

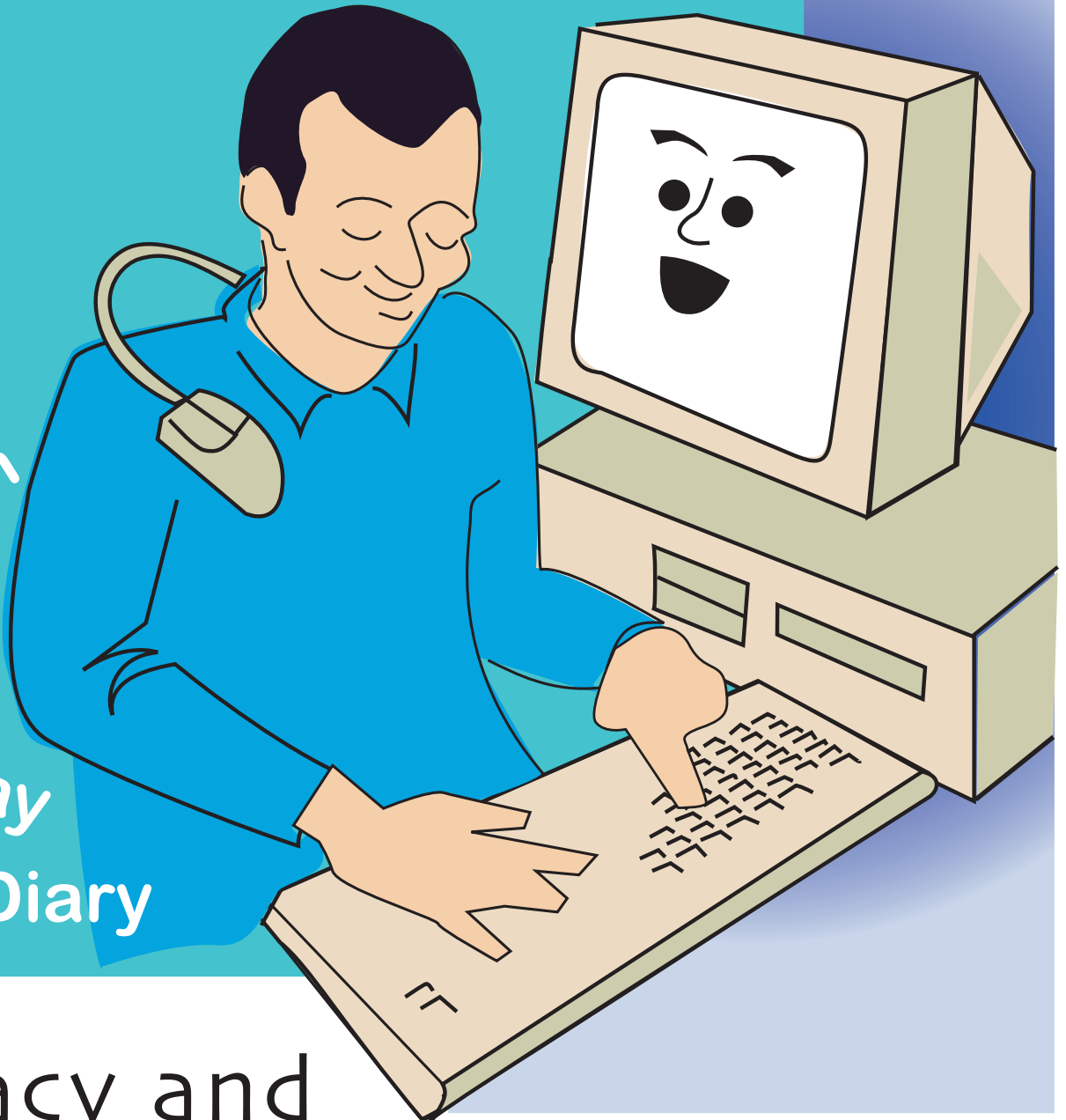
Survey Report

Speech Assisted Reading And Writing (SARAW)

twice
.99 each

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Dear Diary



Literacy and
Disabilities Study
(LaDS)

