

Literacy and Disability

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Table of Contents

Executive Summary	
Section I: Introduction	
Section II: The Data	
Section III: The Need for Change	
Section IV: What Can Be Done	
Section V: Conclusion	
Section VI: References	
Section VII: Appendices	
Appendix A: Sample Tasks Performed at Each Literacy Level	
Appendix B: Training Resources for Literacy Practitioners	
Appendix C: Programs Which use Computers for Literacy Instruction	
Appendix D: Pre-Screening and Assessment Tools	

Literacy and Disability

Executive Summary

- Literacy has been determined by the Persons With Disabilities Advisory Committee (PWDAC) to be a major barrier to employment for people with disabilities.
- Literacy can be defined as “the ability to understand and use written information to function in society, to achieve goals, and to develop knowledge and potential” (*Reading the Future*, 1996).
- The International Adult Literacy Survey (IALS) is the most comprehensive examination of literacy skills ever undertaken. It measured the literacy levels of individuals in twelve countries including Canada.
- IALS demonstrated that approximately 44% of Canadians function at the lowest two of five literacy levels (*Reading the Future*, 1996). Subsequent reports show us that proportionally more people with disabilities function at the lowest literacy levels.
- One report shows that between 50% and 77% of people with disabilities function at the lowest two literacy levels (Kapsalis, 1999). An American study has shown that 87% of Americans with intellectual disabilities, 58% of Americans with learning disabilities and 54% of Americans with visual difficulties function at the lowest literacy level (As cited in *Disability & Literacy: How disability issues are addressed in adult basic education programs*, 1997).
- The IALS data also demonstrated relationships between literacy and education, employment, income and disability.
- The need to improve the generally low literacy skills among people with disabilities is exacerbated by the increasing importance of literacy skills in the workplace of the new economy.

- This report will demonstrate an obvious need to improve the literacy skills among people who have disabilities. To this end, it will make recommendations, which focus on trainer education and enhancing the relationships between the disability and literacy communities.

The recommendations are:

1. Stakeholders in British Columbia should articulate a goal to have all literacy programs in the province be fully accessible and inclusive.
2. People with disabilities who are participants or potential participants in literacy programs should be consulted to determine their needs.
3. The business community should be consulted to provide direction to literacy training relating to specific employment sectors.
4. A literacy coalition should be formed at the social policy level in British Columbia.
5. Linkages between disability groups and literacy groups should be established at the program level.
6. Literacy programs should ensure that their *volunteers* are fully aware of and trained to deal with issues presented by students with disabilities.
7. Disability organizations should make an effort to recruit and train their own literacy volunteers.
8. A credential system should be developed for literacy instructors, especially volunteers, that recognizes practitioners working in the various areas of disabilities.
9. Efforts should be made to increase the use of computers in adult literacy programs.
10. A comprehensive directory of all disability related literacy programs should be compiled.
11. A best practice inventory of literacy programs for people with disabilities should be developed.
12. To become more inclusive, literacy programs should make efforts to become more flexible, in time lines and student expectations to allow for the inclusion of people with disabilities.
13. All literacy students in all literacy programs in British Columbia should be screened for possible learning difficulties including learning disabilities and hearing or visual disabilities.

Section I: Introduction

Introduction

The Persons With Disabilities Advisory Committee (PWDAC) is a tripartite committee made up of representatives from Human Resources Development Canada, the British Columbia Provincial Government and the disability community. The PWDAC influences programs and services of the federal and provincial governments in order to achieve full and equitable employment for people with disabilities throughout British Columbia. At a July 6th, 2000 meeting, the PWDAC identified literacy as one of the main barriers for people with disabilities to finding employment.

The research shows that one's success in obtaining and maintaining employment is to some degree related to one's literacy level. This report will show that the degree of correlation between the two may be more pronounced than we realize. Moreover, this report will demonstrate that the interrelation between literacy and employment success is shaped and influenced by a host of additional factors such as disability, education and income.

This report has two objectives. One is to illustrate the complexity of the relationships between literacy, disability, employment, education and income. In order to examine these relationships, one must understand what literacy means. Literacy will be defined and the literacy levels and characteristics of Canadians will be examined using information gathered by the most comprehensive literacy study ever conducted, the International Adult Literacy Survey (IALS). The data illustrating the impact of disability on literacy will then be explored. The next step will be to demonstrate the value of high literacy skills in the present labour market.

The second and major objective of the report will be to determine how to address the literacy needs of people with disabilities. A literature review will gather relevant resources that have been used to address the problem of low literacy among people with disabilities. Information from the literature review and a selection of best practice literacy programs available in Canada will help to formulate thirteen recommendations. These are intended to address the problem of low literacy among people with disabilities and to guide the efforts of the PWDAC.

Literacy Defined

What does ‘literacy’ mean? Is literacy merely the ability to read or to write? The International Adult Literacy Survey is the most comprehensive examination of literacy and literacy skills ever undertaken. The study took place in 1994 in twelve countries, including Canada where 4,800 people were tested. The test consisted of a background questionnaire (examining such factors as household arrangements, education, income, labour market activity and workplace skills), a brief set of core items and a large main test set of simulation tasks (see appendix A for an example) (http://www.nap.edu/readingroom/books/icse/study_g.html). The core items and the simulation tasks assessed the three distinct yet highly correlated sub-types of prose, document and quantitative literacy. The IALS incorporated these three sub-types of literacy which were initially developed by the American, National Adult Literacy Survey (NALS). The NALS was a 1992 initiative of the U.S. Department of Education “to further refine the instruments used to measure the concept of literacy.” (*Reading the future*, 1996). The three sub-types of literacy can be described as follows:

- Prose literacy: the ability to understand and use information from texts, including labels, pamphlets and media articles
- Document literacy: the ability to identify and utilize information from a variety of formats including charts, tables, graphs and maps
- Quantitative literacy: the ability to identify and manipulate numbers from a variety of formats using text instruction

(*Reading the Future*, 1996)

IALS defined literacy not strictly in terms of the ability to read or write. The IALS went further, by providing a more unified definition of literacy as “the ability to understand and use written information to function in society, to achieve goals, and to develop knowledge and potential” (*Reading the Future*, 1996). This definition is becoming more and more relevant as we move deeper into a knowledge/information based society.

As NALS did, the IALS moves us away from the traditional dichotomy of literate/ illiterate, preferring instead to look at literacy more in terms of a continuum of skills. For each sub-type of literacy (prose, document, and quantitative) there are five levels of skill used to assess proficiency. The ranking, from 1 to 5, is determined from a participant's score of from 0 – 500. Participants are given a number of tasks to perform for each sub-types of literacy. For each sub-type, participants are given a total score ranging from 0-500. Keep in mind that level 1 is not the absence of literacy skills; it is merely the lowest level. (Refer to appendix A to see a breakdown of scores and examples of the tasks at each level).

The Western Canada Workplace Skills Training Network described the 5 levels of literacy skills used in the IALS in the following way:

- Level 1 indicates very low literacy skills, where the individual may, for example, have difficulty identifying the correct amount of medicine to give to a child from the information found on the package.
- Level 2 respondents can deal only with material that is simple, clearly laid out and in which the tasks involved are not too complex. This is a significant category, because it identifies people who may have learned to use their lower literacy skills in everyday life, but would have difficulty learning new job skills requiring a higher level of literacy.
- Level 3 is considered as the minimum desirable threshold in many countries but some occupations require higher skills.
- Level 4 and 5 show increasingly higher literacy skills requiring the ability to integrate several sources of information or solve more complex problems. It appears to be a necessary requirement for some jobs. (levels 4 and 5 are combined in most analyses for statistical reasons)
(<http://www.nald.ca/wwestnet/PDFs/Workshops.pdf>)

The IALS definitions of literacy and literacy levels provide us with a goal in terms of where on the literacy scale we want all Canadians and British Columbians to be. Level 3 is widely considered the minimum. With this goal in mind, the report will now look at the present 'literacy landscape' in Canada and British Columbia as represented by the IALS.

Section II: The Data

The Literacy Picture in Canada

The report *Reading the Future: A Portrait of Literacy in Canada*, was published in 1996 by Statistics Canada and is the most current collection of literacy data we have in Canada. This report is based on data gathered by the IALS in 1994. The data gathered by the IALS and presented in *Reading the Future* provide us with important information that helps illuminate some of the issues surrounding literacy and people with disabilities.

A very strong relationship exists between literacy and educational attainment. A full 59% of Canadians who have completed a University degree function at level 4/5 (*Reading the Future*, 1996). Although very strong, this relationship is also very complex. For example, 11% of people completing a University degree still only function at level 2 and a further 0.2% function at level 1 (*Reading the Future*, 1996). At the same time, 90% of Canadians completing only primary school or less, function at levels 1 and 2. On the other hand 10% and 1% of those only completing primary school function at level 3 and 4/5 respectively (*Reading the Future*, 1996). The fact that, even after a University education, people still function at the lowest literacy levels and conversely, after only a primary school education, people function at the highest level of literacy suggests there are other factors at work here.

We must be careful however not to assign a causal relationship here. Literacy may be as much a predictor of education as education is of literacy. For example, having an initially high literacy level may predispose someone to pursue interests in academia. The situation of correlation, not causation is similar with other variables such as employment and earnings.

No research could be found which explores the direct effect of education on literacy. Nevertheless, it is not difficult to imagine that education has *some* positive effect on one's literacy skills. It would be the degree of this effect that is debatable. The strength of this relationship could potentially have significant implications for people with disabilities because of the somewhat generally lower level of educational attainment within this group. For instance, 19.8% of persons with disabilities have completed less than 9 years of education (<http://www.direct.ca/orw/faq/findex.shtml>).

