta	Bliss	1	1	1	0	0	2
	Picsyms	0	0	0	0	0	1
	Picture Comm. Symbols	0	2	0	0	0	0
	"Other"	0	0	0	0	0	1
	Mixed Contents	0	4	0	0	0	1
British Columbia	Bliss	0	3	0	0	0	2
	Picture Comm. Symbols	0	0	0	0	1	0
	PIC	0	0	0	0	1	0
	"Other"	0	1	0	0	1	0
	Mixed Contents	0	1	0	0	1	1
Manitoba	Bliss	0	0	0	0	1	0
	Picsyms	0	1	0	0	0	0
	Picture Comm. Symbols	0	1	0	0	0	0
	"Other"	0	1	0	1	0	1
New Brunswick	"Other"	0	0	0	0	0	1
Newfoundland	Mixed Contents	0	1	0	0	0	0
NWT	Bliss	0	1	0	0	0	0
	Picture Comm. Symbols	0	1	0	0	0	0
Nova Scotia	Bliss	0	1	0	0	0	0
	Pictures Please!	0	0	1	0	0	0
	Mixed Contents	0	0	0	0	1	0
Ontario	Bliss	4	16	0	1	5	5
	Oakland Schools	0	0	0	1	0	0
	Picsyms	0	4	0	0	0	0
	Picture Comm. Symbols	1	3	0	1	2	2
	Worldsign	0	0	0	0	1	0
	PIC	0	0	0	3	0	0
	"Other"	1	9	1	4	4	5
	Mixed Contents	1	10	0	3	2	4

	Language/System	IBM PC	Apple IIe	Macintosh	Commodore	"Other"	More than 1 Make/Model
PEI	Bliss	0	0	0	1	0	0
	"Other"	0	2	0	0	0	0
Quebec	Bliss	0	1	1	0	0	0
	Write	0	2	0	0	0	0
	PIC	1	0	0	0	0	0
	"Other"	1	2	0	0	0	0
	Mixed Contents	0	0	0	3	1	0
Saskatchewan	Mixed Contents	0	1	0	0	0	1
TOTAL		10	69	4	18	21	27

Description of "Other" Speech, Where only 1 Cause of Speech Impairment is Identified

Alberta	3 sometimes understood by those familiar with the respondent 2 vocalization 2 non-verbal 1 minimal speech
British Columbia	3 sometimes understood by those familiar with respondent 1 difficult to understand 1 non-verbal
Manitoba	3 sometimes understood by those familiar with respondent 3 non-verbal 2 vocalization 2 minimal speech
New Brunswick	2 non-verbal 1 vocalization 1 unspecified
Newfoundland	5 non-verbal 2 sometimes understood by those familiar with respondent 1 always understood 1 minimal speech
NWT	1 non-verbal
Nova Scotia	2 non-verbal 2 minimal vocabulary
Ontario	43 non-verbal 10 sometimes understood by those familiar with respondent 4 minimal speech 3 vocalization 1 withdrawn - seldom speaks 1 repeats sounds 1 gestures 1 rarely understood 1 unspecified
PEI	1 sometimes understood by those familiar with respondent
Quebec	1 minimal 2 unspecified 1 non-verbal
Saskatchewan	3 non-verbal 1 vocalizations 1 minimal vocabulary
Yukon	1 sometimes understood by those familiar with respondent
TOTAL	117

Description of "Other" Speech, Where More than 1 Cause of Speech Impairment is Identified

Alberta	3 sometimes understood by those familiar with respondent
Manitoba	1 gesture 1 sometimes understood by those familiar with respondent
New Brunswick	1 vocalization 1 non-verbal
Newfoundland	3 non-verbal
Nova Scotia	1 non-verbal
Ontario	25 non-verbal 4 sometimes understood by those familiar with respondent 1 unspecified 1 understood with effort 1 vocalization 1 seldom understood by strangers
Quebec	1 sometimes understood by those familiar with respondent
Saskatchewan	8 non-verbal 2 minimal vocabulary 1 echoes words, non-expressive
TOTAL	56