LaDS: SARAW Survey Report

Literacy and Disabilities Study

Audrey Gardner

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Other LaDS publications:

1. Fact Sheet on Literacy and Disabilities. Movement for Canadian Literacy
<http://www.literacy.ca/litand/3.htm>
 - Highlights social, educational and economic barriers for adults with disabilities and low literacy.
2. LaDS Learner Stories. Bow Valley College.
www.nald.ca/fulltext/study/learner/stories.pdf.
 - A collection of stories written by twenty adult literacy learners using the Speech Assisted Reading and Writing (SARAW) computer program.
3. It Gets In Your Brain: Effective Practices in Adult Literacy using Speech Assisted Reading and Writing (SARAW) with People with Disabilities. Bow Valley College.
www.nald.ca/fulltext/study/practice/guide.pdf.
 - A guide for practitioners to increase opportunities in their program for adults with disabilities to strengthen and maintain their literacy skills.

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Executive Summary

The Literacy and Disabilities Study (LaDS) project conducted a survey of literacy and other community programs in Canada that use the Speech Assisted Reading and Writing (SARAW) computer program with adults with disabilities. The purpose of the survey was to learn about different delivery models and educational settings where adults with disabilities use SARAW to help them develop and strengthen reading and writing skills. The programs in this survey, that use SARAW, are mostly community-based adult literacy programs. A few other programs provide support, outreach or residence for people with disabilities.

SARAW is a computer program, developed in the early 1990s by the Neil Squire Society in partnership with Capilano College in Vancouver British Columbia, Canada. Information on SARAW can be found at: <http://www.saraw.net/index.html>. It was developed for people with physical disabilities, who are non-verbal, to learn basic reading and writing skills. However, people with intellectual as well as physical disabilities have used SARAW to help them strengthen their literacy skills. SARAW is a talking computer program with writing, reading and vocabulary building components for adults with literacy levels between grade 2 and 7. The SARAW program was widely distributed across Canada during the mid 1990s to literacy and basic education programs in colleges, literacy organizations, school boards and rehabilitation organizations.

This report documents the methodology, findings and recommendations from the SARAW survey, which consisted of face-to-face and phone interviews with learners, tutors, instructors and coordinators in programs that use SARAW. The report also includes case studies of two programs.

The methodology for the survey design, development and implementation involved the following steps: questionnaire development and interview pilot, sampling, data collection, and data analysis. The sampling was purposive and criterion driven. Participants in the survey had to be adult learners currently using SARAW, and tutors and instructors had to be working with learners currently using SARAW. The other participants were program coordinators where SARAW was being used. While the vast majority of learners had disabilities, the survey was not restricted to people with disabilities. The sample size was 44 participants (20 learners, 11 tutors, and 13 instructors and program coordinators) from 11 programs in different locations across Canada. Over half of the learners are adults with intellectual disabilities, and just under half of the learners in the survey have physical disabilities. One learner did not have a disability, but is using SARAW for ESL (English as a Second Language) literacy. Most of the learners have literacy skills at IALS (International Adult Literacy Survey) level one.

Data collection was done through on-site interviews, a few interviews were done by phone. All participants provided written consent to be interviewed. The researcher verbally asked each question and wrote the participant's response during the interview. Most interviews were tape-recorded and later transcribed for comparison with written responses. The survey asked about learner's preferences for learning on SARAW and in

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the program, assessment and celebrating learner achievements, learning activities, learning environments, human resources, applying learning to daily life, and challenges and barriers. Two programs volunteered to be case studies for the survey. This involved interviewing a number of learners, tutors, one instructor and one program coordinator, plus observation of learners and tutors using SARAW and other materials and tools. Other learning material and tools were reviewed.