There exists a strong relationship between educational attainment and employment status. The higher one's level of education, the more likely one is to be employed. There is also a relationship between literacy level and basic employment status. A full 55% of working age adults functioning at literacy level 1 were unemployed in Canada in 1994 (Shalla & Schellenberg, 1998). The same study tells us that conversely, only one quarter of those at level 4/5 was without work in 1994 (Shalla & Schellenberg, 1998). It appears that low literacy and low educational attainment have similarly negative effects on employment outcome.

Earnings depend in part on one's literacy level. The higher one's literacy skills, the more one earns. For example, IALS tells us that approximately 50% of people who function at level 1 or 2 earn below \$18,000 per year (*Reading the Future*, 1996). Research shows that people who have a disability tend to have lower literacy levels than people who don't have a disability (Kapsalis, 1999). Irrespective of literacy level, people who have a disability earn less than people who don't have a disability. 56% of people with disabilities who are of working age earn less than \$10,000 per year (earned and unearned income) (<http://www.direct.ca/orw/faq/findex.shtml>). One could expect that low literacy is a contributing factor to the low income of people with disabilities.

Education and literacy together are also tied to earnings. A university education yields various benefits. One of the benefits is generally higher earnings than individuals who don't have a university degree. As increasing the literacy levels of students is one of the intended objectives of the education system, one study sought to find out what proportion of the increased earnings of a university graduate was due to literacy skills (Osberg, 2000). The study found that approximately 30% of the increased earnings of a full-time, full year employed male university graduate as compared to a non-university graduate, was due to the higher literacy skills of the graduate (Osberg, 2000). In short this means that literacy skill level accounts for approximately 30% of the economic return from education. However, this relationship could only be established for males. In the same study, no relationship could be established between the education, literacy skills and earnings of full-time and part-time employed women. Reasons for this are not known. This raises the question then: does literacy only affect the earning success of men?

Even women with strong literacy skills are not as highly rewarded as men of similar or even lesser skill level (Shalla & Schellenberg, 1998). This is likely due to the fact that still, the average earnings of women are less than the average earnings of men in all occupational categories (Women in Canada 2000, 2000). Despite the gender differences found in average earnings, within each gender the correlation usually holds that the higher one's literacy skills, the more one earns. The only gender difference shown in the Canadian IALS data was that on average women tend to be more proficient in reading and writing whereas men tend to be more proficient in mathematics and problem solving.

Summary

None of the relationships described here are necessarily causal. However, we can see a picture forming with literacy at the centre and other factors inter-linked (Figure 1).

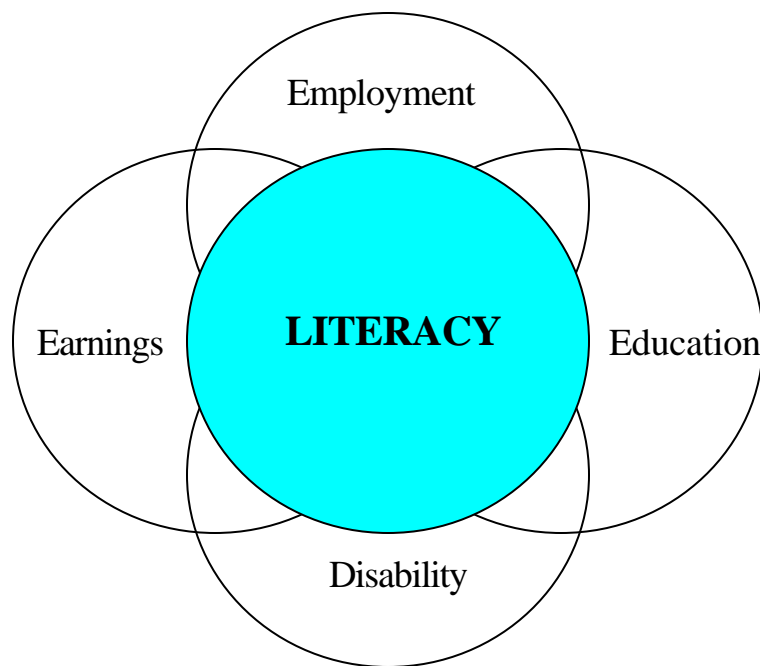


Figure 1.

A relatively high literacy level leads to pursuit of further education, which improves literacy skills through practice, which leads to an increased likelihood of finding employment, which further improves literacy skills through practice, which leads to prospects for a higher income. Having a disability may lead to lower educational attainment, which results in less

opportunity to improve literacy skills through practice in school. Lower educational attainment and lower literacy level in turn decrease the likelihood of finding employment and thus missing the opportunity to practice and improve literacy in the workplace and in turn achieve economic success. It becomes apparent that the person with a disability falls farther and farther behind at each successive step.

In light of the high degree of correlation between literacy, disability, education, employment, and earnings it seems that working to directly improve the basic literacy skills of people with disabilities is the most effective place to intervene in this situation in order to achieve employment and subsequently, full citizenship for many people with disabilities.

Literacy and Disability

A statistical analysis of the IALS data, entitled “*The Effect of Disabilities on Literacy*” was conducted by Data Probe Economic Consulting in 1999. This report focuses on people with learning disabilities and physical disabilities (excluding visual disabilities) and demonstrates a strong relationship between disability and literacy skills.

Because the degree of correlation is so high between the three sub-types of literacy measured in IALS, researchers chose to focus solely on document literacy for methodological reasons. Analyzing only one type of literacy is much simpler than analyzing all three.

The Effect of Disability on Literacy Skills provides us with a useful picture of the relationship between disability and literacy. The study found that 77% of people with learning disabilities in Canada function below level 3 (52% at level 1) and 48% of people with physical disabilities function below level 3 (15% at level 1) on the IALS scale (Kapsalis, 1999). This is compared to 36% of people without disabilities who function below level 3 (Kapsalis, 1999). These findings echo an American study where it was found that 58% of Americans with learning disabilities function at level 1 and between 36% - 53% of Americans with various physical disabilities function at level 1 (National Institute for Literacy, 1997).

The data from *The Effect of Disability on Literacy Skills* tells us that learning disabilities tend to place individuals at the lowest literacy level.

Attempting to equalize for the effect of education and other factors such as age, gender and so on, individuals with a learning disability score an average of 14% lower on the IALS tests than individuals who do not have a learning disability (on the 0-500 point scale) (Kapsalis, 1999). A 14% drop in literacy scores is equivalent to approximately 2.7 years of education (Kapsalis, 1999). As one gets older, the trend is such that it becomes more difficult to realize benefits from education. Learning disabilities make it even more difficult to realize benefits from education as one gets older. Thus, for individuals identified as having a learning disability, early intervention is likely much more beneficial than adult remedial or basic literacy training. However this is not to diminish the potential positive benefits of adult learning.

Interestingly, of the 42% of people with physical disabilities, who failed to exceed level 2 on the document literacy, there is a cluster of individuals at the top end of level two (Kapsalis, 1999). This 'barrier', the author suggests, is surmountable with as little as one year of education in some cases.

With the exception of a slightly higher proportion of individuals below level 3 on the document literacy scale, no statistically significant relationship could be isolated between physical disabilities and low literacy levels (Kapsalis, 1999). However, what goes unmentioned in the study, is the fact that people with physical disabilities (and, for that matter learning disabilities) experience less involvement in the labour force. Therefore, while schooling may be equivalent, people with disabilities do not have as much of an opportunity to practice their literacy skills at work because they are less likely to have a job. Literacy is a well-documented 'use it or lose it' phenomenon (*Reading the Future*, 1996). Prolonged exclusion from the labour market and educational opportunities could contribute to the problem of low literacy skills among people with disabilities (Kapsalis, 1999). For example, one may be functionally literate and reading at a level 3 or 4, but through prolonged exclusion from the labour force may slowly regress to poorer literacy skills. Therefore, it may be beneficial to put into practice programs that promote and support reading and the maintenance of literacy skills once they are acquired.

The report reminds readers that the relationship between disability and literacy is far from perfect for two main reasons:

- 1.) Different degrees of disabilities will tend to have a different impact on literacy skills; and
- 2.) Within similar types of disabilities, there will be differences in literacy skills because of differences in, for example, the level of education, employment, and literacy tasks at work and in everyday life (Kapsalis, 1999).

It is important to bear in mind several limitations of this study. Firstly, visual disabilities were not included in the study. The definition of ‘disability’ in IALS was very broad. No distinction was made between more minor visual disabilities and complete blindness. For this reason, *The Effect of Disability on Literacy Skills* did not use the data relating to visual disabilities. Also, this study did not include data on people with intellectual or mental health disabilities.

Secondly, one must bear in mind that the range of physical disabilities as defined in IALS was very broad. In IALS, physical disabilities included hearing, speech disabilities, as well as disabilities which may have existed in the past and disabilities that may have been temporary or did not restrict activities of daily living. This broad range may result in the understatement of the impact of disabilities on literacy skills. For example someone who is temporarily disabled by a broken arm at the time of the study may identify themselves as disabled but their literacy skills may not have been negatively affected due to the very temporary nature and limited scope of their disability.

Thirdly, while the overall impact of disabilities on literacy skills may be significant and apparently universal, different disabilities may impact different literacy skills in different ways. For example, one type of learning disability may impact on one’s ability to manipulate numbers, while another type of learning disability may impact on one’s perception when reading prose.

Lastly, because of the relatively high incidence of low literacy skills and significant increase in the rate of disability among individuals over 55, *The Effect of Disability on Literacy Skills* did not include those individuals over the age of 55. The report only includes individuals 16 – 55 years of age, which could also lead to an understatement of the problem of low literacy skills among working age adults. This is because, due in some part to lower

educational attainment, adults over 55 tend to have lower literacy skills than younger adults (*Reading the Future*, 1996).