The researcher and external evaluator conducted data analysis. The Statistical Package for the Social Sciences (SPSS) computer program was used for statistical analysis. Qualitative data was analyzed using MS Word. The researcher and evaluator linked the statistical results with qualitative findings to verify consistency and identify significant themes. During this step a re-look at the data was conducted using a list of possible trends to be found in the data. After the re-look at the data and reassurance that we were on the right track, the analysis continued with drafting a preliminary report. The preliminary draft of the report was reviewed by the LaDS steering committee, and their feedback contributed to this finalized report.

Over half of the programs using SARAW are community based literacy and adult basic education programs located either in a community literacy organization, rehabilitation organization, or a college. Programs in rural and urban locations participated. Nine of the 11 programs have the SARAW computer as one of a number of tools for learners to use, and only some learners in the programs use SARAW. The two other programs use SARAW as the primary learning tool and all learners in those programs used the computer. The majority of programs have only one SARAW computer, which is the original DOS version.

The findings from the SARAW survey offer possibilities to improve accessibility to literacy programs for people with disabilities. The survey explored contexts in which SARAW is being used, and in particular the survey looked for effective practices that contribute to literacy skill development. Effective practices involve positive, respectful relationships, communication, selection and use of tools and materials that reflect adult learning principles.

Overall, the participants indicated that the SARAW computer is an effective tool for building literacy skills for adults with disabilities. Most of the learners use SARAW to write their stories, thoughts and imagination. A common and effective approach is the Language Experience Approach. Components of SARAW which participants indicated as useful, fun and helpful are Writing, Mystery Word, and Reading. Learners used SARAW for spelling, sounding words, writing and reading. The fact that the computer speaks made it very popular among the learners in the study. Although most programs use the original DOS version (predates Windows platform) which is dated, and updated versions (Windows) have some technical problems, participants indicated that they like the computer as it offers a unique way for adults with disabilities to use technology for their literacy skill development.

All programs used other learning materials and tools, as well as the SARAW computer. Important in the findings is the significance of learner-tutor/instructor relationship.

Whether the programs are structured as small groups or one to one tutoring, the relationships of those involved in the learning underpins the successful facilitation and instruction of practical, hands-on, experiential activities. The qualities, strategies and techniques demonstrated in the interactions between learner and tutor, instructor or coordinator reflect adult learning principles in action. Significant outcomes, in addition to improved and maintained literacy skills, include: increased self-confidence, expanded social relationships, and application to learners' everyday lives. Although much work is needed to increase accessible literacy programs for adults with disabilities, the programs in this survey demonstrate effective literacy practices.

Most of the programs in the survey are primarily for adults with disabilities, and as such accommodations (structural and support person) were considered and provided as much as possible. However challenges and barriers to access and participate in literacy programs were identified by participants: lack of information about where to find assistive technology and adaptive devices for the SARAW computer; transportation difficulties; limited time on the SARAW computer; out-dated computer that SARAW is on (DOS version); technical problems with the Windows version of SARAW - such as the screen freezing - and lack of information about where to find technical support for maintaining SARAW.

Based on the findings in the survey and related studies on literacy and disabilities, recommendations to advance literacy programming for adults with disabilities include: more SARAW computers in literacy programs; update SARAW software, correct technical problems, and make it easier to install on current computers; Neil Squire Society to provide information on assistive devices and adaptive technology as well as communicate on a regular basis with programs about technical and other information for SARAW maintenance and troubleshooting; expand the components of SARAW and include instructions on the computer and a plain language dictionary; and increase tutor training including more professional development opportunities.

Not enough people with disabilities know about literacy programs, and not enough literacy programs know about SARAW and how to support learners with disabilities. Macht (2000) offered 13 recommendations in the report "Literacy and Disabilities", which continue to be applicable today. Most of the recommendations require action in order to support people with disabilities in their effort to improve their literacy.

This report compliments other key objectives of the LaDS project: to develop a fact sheet, produce a book of learner stories and produce an effective practices guide. The literacy and disabilities fact sheet (see Appendix a) is now part of the Movement for Canadian (MCL) Literacy Fact Sheet series and can be found at <http://www.literacy.ca/litand/3.htm>. Learners were invited to submit stories they had written on the SARAW computer to be published in the LaDS Learner Stories. The book can be found at: www.nald.ca/fulltext/study/learner/stories.pdf. This report served as the key resource for the development of "It Gets in Your Brain: Effective Practices in Literacy Programs using SARAW with Adults with Disabilities", which can be found at www.nald.ca/fulltext/study/practice/guide.pdf. This report is also available on the Internet, and can be found at www.nald.ca/fulltext/study/final/report.pdf.

1. Introduction

People with disabilities make up a disproportionate amount of the 42% of Canadian adults who function at the two lowest literacy levels (MCL, 2005). Studies on literacy and disabilities have found that people with disabilities are disadvantaged when accessing programs to develop and strengthen their literacy skills (Carpenter, 2004; Yates, 2001; Macht, 2000. Kapsalis, 1999; Literacy Ontario, 1998; Roher, 1995).

“Literacy training for many people with disabilities plays a critical role in helping them move from a place of marginalization towards the mainstream of society.” (Carpenter, Readman, 2004)

“Literacy is one of the most fundamental skills required to assert one’s independence in a fast-paced, print-dependent world. Already experiencing social exclusion and isolation, low literacy skills only magnify community exclusion for people with intellectual disabilities.” (Piovesan, 2003)

Although studies on literacy and disabilities have found that technology is beneficial for learning and accessibility for people with disabilities, it is difficult to find computer programs designed specifically for literacy development for people with disabilities other than the Speech Assisted Reading and Writing (SARAW) and its companion math program Speech Assisted Math (SAM) (Macht, 2000).

“Despite rapid advances in technology and learning tools, people with disabilities are still being left behind on their journey towards literacy.” (Canadian Association of Independent Living Centres, 2003)

The Literacy and Disabilities Study (LaDS) project conducted a survey of literacy and other community programs in Canada that use the SARAW computer program with adults with disabilities in order to learn about different delivery models and educational settings where adult with disabilities use SARAW to help them develop and strengthen reading and writing skills. The programs in this survey that are using SARAW are mostly community-based adult literacy programs, and a few programs provide support, outreach or residence for people with disabilities.

This report documents the methodology, findings and recommendations from the SARAW survey, which consisted of face-to-face and phone interviews with learners, tutors, instructors and coordinators in programs that use SARAW. The report also includes case studies of two programs. The intent of including case studies is to provide a descriptive picture of a typical day in two different programs.

The findings from the SARAW survey offer possibilities to improve accessibility to literacy programs for people with disabilities. The survey explored contexts in which SARAW is being used, and in particular the survey looked for effective practices that contribute to literacy skill development. Effective practices involve positive, respectful relationships, communication, selection and use of tools and materials that reflect adult learning principles (Carpenter, 2004; Imel, 1998; Literacy Ontario, 1998).

Introduction

This report compliments other key objectives of the LaDS project, which was to develop a fact sheet on literacy and disabilities (see Appendix a), for the Movement for Canadian Literacy Fact Sheet series, found at <http://www.literacy.ca/litand/3.htm>. During the survey learners were invited to submit stories they had written on the SARAW computer to develop a book of stories by learners. This book can be found at: www.nald.ca/fulltext/study/learner/stories.pdf.

This report served as the key resource for the development of the guide “It Gets In Your Brain: Effective Practices in Literacy Programs using SARAW with Adults with Disabilities”. The guide is a resource for practitioners in the literacy and disabilities fields to assist them to incorporate effective practices for literacy skills development with adults with disabilities. It is intended for instructors, tutors and coordinators in adult literacy programs, and support workers and coordinators in disabilities and rehabilitation programs. The guide can be found at www.nald.ca/fulltext/study/practice/guide.pdf.