Despite the limitations of this study, we can conclude that low literacy is often not explicitly the result of ones' disability. It is more likely the result of exclusion from meaningful opportunities to develop those skills (Kapsalis, 1999).

The Relevance of Literacy

As our economy and society become more information and knowledge-based, it is logical to assume that those with high literacy skills will tend to be more successful in terms of employment and earnings. This is reflected in the rise in the growth occupations called "knowledge occupations" by Masse, Roy & Gingras (1998). These "knowledge occupations" are in such areas as pure science, applied science, engineering and computers (programmers, Information technology (IT), systems administration etc). These types of occupations grew at more than twice the rate of total employment during the 1990's (Masse, Roy & Gingras, 1998). Growth in the management category also grew at a high rate through the 1970's 80's and 90's. These two fastest growing sectors of the Canadian labour market require highly educated workers. For example, as of the 1991 census, 78% of the workers in the knowledge occupations have some post-secondary education, while a full 50% of those have completed a university degree. Masse, Roy & Gingras also note that Human Resources Development Canada's (HRDC) labour market research has determined that the literacy requirements of many jobs are increasing due to technological and organizational change (1998). Indeed, there is a growing concentration of highly literate individuals in management and knowledge occupations (Masse, Roy & Gingras, 1998).

Masse, Roy & Gingras hold that, because of the movement of the economy toward occupations with a higher skill set, "it is possible that some share of the least skilled segment of the labour force will have difficulty in finding work and will eventually quit the job market." (1998). HRDC's Essential Skills Project, have clustered the literacy skill requirements of the lowest jobs at around level 3 (www.hrdc-drhc.gc.ca/hrp/index_e.html). We can interpret this finding to have profound implications for people with disabilities because, as we know, many people with disabilities are already on

the fringes of the labour market. For example, according to the study, *The Effect of Disability on Literacy Skills*, this requirement of level 3 literacy skills would exclude the majority of people with learning disabilities from the labour market.

These baseline requirements of level 3 literacy are expected to rise with the shifting of the economy towards more knowledge and information-based occupations. The report, *Training for the New Economy* states that currently, “technological change is contributing to an upskilling process that is reducing the demand for unskilled workers” (Betcherman, McMullen & Davidman, 1998).

The presently “unskilled workers” and long-term unemployed need to be trained to suit the demands of the labour market as James Page suggests. James Page is the Executive Director of the National Literacy Secretariat (NLS) and has discussed several myths surrounding adult literacy (<http://www.nald.ca/fulltext/wwestnet/cover.htm>). One of these myths is that we should “train the best and forget the rest” (<http://www.nald.ca/fulltext/wwestnet/cover.htm>). This attitude or myth supports the notion of forgetting those on the lower end of the literacy scale, such as people with disabilities, and train only those with a high likelihood of succeeding in the job market. This attitude can be especially damaging for people with disabilities who often have a lower likelihood of employment success because they are often faced with multiple barriers to employment success as a result of their disability. James Page refutes this attitude saying, “We ignore the literacy training needs of our whole labour force at our peril.” (<http://www.nald.ca/fulltext/wwestnet/cover.htm>). He goes on to say that we can’t afford “to neglect the deteriorating literacy skills of the short term and long term unemployed” (<http://www.nald.ca/fulltext/wwestnet/cover.htm>). The Canadian skills supply cannot be taken for granted if it is to meet the higher demands of global competition and economic expansion” (<http://www.nald.ca/fulltext/wwestnet/cover.htm>). The 4.2 million Canadians reporting some kind of disability, who also tend to be on the lower end of the literacy scale, represent a large pool of human resource potential (<http://www.hrdc.drhc.gc.ca/commons/news/9821b3.html>).

Summary

The data tells us that the literacy needs of people with disabilities have not been met. The numbers are real and the situation has continued for years. Despite the extraordinary efforts of some literacy practitioners and disability groups across the country, the literacy picture for people with disabilities has remained relatively unchanged over the past decade. There are hundreds, perhaps thousands of literacy programs in Canada. A literature review has revealed that there are too few that serve the needs of people with disabilities. The lack of literacy programs capable of serving people with disabilities leads to these people often having only one option when it comes to participating in a literacy program. This often results in, and perhaps is a symptom of lower participation rates of people with disabilities in literacy programs. For instance, there is relatively little participation, specifically by people with intellectual disabilities in literacy programs (Bach, 1994). Furthermore, the education system in Canada has long been segregated for people with disabilities. The legacy of a segregated education system and few literacy program options for people with disabilities in Canada is lower educational attainment, poor literacy skills and high unemployment (Panitch & Ticoll, 1995). Because of generally low literacy skills, many people with disabilities are not in a position to take advantage of the opportunities presented by the changing economy.

So the urgency to improve the literacy of people with disabilities is demonstrated on two fronts. The first is the generally low levels of literacy among this population that limit involvement in the labour force. The second is the demonstrated need of the global economy for an increasingly literate workforce.

Section III: The Need for Change

In the past, surveys and canvassing of the literacy community in BC have not paid heed to the issues surrounding the literacy needs of the disability community. For example, a regional professional development needs assessment conducted for the Adult Basic Education Association of British Columbia (ABEABC is the provincial body which administers adult basic education at the grade 8-12 level) failed to acknowledge the urgent literacy needs of people with disabilities (Thomas, 1993). Of the 26 topics of concern identified by ABEABC members (consisting mainly of literacy programs), only six 'topics of concern' were related to the needs of people with disabilities. Areas included: 'learner diagnosis and assessment'; 'strategies for teaching people with learning difficulties'; 'strategies for computer assisted instruction'; and 'good practice issues' (Thomas, 1993). Whether or not respondents had people with disabilities in mind when identifying these factors is not known. Certainly awareness must be raised among literacy practitioners and programmers that there exists an incredible need for literacy programs to reflect the concerns of people with disabilities.

Members of the disability community go beyond the general areas of need as identified by the British Columbia Adult Basic Education community. The disability community has identified specific issues, which, if adequately addressed could help to serve the literacy needs of people with disabilities. There are several reports that describe specific areas of need:

1.) In a *Pan Canadian Study on Literacy Issues for Adults with Significant Physical Disabilities*, the Neil Squire Foundation found that "the majority of programs in every province identified the need for training and support in several areas":

- how to make their programs more accessible,
- disability awareness,
- technical aids and assistive devices,
- services and programs who can assess learner's access needs and services who can recommend appropriate equipment and provide training,
- educational tools.

(Source; Neil Squire Foundation, 1999)

A Pan Canadian Study on Literacy Issues for Adults with Significant Disabilities was conducted in 1999 by the Neil Squire Foundation, partly in order to understand the barriers posed by mainstream literacy training to people with disabilities. This was accomplished through a literature review, a survey and a field test of different models.

- 1.) A report published by the Roeher Institute, a Canadian national organization for the study of public policy affecting people with intellectual disabilities, made recommendations to improve the literacy opportunities for people with disabilities in Canada. *Literacy and Labels* is an analysis of Canada's literacy policies as they relate to individuals with intellectual disabilities. The report makes recommendations designed to improve these policies for people with intellectual disabilities in the following areas:

- policy development,
- documentation of best practices,
- materials development,
- outreach,
- linkages,
- program evaluation

(Source; Bach, 1990)

- 1.) *Speaking of Equality: Making literacy programs accessible to people with an intellectual disability* is a publication that speaks directly to program managers and coordinators. As the title suggests, it offers some practical suggestions for making a literacy program accessible to those with an intellectual disability. In *Speaking of Equality* the authors elaborate on the ideas contained in the 1990 document, *Literacy and Labels*. The authors provide us with specific areas on which we should focus our efforts to improve literacy opportunities for people with disabilities:

- Policy and Program Barriers
 - I. Program funding
 - II. Costs to the individual
 - III. Eligibility criteria
 - IV. Supports and services

- Barriers to Learning
 - V. Training and development of tutors and educators
 - VI. Materials
 - VII. Modes of instruction
 - VIII. Links
- Attitudinal barriers

(Source; Panitch & Ticoll, 1995)

4) An extensive literature review and primary research has lead The Saskatchewan Association of Rehabilitation Centres (SARC), which serves consumers with developmental disabilities, to identify four “keys to success” for improving the literacy of people with developmental disabilities as described in their *Supplementary Tutor Handbook*:

- tutor qualities (certain qualities and aptitudes must exist in literacy tutors in order to ensure successful learning relationships)
- written materials (development of appropriate written materials for teaching and learning)
- support and outreach (literacy support in all different environments)
- successful programs (identification of the common features of ‘best practices’)

(Source; Lockert, 2000)

The literacy community in British Columbia has begun to recognize the need to address disability issues. Literacy BC is a provincial umbrella organization concerned with promoting and supporting literacy activities in British Columbia. Recently, Literacy BC held a provincial conference on the future of literacy in BC for the next ten years. “Setting an Agenda for Tomorrow” was one part of a four-pronged plan designed to produce a provincial literacy agenda for the government and other literacy stakeholders in BC. The other three prongs were province-wide community consultations, phone interviews with approximately 300 learners, practitioners, program coordinators and literacy policy makers, and applied social policy research to determine areas of concern. Issues reflected in the recommendations of this report and identified by members of the disability community, such as organizational collaboration, strengthening professional development, accessibility, and pre-screening, were also concerns of the provincial literacy

community and expressed at the conference. These concerns will be included in the provincial agenda to be prepared by Literacy BC.

Similarly, in the United States, literacy programs have looked to address the needs of people with disabilities. A case study of three states (Oklahoma, Illinois and Connecticut) that have made gains in providing literacy services to people with disabilities reveals that there are three main approaches aimed at improving access to literacy programs for persons with disabilities. These are: providing strong professional development opportunities; creating state-level collaborative groups; and developing and investing in screening and diagnostic procedures (United States Department of Education Office of Vocational and Adult Education, 1999).

Disability organizations across the country have clearly indicated where efforts need to be directed. These directives have been endorsed and reflected by the literacy community in BC as well as the literacy community across Canada and in the United States.

Section IV: What Can Be Done

Themes

This report makes thirteen recommendations aimed at improving literacy opportunities and outcomes for people with disabilities British Columbia. These recommendations could apply to any jurisdiction.

The recommendations were developed as the result of an extensive literature review which revealed that work needs to be done to:

1. make all mainstream literacy programs accessible to people with all types of disabilities;
2. foster cooperation and linkages within and between the literacy and disability communities;
3. facilitate the documentation and widespread dissemination of best practices; and
4. provide opportunities for trainer education.

Where accessibility is referred to, it means flexibility to accommodate in: instruction method; program times and availability of adaptive equipment; physical accessibility and plain language.

Recommendations

- 1. Stakeholders in British Columbia should articulate a goal to have all aspects of the literacy programs in British Columbia fully accessible and inclusive.**

This is an overarching recommendation, applicable to all subsequent recommendations in this report. Accessible design must be incorporated into all new literacy programs and into the existing literacy programs in British Columbia.

There are few options for people with, for example a significant physical disability, in terms of access to literacy programs. According to the Neil Squire Foundation in a relatively small 'national' survey of 68 literacy programs across Canada, it was found that found, "of the 22 programs that provide services to people with physical disabilities, only one program met the survey criteria for a truly accessible literacy program." (Neil Squire Foundation, 1999). The criteria used for accessibility were: physical

accessibility; flexible timelines and schedules; use of computers and access to technical aids and assistive devices; and being able to provide support care (attendants or scribes) when necessary (Neil Squire Foundation, 1999).

Ensuring that all literacy programs in British Columbia meet these criteria of accessibility would vastly increase the available literacy resources for people with disabilities. Furthermore, these criteria could be expanded on and developed with the cooperation of disability agencies and literacy groups throughout the province.

One idea that could move literacy programs toward the goal of accessibility may be very simple. All literacy programs need the knowledge and ability to accommodate any learner, no matter what means are required. Bulgren et. al (1998) published *Accommodating Adults with Disabilities in Adult Education Programs*, which is a framework and sequence for working with adult learners to: confirm their disability; assess their functional needs; select appropriate accommodations, provide instruction for using accommodation(s); and monitor accommodation effectiveness. It may be that a tool such as this needs to be made available to all literacy programs when working with a student who has a disability. When it comes to accommodating a student with a disability, knowledge is a very important factor.

Accessibility and inclusiveness should be hallmarks of literacy programming in British Columbia. All efforts to improve literacy services for people with disabilities should be learner-centred and inclusive. Advocating for accessible literacy programming could help to ensure an inclusive literacy environment. The theme of inclusiveness is one, which resonates throughout the disability community.

The Roeher Institute is a strong advocate of inclusive literacy education (Bach, 1990) and has long advocated for the inclusive literacy education of adults with intellectual disabilities. The Institute has published several practical tools that can help advance the cause of inclusive literacy education in Canada. *Speaking of Equality: Making literacy programs accessible to people with intellectual disabilities* and *Literacy in Motion: A guide to inclusive literacy education* (3 volume series), are templates that can be used by literacy programs throughout British Columbia and help them to become

more accessible to people with disabilities. These templates provide the criteria and methods for operating an inclusive literacy program.

The literature review undertaken for this report has revealed that there are relatively few literacy programs that are indeed truly accessible for people with disabilities (Neil Squire Foundation 1999). Therefore few people with disabilities seem to participate in literacy programs. For example, there is significantly lower participation rates in literacy programs among adults with intellectual disabilities (Bach, 1994).

However, programs do exist that work towards including people with disabilities into mainstream literacy education programs. The Speech Assisted Reading And Writing (SARAW) program is an example of where the transition from a specialized literacy program to a fully inclusive program can succeed. The SARAW program is a talking computer program primarily designed to teach basic reading and writing skills to adults with severe physical disabilities who are non-verbal (<http://www.neilsquire.ca/prod/sarawsam.htm>). Through the three major components of reading, activities and writing, SARAW offers a variety of activities to the student. The program has the ability to read stories aloud, speak as the student types, play word games and perform other activities, which teach phonics. There is no sequential lesson order that the student must follow and characteristics such as the computer's voice and speed at which the program reads can be changed according to the student's liking. There are several hardware requirements that are needed to run the program and it can be downloaded free of charge from the Neil Squire Foundation website (<http://www.neilsquire.ca/prod/sarawsam.htm>). In addition to the North Vancouver site at Capilano College, the SARAW program is operated at locations across the country including the Neil Squire Foundation in Regina and the Department of Education in Halifax Nova Scotia (Hebert, 1994). A current listing of sites and organizations using the SARAW program is not currently available.

Don Bentley is one of the developers of the SARAW program as well as a SARAW lab supervisor and instructor in the Adult Basic Education department at Capilano College. Mr. Bentley states that the real goal of providing grade level 2 – 7 literacy instruction for people with physical disabilities is to allow for future integration of those students into a traditional grade level 8 – 12 ABE program. Certainly, at times, supports will need to

exist and accommodations may have to be made in the regular ABE classroom, but inclusive education can and does occur.

Don Bentley also mentioned that since he is involved in the SARAW program and he is also an ABE instructor at the college, he is able to support the transition of students from the SARAW program to the ABE program. This relationship allows him to ensure the necessary supports exist for students making the transition, and to reassure instructors who may feel apprehensive about teaching a student who is 'different' and whom they may perceive as being unable to learn in an ABE setting.

In recommending more inclusive literacy practices, it would be advisable that where 'pre-ABE' (i.e. basic literacy) classes exist, linkages between staff and instructors at each level are vital to ensure a smooth transition for students into an ABE classroom.

The Neil Squire Foundation in 1999 conducted a Pan Canadian Study on Literacy Issues for Adults with Significant Physical Disabilities. Through a literature review, a National Accessibility Survey and field testing of three different models, the study discovered that it is indeed possible for mainstream programs to accommodate students with physical disabilities. One out of twenty-two programs that purported to provide services for people with disabilities was truly accessible (Neil Squire Foundation, 1999). As mentioned, the study deemed a truly accessible program to be one that was physically accessible, flexible in terms of schedule, offered students the use of computers, offered access to appropriate technical aids, and provided support care in terms of attendants or scribes when required (Neil Squire Foundation, 1999). However, the findings should be viewed cautiously because the National Accessibility Survey had quite a small sample size ($n=27$; a total of sixty-eight surveys were sent out for a response rate of 40%) (Neil Squire Foundation, 1999). This small sample size may mean that the results of the study were not necessarily representative of literacy programming in Canada. No surveys were returned from Manitoba, Nova Scotia, the Yukon or the Northwest Territories.

Indeed then, we have a long way to go in Canada towards providing truly accessible and inclusive literacy education for adults with disabilities.

2. People with disabilities who are participants or potential participants in literacy programs should be consulted to determine their needs.

Much consultation, in the form of professional development needs assessments has been done with practitioners in the literacy community. However, there seems to be very little information about any concerns people with disabilities themselves have regarding literacy programs. This type of consultation is a crucial part of developing literacy programs that address the specific needs of people with disabilities. It would be interesting to know what the learner is experiencing. What are the factors that influence one's decision to participate in a literacy program? Do people prefer one-on-one environments or small classes or large classes? Do literacy classes occur frequently enough or last long enough for students to derive some benefit? These are questions the learner and potential learner need to be asked. This was done with general literacy students in Ontario in 1998 (Ewing, 1998). The responses he received can now help guide literacy policy in that province. A similar initiative could be undertaken in BC for people with disabilities. Obtaining direct input from those affected as to where these needs exist would be helpful in providing the literacy and disability communities some direction.

3. The business community should be consulted to provide direction to literacy training relating to specific employment sectors.

A template for this type of collaboration exists in Ireland (<http://www.fit.ie>). The Fastback to Information Technology (FIT) Program worked with private companies in the Information Technology (IT) sector in Ireland to identify the skills and professional qualifications people needed to enter the IT workforce. Once the specific skill and qualification benchmarks were established, industry, government and employment services representatives then developed a curriculum and a delivery model to teach the identified skills to the long-term unemployed. This program has had great success in the Dublin area, helping hundreds of long-term unemployed people find work in the IT industry (<http://www.fit.ie>). A similar approach could be used here in British Columbia with regard to literacy skills.

In terms of literacy, identification of skills and establishing qualification benchmarks could be done on a sector by sector basis. For example, one

could choose a single employment sector such as tourism and with the help of industry representatives, develop a range of minimum literacy skills one would need in order to obtain employment in that sector. Once this has been done, curricula could be developed, perhaps using resources identified in this report or adapting other literacy resources that would give students the literacy qualifications needed to obtain employment in that sector. Granted, literacy skills would not likely be the only qualification one would need to gain employment, but a program such as this could help remove low literacy skills as a barrier in specific occupational categories.

4. A literacy coalition needs to be formed at the social policy level in British Columbia.

Literacy impacts all aspects of one's life from employment to health to socioeconomic status. Therefore it is important, when addressing the problem of low literacy that all stakeholders are involved. A coalition focussing on addressing the low literacy levels of people with disabilities should bring together representatives from the literacy community, the disability community, the private sector, government bodies involved in literacy initiatives (HRDC, MAETT), women's groups, aboriginal representatives, social assistance advocates and representatives of the homeless. There currently exists no provincial umbrella organization that has representation of all these groups. Literacy BC provides an existing structure on which to base this coalition.

This coalition should maintain an ongoing, working relationship, meeting regularly throughout the year. The constant communication of a literacy coalition could identify which groups are and which groups are not having their literacy needs met. This would result in greater coordination of literacy services throughout the region.