SARAW is a computer program, developed in the early 1990s by the Neil Squire Society in partnership with Capilano College in Vancouver British Columbia, Canada. Information on SARAW can be found at: <http://www.saraw.net/index.html>. It was developed for people with physical disabilities, who are non-verbal, to learn basic reading and writing skills. However, people with intellectual as well as physical disabilities have used SARAW to help them strengthen their literacy skills. SARAW is a talking computer program with writing, reading and vocabulary building components for adults with literacy levels between grade 2 and 7. The SARAW program was widely distributed across Canada during the mid 1990s to literacy and basic education programs in colleges, literacy organizations, school boards and rehabilitation organizations.

This survey is the first inquiry to explore the various delivery models and educational settings using the SARAW computer program. For the purpose of this report the SARAW computer program will be referred to as the SARAW computer.

The report is organized into the following sections:

- Methodology: describes the process of survey design, sampling, data collection, and data analysis
- Where SARAW is being used: presents the locations and types of programs in which the computer is currently being used
- Program information: describes the various programs’ structure and resources
- Who uses SARAW: presents the diversity of learners
- Learner experiences with SARAW: describes learners’ thoughts about SARAW and how they know the computer is helping them
- Learner experiences in the programs: illustrates the range of learning activities and learning environments, challenges and barriers, and measuring progress
- Applying learning in daily life: presents learners’ statements about how participating in the programs connects with their lives at home, work and in the community
- Case Studies: describes a typical day in two different programs
- Conclusion and Recommendations: from the survey findings are presented

2. Methodology

The methodology for the survey design, development and implementation involved the following steps:

- Questionnaire Development and Interview Pilot
- Sampling
- Data collection
- Data analysis

2.1 Questionnaire Development and Interview Pilot

The LaDS Project Manager and Researcher (Bow Valley College), and the Research and Design Manager at Neil Squire Society developed three pilot survey questionnaires, one for each group:

- Learners
- Coordinators
- Instructors and Tutors

The questions were designed for comparison across all three groups. The questionnaires had the same categories with similar questions worded differently for the particular group. The LaDS steering committee reviewed drafts of the questionnaires, which were then piloted with five learners, two instructors and one coordinator. Of these eight pilot interviews, six were face-to-face and two were by phone.

Results from the pilot included a greater understanding of the needs of learners, appropriateness of the questions, and required adjustments to the questionnaires and interview format. The questions were found to be appropriate. Changes to the questionnaires involved re-ordering of some questions, and the questionnaires were reorganized into:

- Learner
- Tutor
- Instructor/Coordinator

See Appendices b, c, and d for Questionnaires. The learner interviews were changed from structured to semi-structured during the pilot as many learners using SARAW have intellectual disabilities and as such semi-structured interviews were more comfortable for them.

2.2 Sampling

The sampling was purposive and criterion driven. Participants in the survey had to be adult learners currently using SARAW, and tutors and instructors had to be working with learners currently using SARAW. The other participants were program

Methodology

coordinators where SARAW was being used. While the vast majority of learners had disabilities, the survey was not restricted to people with disabilities. One learner who participated in the survey had English as a Second Language.

During the questionnaire development phase, Neil Squire Society initiated contact with organizations that had received the SARAW computer since its inception in the early 1990's. This database of organizations that originally received SARAW was partially updated in 1999, and there were 112 organizations identified at that time still using the computer. From the list of 112 organizations contact was made to invite programs to participate in the survey, however many of the organizations had stopped using the SARAW computer or the literacy program in which SARAW was used was no longer running. Due to various reasons, such as funding cuts, a shift in program focus, program closure, institutional restructuring, and staff retirement or changeover, many of the programs in the database were not currently using the SARAW computer.