A coalition could perhaps act to influence the funding of the National Literacy Secretariat on behalf of people with disabilities. Also, a coalition could explore new avenues for obtaining and utilizing funding to assist those who are currently under-served in the existing mainstream literacy community.

Should the PWDAC choose to carry out this recommendation, it would need to survey the interest of literacy stakeholders in British Columbia in

forming a literacy coalition. Certainly there would need to be a strong desire to form a literacy coalition at the social policy level within the literacy and disability communities for this recommendation to succeed.

It also may be worth considering inviting a representative from the literacy community such as Literacy BC to be on the Persons With Disabilities Advisory Committee. This may be especially helpful at least during the time the committee is looking at the issue of literacy and persons with disabilities.

Forming a coalition could be a first crucial step toward creating a stronger relationship between literacy and disability organizations and other marginalized groups.

5. Linkages between disability groups and literacy groups must be established at the program level.

To support organizational collaboration at the policy level, increased collaboration at the program level must occur simultaneously. This should be used to encourage the disability community and the literacy community, as well as those working to improve employment prospects for people with disabilities, to work together and ensure that their services are more complementary of each other. One of the main reasons people participate in literacy programs is to gain or improve their status in the labour market. For example, Ewing (1998), demonstrated in a survey of 227 literacy students in North York Ontario, that “finding a job” was the number one reason for coming to a literacy program. It seems that people with disabilities are possibly even more likely to participate in a literacy program considering their disproportionately high unemployment rate. Thus, it would be tremendously advantageous for literacy programs that focus on employment to also be completely accessible to people with disabilities.

The Antigonish County Adult Learning Association is one example of where a relationship at the service delivery or program level, between a literacy organization and disability organization was successful. Judy Cairns, Project Coordinator with ACALA, describes a program that ran one year ago before funding changes forced its cancellation. The program was specially designed with a one-on-one tutor/student set-up. The scheduling was more flexible than normal, with class time more determined by the learner. Smaller

groups were employed more often, depending on the preference and abilities of the learner, and computers were used more often as well.

A student who used a wheelchair enrolled in the program. The student had a disability that made it impossible to hold a pen or pencil. At the time, ACALA was unsure how to accommodate this student. They contacted a local disability organization that provided advice and services that helped accommodate the student. Judy mentioned that ACALA “did not want to take on the role of being specialist” considering that funding, knowledge and resources were sparse within her organization. Partnering with the local disability organization enabled ACALA to meet the needs of the learner in a literacy environment.

Relationships such as the one described can work to achieve several goals. First and most importantly, a working relationship between a literacy organization and a disability organization can help a learner to achieve their goals. Second, awareness of disability issues can be raised within the literacy community. Third, often a literacy organization may learn how easy and inexpensive it is to accommodate a learner with a disability and become more accessible and willing to accept people with disabilities as a result.

Literacy organizations can’t be expected to always be experts in disability issues, but can be expected to consult the experts who can enable them to provide the required accommodations to a student with a disability. Judy acknowledged that “you can’t have the same approach for everyone” and that “it is important that literacy organizations and disability organizations work together”. Working together to help literacy programs to understand students’ disabilities and how to assist those students is an important step in creating literacy opportunities for people with disabilities.

Clearly, there are proven benefits to having literacy and disability organizations work in partnership. Some literacy programs already serve adults with different disabilities. It could be valuable to partner with established literacy organizations. One such organization is Frontier College.

Frontier College is Canada’s original adult literacy organization, dating from 1899. Among other programs, Frontier College operates the Independent Studies Program for adults in the Toronto area. This program is inclusive of adults with disabilities and operates in a community context,

attempting to tie in to community centres and other organizations with a stake in literacy such as schools and businesses. Unfortunately, as a result of low numbers of paid staff in British Columbia, there are limited opportunities for developing new programs. There is only one paid full-time employee coordinating the literacy services of Frontier College in the Lower Mainland and only one paid part-time employee coordinating services on Vancouver Island. Programs operating in the Lower Mainland and Vancouver Island at the present time consist of: one-to-one tutors working with youth at Trout Lake and Britannia community centres, homework clubs, book buddies at schools in East Vancouver, a tutor program working with first nations youth at two alternative schools, a homework/reading circle in partnership with an African women's group and tutoring for domestic workers.

Frontier College also uses a comprehensive volunteer tutor handbook that includes specific strategies for working with people with disabilities. The handbook is based on actual programs delivered by Frontier College. It would be very valuable to liaise with established, reputable literacy programs such as Frontier College, which could be used to help institute and implement disability-related programs or classes.

Ongoing consultation with disability groups in the form of community involvement as demonstrated by Frontier College, as well as consultation on an 'as needed basis' as demonstrated by the Antigonish County Adult Learning Association would provide multiple options for people with disabilities in terms of available literacy programs in British Columbia. Where the proper resources for someone with a disability do not exist in a program, consultation on the matter with a knowledgeable member of the disability community could help solve the problem.

While the demand for literacy programs sensitive to the needs of people with disabilities may be high, recruitment of students with disabilities can sometimes be a challenge. This also could be best addressed by a collaboration of literacy and disability organizations. The Landmark East School Adult Literacy Program discovered that recruitment of students was an unforeseen challenge and recommended expanded outreach to publicize literacy programs for adults with disabilities. This was likely because "adults are not always willing to risk coming forward to help themselves due to their fears of a stigma associated with poor literacy skills and negative feelings about their ability to learn." (*Landmark East School Adult Literacy*

Program, 1999) Landmark East recommends that “ongoing contact with agencies needs to take place throughout the year, rather than a few months prior to each session. Also increased effort to raise general community awareness could be used to reduce the stigma. This may “increase the number of applicants...for each session.” (*Landmark East School Adult Literacy Program*, 1999).

6. Literacy programs need to ensure that their *volunteers* are fully aware of and trained to deal with issues presented by students with disabilities.

“Teachers can’t teach people with disabilities the same way they teach people who don’t have disabilities. If your teachers are not well-trained in accommodated instruction, they will probably keep trying to use their standard instructional approaches, which won’t work.” “...providing appropriate and effective literacy instruction re: teaching adults with disabilities is going to require some good training and some assistive technology in the classroom as well as on the job.”

Patti White, Disabilities Project Manager, Arkansas Adult Learning Resource Centre (personal communication, October 19, 2000)

A common complaint of administrators of all types of literacy programs and one raised by disability organizations, is the lack of properly trained literacy instructors. Some instructors are not trained how to teach students with disabilities and may not be able to recognize or know the teaching strategies to use with a student who has a learning disability. They also may not be aware of available adaptive devices or other accommodation techniques. There is a need to improve and expand literacy instructor training.

A large number of the projects funded by the National Literacy Secretariat (NLS) over the past five years have included some reference to trainer education and the development to tutor/instructor training tools. This was also a prevalent theme at the “Setting and Agenda for Tomorrow” provincial literacy conference. Trainer education means enabling literacy practitioners, instructors and volunteers to more effectively provide literacy services to people with disabilities. In British Columbia, Literacy BC is taking some steps in this direction with their 2001 Summer Literacy Institute to be held at

Simon Fraser University. This institute is going to train almost 50 literacy providers in BC about effective teaching strategies for people who have a learning disability.

Many of the people who teach literacy skills are volunteers. Often, volunteers have had neither proper nor sufficient formal training relating to disabilities. For instance, some volunteers may not be able to recognize that a person has a learning disability, or a vision or hearing problem. Volunteers need to be trained to recognize possible learning difficulties and to address them effectively. Addressing issues presented by a disability, whether it be a physical disability or a learning disability, may consist of simply adjusting teaching style or class structure, providing certain physical accommodations, or referring a person to a literacy program that has staff with the right knowledge and expertise.

An exploration of training resources available to the volunteer tutor demonstrated a minimal emphasis on adults with disabilities. The vast majority of these resources, consisting of handbooks, manuals, assessment packages and so on, neglected to address the issue of adults with disabilities in literacy programs. For example, two Canadian training resources that did not mention literacy students with disabilities include: *Let's Get Started: An Initial Assessment Pack for Adult Literacy Programs*, and *Demystifying Adult Literacy for Volunteer Tutors: A Reference Handbook and Resource Guide*. Several training resources contain at least some reference to specific effective teaching or accommodation strategies to assist literacy instruction for people with disabilities. Examples can be found in Appendix B.

As one can see, training manuals, programs, and other resources have been developed recently and are still being developed, which do address the issue of volunteer training with respect to people with disabilities. Numerous groups that provide literacy services in the disability community have identified a need for this type of specific training for volunteers.

It is important to mention at this point that there is not one guide or resource or tool that is going to address all needs of all people with all types of disabilities. Different people have different needs. It follows that different people with different disabilities require certain accommodations sometimes dependent on the type of disability.

7. Disability organizations should make an effort to recruit and train their own literacy volunteers.

It seems that there is a focus on training literacy practitioners to know how to meet the needs of students with disabilities. This focus has widespread support from disability organizations and some literacy practitioners alike. However, to speak to the concern of literacy service providers being “experts” in the area of disability one may want to turn that relationship around and think about training the “experts” to provide literacy instruction. The “experts” being employees and volunteers of disability organizations. Training counselors, new literacy tutors, or other employees of disability organizations who are familiar with the needs of people with disabilities, how to teach literacy skills may be an option worth considering. It was recommended at a literacy coordinators meeting in Saskatchewan that community living and rehabilitation agencies should be encouraged and trained to provide their own literacy tutoring (SARC, *Supplementary Tutor Handbook*, 2000). Once literacy tutors have been trained from within a disability organization, that organization is then more prepared to develop and implement a literacy program of their own with tutors attentive to the needs of people with disabilities.

Examples exist where disability organizations have recruited tutors from within their organizations to help successfully operate a literacy program. The Canadian Mental Health Association (CMHA) in Prince County Prince Edward Island is an example such a program. Notre Dame Place Clubhouse is a program of the CMHA, which operates the literacy program. The Clubhouse is a place that provides people with a mental disability with support and encouragement that enables them to strive towards more meaningful and satisfying lives.

Notre Dame Place received funding from the National Literacy Secretariat beginning in 1998, for a three year program intended to address the literacy needs of people with mental disabilities. The program unfolded through several successive steps. These steps were: to develop and promote an awareness of the need for volunteer tutors; to recruit and train volunteers, to create an awareness among referral sources (such as clubhouse members, and community organizations) of the educational opportunities available for individuals with mental or emotional disabilities; to identify and provide literacy resources; and to identify and develop supports for students and

tutors that will support continued learning (*1998-1999 Literacy Project Evaluation*, 1999). Notre Dame Place provided several literacy volunteers from within their organization, and recruited several volunteers from a local literacy council to work in a one-on-one setting with people with mental health disabilities.

Notre Dame Place offers us many other examples of organizational collaboration. The clubhouse contacted a local literacy council to obtain literacy training for its volunteers and to recruit volunteers (*1998-1999 Literacy Project Evaluation*, 1999). Moreover, a partnership was established with the local office of the Canadian National Institute for the Blind to help accommodate one student with a visual disability (*1998-1999 Literacy Project Evaluation*, 1999). Notre Dame Place also established a partnership with the local Learning Centre which resulted in referrals for General Education Development (GED) (*1998-1999 Literacy Project Evaluation*, 1999).

Other factors that influenced the success of the program included the program flexibility around timelines and schedules. As a result of extenuating circumstances such as recurring mental disability or medication side effects and other health factors, progress was slow for some. However, 50% of the students realized some improvement in their literacy skills (*1998-1999 Literacy Project Evaluation*, 1999).

Further benefits of the program included the realization of students that “it is possible to learn!”, increased self-esteem among program participants, strong personal bonds between program participants and tutors, and tutors who came into the program from outside Notre Dame Place became more aware of and sensitive to issues surrounding mental disability (*1998-1999 Literacy Project Evaluation*, 1999).

The program is a three-year program, continuing until 2001. Therefore, evaluations are only available for 1998-1999 and 1999-2000. The 1999-2000 evaluation revealed some additional benefits and successes of the program. Arrangements were made with the local learning centre for program participants who were ready to move out of the basic literacy program and into the community-based GED program. The local learning council was flexible in assisting students from the Notre Dame Place Program in making the transition.

A retired teacher was recruited for the Notre Dame Place Program to work one-on-one with the growing number of people interested in the GED program. So the Notre Dame Place Literacy Program acted as a supportive and complementary program for those students interested in obtaining a GED diploma. This was especially important for Notre Dame Place participants because for many of the employment opportunities posted at the clubhouse, a GED diploma was a requirement.

Students continued to come forward interested in assistance with their GED studies. The need for more tutors became apparent and five new tutors were recruited from the community. The rising membership numbers of both students and tutors increased the visibility of the program in the community. This again resulted in more people coming forward to request literacy training.

The program is now in its third year of offering one-on-one literacy instruction to individuals with mental/emotional disabilities. This program illustrates the success that a disability organization can have in offering its own literacy program. That being said, considering the often overwhelming time, financial and manpower constraints, it is tremendous undertaking for a disability organization to operate a literacy program. Certainly though, it would be beneficial for all if *both* literacy practitioners and workers in the disability community were educated about how to effectively assist people with disabilities.

8. A credential system should be developed for literacy instructors, including volunteers, that recognizes practitioners working with people with disabilities.

This initiative is intended to institutionalize inclusive literacy education in the region by making disability training for instructors mandatory.

Liaisons could be made with various post-secondary institutions with the intention of establishing specific certification programs for teaching adults with various disabilities. This certification would be distinct from a specialized Bachelor of Education degree (B.Ed.) in special education. Bearing in mind the large number of volunteers involved in literacy instruction, a credential system should be designed more for volunteers as

opposed to being designed in the form of a college or university course. This is also because some college and university courses already exist regarding teaching students with disabilities. This certification process could provide more standardized literacy instruction for adults with disabilities.

Formally recognized credentials need to be structured to achieve the following outcomes:

- A universally recognized, standardized credential system British Columbia.
- Literacy programs that are accessible to all people with disabilities.
- All literacy instructors are prepared for and welcome people with disabilities into their program.
- All literacy instructors know how to conduct and do conduct pre-screening of students to determine possible learning disabilities.
- All literacy instructors know when the appropriate time is to refer a student for clinical assessment.
- All literacy instructors know how and when to make necessary accommodations in their instruction methods in order to incorporate people with disabilities into the classroom.

If this recommendation is to be undertaken, efforts must be made to ensure that the most up to date training and educational opportunities are available for the professional development of literacy practitioners.

Best Practices in Literacy for Adults with Developmental Disabilities tells us that, “Maintaining and developing the competence of teachers and tutors is considered to be part of the recipe for successful adult literacy programs” (1998). Establishing a credential system for teachers, tutors, volunteers and all others working with students in the literacy field should be explored as a way to accomplish this goal.

Developing some kind of universal specialized training for volunteer would be particularly valuable yet challenging. A volunteer certification program would be challenging because of the unique needs and circumstances of any volunteer program. Some of the challenges would be: getting the buy-in of literacy programs that use volunteers; attracting

volunteers; providing concise, flexible training; and ensuring the training curriculum is up to date in terms of research and best practices.

The vast majority, if not all literacy programs that use volunteers have some kind of volunteer training program or training session for all volunteers. The idea of a specialized certification for working with students with disabilities could be proposed as a supplement to this regular training. The supplement could be in the form of the literacy program itself using one of the resources described in Appendix B. A representative from a disability organization could give a brief workshop on effective strategies for teaching a student with a particular disability. Considering that most volunteers have other demands on their time, it would be important for these workshops to be brief yet comprehensive and very flexible with regard to scheduling. These workshops could be available either at the location of the literacy program or could be given at a disability organization, with volunteers from a range of literacy programs attending.

Upon completion of the specialized training workshop, volunteers could be given some kind of certificate in recognition of their new knowledge. It may be possible to make arrangements with local high schools, community colleges, and/or universities to have partial credit granted in a particular program or field of study.

Some post-secondary institutions offer programs that may have potential for honouring specialized volunteer training in the form of credit. They include: the Faculty of Education at Simon Fraser University which offers a certificate program in Literacy Instruction that is aimed at preparing students to teach literacy skills to adult learners; The University of British Columbia which offers a Diploma in Education with fields of specialization including adult education and special education; and Capilano College which offers a Special Education Teacher Assistant program to prepare students to work in inclusive educational settings with children and adolescents. Offering volunteers some type of transfer credit for these specialized programs may be an incentive, which would attract literacy volunteers such as prospective or current college or university students.

The British Columbia Council on Admissions and Transfer (BCCAT) would likely have to be consulted on this matter. The BCCAT facilitates admission, articulation and transfer arrangements among the colleges,

university colleges, institutes and the Open University, and the universities. The council would need have to have input if the literacy community was to explore the notion of transfer credits.

9. Efforts should be made to increase the use of computers in adult literacy programs.

Technology has the ability to open up literacy programs to many people who have been marginalized. There are numerous adaptive devices available for computers and many programs that enable those who may be unable to participate in classroom or ABE-level literacy instruction. The SARAW program is one example. Also, with the use of computers increasing in everyday life and the growth of the knowledge-based economy, it is becoming increasingly important to know how to use a computer. Use of computers in literacy programs could benefit the learner in both respects.

It is possible for the barriers of both traditional literacy and computer literacy to be addressed concurrently. The PWDAC has identified computer literacy as another major barrier to employment. However, some see a 'lack of basic computer skills as a barrier to successful integration of computer-assisted instruction.' (Lever-Duffy, 1993, as cited at: <http://www.gseis.ucla.edu/ERIC/digests/dig0001.html>). Any literacy program, which considers using computer technology as a teaching tool, must consider the implications. Nevertheless, there are several examples of computers being used effectively in a literacy setting (See Appendix C).

The Community Access Program (CAP) of Industry Canada could be a possible avenue through which to secure computer resources for literacy programs for adults with disabilities. The Community Learning Networks (CLN) initiative of Human Resources Development Canada could be an avenue through which to develop learning tools, resources and delivery mechanisms for computerized literacy instruction.

10. A comprehensive directory of all disability related literacy programs should be compiled.

Presently, there is a directory of all literacy programs in British Columbia and is available at Literacy BC. No directory currently exists in British Columbia that directs people with specific needs to an appropriate program

where the facilities and expertise exist to accommodate a disability. Such a directory should be available to all organizations, which refer individuals to training and education opportunities. Furthermore, all literacy programs should be aware of this directory in order to refer clients to the proper program if they themselves cannot meet that client's need. The directory could also be made available at libraries. Wide distribution would be essential for the directory to be a success.

Since Literacy BC already has a directory of all literacy programs in the province, the framework already exists on which to build a more specific catalogue of programs for people with disabilities. A directory such as this would assist in enabling people who are disabled to access the proper literacy training, wherever they are in British Columbia. Moreover, a directory would also help to identify specific programs and areas within these programs that need to be modified in order to achieve greater accessibility of literacy programs in the region.

It is important, if this recommendation is to be undertaken that the accommodations, resources, training expertise, and target group (i.e. a literacy program for people who are deaf or hard of hearing) are identified in such a directory. Within the directory, each program should explain how, and in which areas it meets the criteria for universal accessibility as discussed above.

The Source directory of services for people with disabilities on the ORW homepage could be used as a template for an Internet based directory.

11. A best practice inventory of literacy programs for people with disabilities should be developed.

A well circulated, current compilation of all best practices used in the province and across Canada could act as a referral tool for programs in the British Columbia that do not already have mechanisms in place to assist people with disabilities. It could be valuable to incorporate best practices that have been identified in other parts of the world in addition to those identified in Canada. A best practice inventory could also act as a contact list to enable new or developing literacy programs or groups to network within the community.

This type of resource could be produced in conjunction with Literacy BC's directory of literacy programs. Perhaps a co-op education student on behalf of the Persons With Disabilities Advisory Committee could work on this project.

12. Literacy programs should make efforts to become more flexible, in time lines and student expectations to allow for the inclusion of people with disabilities.

Instead of making the student keep pace with the class, the class should adjust to the pace of the students. An example of this is the SARAW program at Capilano College and numerous other volunteer-tutor based literacy programs. Flexible programs operate on the basis that as long as the student shows some progress towards their desired literacy goals and effort is being made on the part of the student, the student can remain in the program for as long as necessary. Program flexibility appears to be one of the most fundamental requirements of a successful inclusive literacy program for people with disabilities.

Other examples of flexible programs include the program offered at the Antigonish County Adult Learning Association, where flexibility is a hallmark. The Association offers three different levels of literacy instruction: a 'Learn by Mail' program; a GED preparation course; very small classes and one-on-one instruction; continuous enrollment; and student involvement in decision-making (See the ACALA website at <http://www.nald.ca/acala.htm>). As mentioned earlier, the Notre Dame Place Literacy program offered by the Canadian Mental Health Association is also one of the more flexible programs available. The Notre Dame Place program needs to be very flexible in order to best serve the client group, some of whom may be absent due to health or medication reasons (Notre Dame Place, 1999).

13. All literacy students in all literacy programs in British Columbia could be screened for possible learning difficulties including learning disabilities and hearing or visual disabilities

This would ensure that instructors know the specific learning needs of each student and be able to accommodate that student with the proper teaching strategies and/or assistive devices.

Many organizations in the field of literacy and disability advocate for the wide use of non-clinical assessment procedures in literacy programs. Assessment tools should be used universally in literacy programs to identify, as soon as possible, those for whom teaching methods need to be modified or those who would benefit more from a different literacy program.

Examples of programs that use this screening/assessment technique as an integral part their delivery include the public library programs described in *Best Practices in Literacy for Adults with Developmental Disabilities* (1998). These public libraries are North York Public Library and Hamilton Public Library Learning Centre.

Information about screening/assessment tools developed by leaders in the field can be seen in Appendix D.

One caution about screening assessment tools for people with learning disabilities is that they are *neither clinical nor* diagnostic tools. They are intended to screen for the *possibility* of learning disabilities rather than to indicate the definite presence of Learning Disability. The Adult Learning Development Association (ALDA) has attempted to utilize pre-screening tools prior to administering a full clinical assessment and found that the pre-screening was unreliable. On the other hand even if screening doesn't *always* work, the right screening tool may be useful to literacy programs even if it helps identify only a fraction of those learners who may be at risk for a learning disability. Screening tools such as *Destination Literacy* may help identify are those who perhaps have never sought assistance from a learning disability organization or a literacy program, may have left school early, or those who may be newly unemployed and now need upgrading.

While formal assessment and diagnosis of a learning disability requires a psychological educational assessment by a registered psychologist, expanded use of screening tools may help us to provide the proper services to people who may otherwise not receive assistance.

Section V: Conclusion

Defined as “the ability to understand and use written information to function in society, to achieve goals, and to develop knowledge and potential”, literacy is an increasingly valuable skill (*Reading the Future: A Portrait of Adult Literacy in Canada*, 1996). The new economy, knowledge-based occupations and the information superhighway are all raising the literacy standards required to function in society. This report has illustrated that many people with disabilities do not have the literacy skills necessary to improve their participation in the labour market. It has put forth a number of recommendations intended to assist people with disabilities in acquiring the literacy skills necessary to participate in labour market. The recommendations have been concerned with the four main themes of: accessibility for all; organizational collaboration; documentation of best practices; and trainer education. The recommendations have been made in as general a sense as possible so as to be relevant in any jurisdiction.

The vast majority of the discourse surrounding literacy and people with disabilities does not seek to redefine or change the way we think about literacy. The conventional definitions provided in the literature are widely accepted. Furthermore, the need for literacy skills as we know them has been consistently emphasized in the literature. This report has followed this widely accepted line of thinking.

However in addition to the more conventional ways to address low literacy, there is an alternative view. The Roeher Institute calls into question our acceptance of literacy as it is popularly defined and maintains that it is society that needs to change to suit the diverse communication needs of the people rather than people changing to meet the common communication currencies of the day (Bach, 1999, p.83). In a 1990 publication, Michael Bach of the Roeher Institute said, “the standards our society sets for being able to read and write such official documents as court documents or social assistance forms need to be considered, challenged and revised” (p. 9).

There has been some government effort over the last several years to move towards plain language communication in their forms and publications. However, this has not always been successful. For example, numerous government documents have been determined to be at much higher reading levels than they were intended. (Calamai, 1999). The general information guide to help people to complete their Canadian Pension Plan –Disability

(CPP-D) application is intended for grade 6/7 reading level, but is actually at grade 14 reading level (Calamai, 1999). Since many people with disabilities have generally lower literacy levels than the majority of the population, clearly, government communications directed at people with disabilities need to reflect this.

Bach describes literacy as more than just a skill, but as the ability and the means to communicate (Bach, 1999, p. 83). “The polarization between those able to communicate and those denied that ability deepens; it is only the silences between them that grow louder” (Bach, 1999, p. 83). It is intended that the recommendations in this report can help end this silence.

Section VI: References

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Section VII: Appendices

Appendix A

Sample tasks at performed at each literacy level, for each sub-type of literacy.

Adapted from *Reading the Future*, 1996.

Level	Score	Prose	Document	Quantitative
1	0-225	Use the instructions on the bottle to identify maximum duration recommended for taking aspirin	Identify the percentage of Greek teachers who are women by looking at a simple pictorial graph.	Fill in the figure on the last line of an order form, "Total with Handling," by adding the ticket price of \$50 to a handling charge of \$2.
2	226-275	Identify a short piece of information about the characteristics of a garden plant, from a written article.	Identify the year in which the fewest Dutch people were injured by fireworks, when presented with two simple graphs.	Work out how many degrees warmer today's forecast high temperature is in Bangkok than in Seoul, using a table accompanying a weather chart.
3	276-325	State which of a set of four movie reviews was the least favourable.	Identify the time of the last bus on a Saturday night, using a bus schedule.	Work out how much more energy Canada produces than it consumes, by comparing figures on two bar charts.

4	326-375	Answer a brief question on how to conduct a job interview, requiring the reader to read a pamphlet on recruitment and integrate two pieces of information into a single statement.	Summarize how the percentages of oil used for different purposes changed over a specified period, by comparing two pie charts.	Calculate how much money you will have if you invest \$100 at a rate of 6% for 10 years, using a compound interest table.
5	376-500	Use an announcement from a personnel department to answer a question that uses different phrasing from that used in the text.	Identify the average advertised price for the best-rated basic clock radio in a consumer survey, requiring the assimilation of several pieces of information.	Use information on a table of nutritional analysis to calculate the percentage of calories in a Big Mac that comes from total fat.

The IALS proficiency levels were based on qualitative shifts in the skills and strategies required to succeed at various tasks along the scales, ranging from simple to complex. This scaling method gives a more detailed picture of the distance between successive levels of information-processing skills, and allows analysis based on performance for a broad array of reading tasks (*Reading the Future*, 1996).

Appendix B

Training resources and programs for literacy practitioners that can be used with people with disabilities.

A. *Supplemental Tutor Handbook: Supporting Literacy for people with Intellectual/Developmental Challenges*, was produced by the Saskatchewan Association of Rehabilitation Centres. As the title suggests, this resource is designed to be a supplement to a pre-existing volunteer tutor-training program. This manual contains: an introduction to developmental disabilities; general attributes of best practices for working with people with developmental disabilities; advice for tutors; assessment tips; literacy activities; and a bibliography of resources such as websites and computer software. It is a very comprehensive manual. The *Supplemental Tutor Handbook* was distributed to all member agencies of the Saskatchewan Association of Rehabilitation Centres and all twenty-one of the provincial literacy coordinators in Saskatchewan. Six workshops will be taking place in 2001 across the province where training will be administered using the Handbook.

B. SARC has also published *Inclusive Literacy: Annotated Listing of Resources Appropriate for Learners with Intellectual/Developmental Challenges*. This resource contains useful teaching tools. This resource catalogue was distributed to all member agencies of the Saskatchewan Association of Rehabilitation Centres as well as all twenty-one provincial literacy program coordinators. Member agencies of SARC include various district associations for handicapped adults, various Ability Centres, and other organizations that provide services to adults with disabilities.

SARC has purchased many of the materials listed in the catalogue and maintains a modest lending library in Saskatoon. Member agencies and other provincial literacy organizations are encouraged to purchase the material listed in the catalogue which best suits their needs, or borrow available materials from SARC.

C. The Ontario Ministry of Education and Training published a report in 1998 entitled *Best Practices in Literacy for adults with Developmental Disabilities*. This publication lists and describes several successful

approaches that have been adopted by literacy programs to accommodate adults with developmental disabilities. These approaches are:

- I. one-to-one instruction (usually in a volunteer or tutor situation);
- II. small-group instruction;
- III. classroom instruction; and
- IV. a sequential combination of instructional methods.

Moreover literacy tutors and instructors are encouraged to incorporate a learner-centred approach, which includes:

- I. participation of the learner in the choosing of materials;
- II. language experience through writing (for example, through a program such as Speech Assisted Reading And Writing – SARAW);
- III. materials related to reading matter in which the adult learner was interested (for example, job skills or employment issues);
- IV. computer-assisted instruction (CAI).

Adapting the best practices described here could help the volunteer tutor feel prepared to assist with the needs and issues that learners with developmental disabilities may bring with them to a literacy program. Examples of programs that have used these approaches are the North York Public Library Adult Literacy Program, Grimsby/Lincoln and District Association for Community Living, and St. Christopher House Literacy Program.

- D. Harwood (1999) has developed an extremely valuable literacy tutor training tool. *The Handbook for Literacy Tutors*, published as a pilot edition in 1999 by the Ottawa-Carleton Coalition for Literacy, was developed with help from several disability organizations including Canadian Hearing Society, Canadian National Institute for the Blind, Neil Squire Foundation and the John Howard Society. The handbook covers topics relating to various styles of learning, general instruction strategies, accessibility issues and includes an appendix for communication methods for people who are deaf-blind. The pilot edition of the handbook is available on a loan basis from the resource centre at Literacy BC.

A representative of the Ottawa-Carleton Literacy Coalition stated that the pilot edition has received extremely good feedback. Interest has been

shown by literacy groups in the United States and across Canada in purchasing the handbook once it is published. The Handbook is scheduled to be published by Grassroots Publishing in March 2001. It is currently being used as the tutor-training tool for the one-on-one tutoring programs operated by the Ottawa-Carleton Coalition for Literacy.

The *Handbook for Literacy Tutors* is the first of a series of three publications. The second is an as yet to be published “trainers manual” designed to facilitate seven, three hour training sessions for tutor trainers. The third is a coordinator's manual that will be designed to address the issues of setting up a volunteer training program including the recruitment and screening of volunteers.

In researching the need for such tools as tutor handbooks, trainer's manuals and coordinators manuals, Chris Harwood at the Ottawa-Carleton Coalition for Literacy found that the information was very fragmented. She saw a need to bring the resources together. Once published, these manuals could be used by disability organizations to operate their own literacy program.

- E. *Bridges to Practice* is an American “research based guide for literacy practitioners serving adults with learning disabilities”. The National Adult Literacy and Learning Disabilities Centre developed it. This tool consists of five booklets ranging in topic from “The Assessment Process” to “The Teaching/Learning Process” to “Creating Professional Development Opportunities”. These guidebooks are “designed to influence the decision-making process of literacy providers toward improving educational services and instruction for adults with learning disabilities” (*Bridges to Practice*, 1999). This is an extremely comprehensive tool that also addresses the issue of compliance of literacy and ABE programs with the Americans with Disabilities Act (ADA). The ADA ensures that Americans with disabilities are not discriminated against on the basis of their disability.

In collaboration with the American National Adult Literacy and Learning Disabilities Centre (NALLDC), *Bridges to Practice* is used widely by many state agencies involved in delivering literacy and adult basic education in the United States. For example, in Pennsylvania, Bridges to Practice provides a framework for six Regional Professional

Development Centres which deliver professional training related to disabilities (United States Department of Education Office of Vocational and Adult Education, 1999). The Arkansas Learning Disabilities Training and Dissemination hub, available on the internet (<http://www.aalrc.org>), “disseminates information and provides resources on learning disabilities, including training in *Bridges to Practice* to 13 other southern states” (United States Department of Education Office of Vocational and Adult Education, 1999). An infrastructure has been built up in the United States to support the *Bridges to Practice* publication for the dissemination of information about learning disabilities and the administration of training programs based on *Bridges to Practice*. *Bridges to Practice* could potentially be a useful tool for Canadian Literacy providers if a similar infrastructure was put in place here.

- F. The Adult Learning Development Association in BC is presently seeking funding to develop an innovative tutor-training resource and program for volunteer tutors assisting adults with learning disabilities. The program, called VOLTage, would consist of a training manual and program, deliverable by ALDA to a team of volunteers to be recruited through a series workshops. Funding has not yet been secured for this project.

Appendix C

Programs using computers for literacy instruction.

- A. The Write Place literacy program in Parksville BC. The computers in this program are part of the P4 Literacy Project initiative, which provides literacy students in Parksville/Qualicum with access to computers, the Internet, and Literacy BC's First Class Literacy Network. The First Class network is an electronic forum whereby literacy stakeholders can communicate and share information.

- B. A publication entitled *Computer Labs for Literacy Groups: A practical guide* is designed to guide any literacy program considering setting up a computer lab. The manual is available on the National Adult Literacy Database (<http://www.nald.ca>). While no mention is made of people with disabilities in the guide, it could be used as a rough template if setting up computer-instruction in a literacy program for people with disabilities.

- C. The Alberta Vocational College (AVC) – Calgary Computer Assisted Reading Instruction Project. This project used the Autoskill Reading Program which is “a computerized skills-oriented learning resource aimed at promoting the acquisition of skills needed for the mastery of reading.” and the PLATO (Basic Literacy Skills Reading – Canadian Edition) which is a “modularized computer assisted instruction program designed to meet individual learner needs, and to match the objectives of learners’ educational or training programs” (Evaluation Report, 1997). The evaluation report of the two year program showed that adult basic literacy and “low initial entry-level readers” made the most significant gains using computer-assisted instruction (CAI) compared to ESL students and students not using CAI (Evaluation Report, 1997).

While the evaluation report recommends the continued use of this program, it is emphasized that, “It should be used strategically and not as a blanket solution for all students.” (Evaluation Report, 1997). The report goes on to say that CAI is neither superior nor inferior to traditional methods of instruction but that there are potential benefits for low to mid level readers depending on the software used (Evaluation Report, 1997).

Considering many people with disabilities who have low literacy skills are at the lowest of the five levels, it would seem reasonable to conclude that CAI using such programs as SARAW would have maximal benefits for people with disabilities.

There was no mention of any students with disabilities in the AVC project. A pilot could possibly be undertaken involving people with disabilities, using this template and adopting some best practices of programs for people with disabilities as described.

- D. The SARAW program itself has been very successful in addressing the improving the literacy levels of adults with disabilities. For instance, of the students participating in the SARAW program in Regina, five planned to buy a computer of their own, four wanted to obtain a grade twelve General Equivalency Diploma or move to a more advanced employment options program, and four wanted to use other computer programs including the Internet (Neil Squire Foundation, 1999). Furthermore, six students saw themselves in the paid or unpaid labour force in the future, with the assistance of the SARAW program (Neil Squire Foundation, 1999).

There are two examples of resources that have been developed to complement the use of the SARAW computer program. The first is the *SARAW Resource Manual: Learning strategies for inclusion of people with disabilities* published by the Society for Manitobans with Disabilities (1997). This manual is designed to provide teaching resources for literacy programs using the SARAW equipment. This is accomplished by describing effective methodologies using the five major components of SARAW (Read, Activities, Write, Print and Options).

Another resource is *The Companion to SARAW: An exercise workbook* published by the Neil Squire Foundation (1999). This is a very practical resource for instructors and tutors using SARAW. Using the READ section of the program, *The Companion* serves to “cut down instructor and tutor preparation time and give some direction for learning” (Neil Squire Foundation, 1999). *The Companion* also developed basic grammar exercises and other activities that could be used by the instructor and tutor. Feedback from literacy programs has been extremely positive and provides reason to expand the use of SARAW to other literacy

programs in order to improve access to literacy programs for people with disabilities.

Many examples of equipment, programs, websites and various assistive devices enabling people with disabilities to work on computers, and hence access many literacy services mediated by computers is available at the SARA W website (<http://merlin.capcollege.bc.ca/SARAW/>).

Appendix D

Pre-screening and assessment tools.

- A. *Special Needs Assessment Tools* was written by Pat Hatt, an independent learning consultant, with input from approximately twenty-five community groups including CNIB, St. Christopher House Adult Education Program, the Toronto School Board. *Special Needs Assessment Procedures* is a “guide to ensure equal access to literacy programs for adults with disabilities”. The guide focuses on assessment procedures for all types of disabilities. This guide is currently in use by the Toronto School Board and the author has indicated that all feedback on this resource has been tremendously positive.
- B. In 1999, the Learning Disabilities Association of Canada (LDAC) developed *Destination Literacy: Identifying and Teaching Adults with Learning Disabilities*, a comprehensive screening, assessment and teaching tool. This is a practical resource that can be used in a classroom and in program development by literacy practitioners including tutors and volunteers, program managers and coordinators. *Destination Literacy* provides a framework that can be used by all literacy programs to become more accommodating for people with all types of disabilities.

Destination Literacy provides specific screening/assessment tools, specific teaching strategies, including accommodations such as computer programs, specific lesson ideas, and resources, all of which can be readily incorporated into an existing literacy program to assist people with learning disabilities.

Destination Literacy can be used with people who have all types of learning disabilities. *Destination Literacy* can be purchased from the Learning Disabilities Association of Canada for the relatively inexpensive cost of \$50. It is recommended that programs that do not have pre-screening/assessment tools in place begin using *Destination Literacy*. Moreover, those programs that do make use of *Destination Literacy* should get proper training on how to use it. One suggestion is to partake in the Literacy BC Summer Institute 2001. The Summer Institute is an annual professional development opportunity, which in 2001 will specifically address literacy and learning disabilities.

- C. The second guidebook of the *Bridges to Practice* series deals with the assessment process for adults with learning disabilities. This guidebook is very comprehensive. Among the topics of focus are an introduction to assessment, screening for learning disabilities, various selected screening instruments (including the LDAC precursor to *Destination Literacy*, entitled *Bringing Literacy Within Reach*) and systems and programs which can help an existing literacy program to become more accessible and effective for people with learning disabilities.

As described earlier, the *Bridges to Practice* resource is used extensively in the United States as the main tool for enabling literacy programs to assist adults with learning disabilities.