In this survey organizations that were successfully contacted were invited to participate. A total of 19 programs indicated that they were currently using SARAW, and 11 programs agreed to participate in the survey. Between September 2004 and January 2005 interviews were conducted with adult learners, tutors, instructors and coordinators in 11 programs using the SARAW computer. See Appendix e for program information. Due to the smaller than anticipated size of the sample, and the fact that the survey had not changed significantly from the pilot phase, data collected from the pilot interviews was included in the data analysis. The size of the sample is 44 participants, as noted in Table 1.

Table 1. **Number of Interviews**

Learner	20
Tutor	11
Instructor	7
Coordinator	6
Total	44

Limitations of this study include: the small sample size, and data collection only from programs who were using SARAW at the time of the survey. Data was not collected from former learners who used SARAW or from instructors or coordinators in programs that were no longer using SARAW.

2.3 Data Collection

Data collection was initially planned to be both face-to-face on-site interviews and phone interviews. Based on the results of the pilot, the remaining 15 learner interviews were conducted face-to-face, as the phone was a potential barrier for some learners, particularly those with verbal communication difficulties. The remaining interviews with tutors, instructors and coordinators were all face-to-face except one, which was a phone interview with an instructor.

All participants provided written consent to be interviewed. The researcher verbally asked each question and wrote the participant's response during the interview. Also, interviews were tape-recorded and later transcribed for comparison with written responses. The researcher played the tape and added verbal comments of the individual participant to the written responses on their questionnaire. A few participants requested that their interview not be taped which was respected.

All participants did not answer all questions on each survey. In particular, coordinators and instructors responded depending on their specific responsibilities. Some instructors had little coordinating responsibilities while other instructors were responsible for coordinating the program as well as instructing the class. Learner responses varied due to severity of disability and communication difficulties. Some learners had their tutor, instructor or support worker assist them in communicating their responses to the questions.

Two programs volunteered to be case studies for the survey. This involved interviewing a number of learners, tutors, one instructor and one program coordinator. The researcher observed learners and tutors using SARAW and other materials and tools. Other learning material and tools were reviewed. The researcher took field notes on the learning environment and accepted invitations to engage in program activities including casual conversations, learners showing their work, organized presentations by learners, and answering questions about SARAW. The researcher spent between 1.5 and 3 days on site for each of the case studies.

2.4 Data Analysis

Once the interviews and case studies were complete the researcher and evaluator initiated the data analysis. They began with organizing the data for statistical and qualitative analysis. A master codebook was created for all the questions in all three questionnaires (learner, tutor, instructor/coordinator). The coded data was re-organized into grouped questions under categories noted in the questionnaires, plus additional categories identified in the coding process. See Appendix f for Grouped Data.

The quantitative data was first organized onto an MS EXCEL spreadsheet, which was then sent to an external statistician for analysis using the Statistical Package for the Social Sciences (SPSS) computer program. A number of questions were cross tabulated for comparison of responses by learner, tutor, and instructor/coordinator, as well as to identify preferred SARAW components and other learning tools and materials, and to compare indicators of learning and skill improvement.

The qualitative data was analyzed using MS Word tables to identify frequency of key words and phrases. These led to identifying emerging themes. Responses were compared between learners, tutors, instructors and coordinators.

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The researcher and evaluator then linked the statistical results with the qualitative findings to verify consistency and identify significant themes. During this step a re-look at the data was conducted using a list of possible trends to be found in the data. This list of possible trends was developed by the LaDS project manager, who is also the program coordinator of the Bow Valley College SARAW program. (See Appendix g for Possible Trends to be Found in the Data). The purpose of this re-look provided an opportunity to reflect on the project objectives, particularly in light of informing the development of a guide on “Effective Practices in Adult Literacy using SARAW with People with Disabilities”. In other words, this pause in the analysis assisted us to answer the questions: Are we on track? Will this lead to creating a useful resource for practitioners to make their literacy program more accessible to people with disabilities, and to help those working in the rehabilitation and disabilities field to incorporate literacy activities into their programs?

After the re-look at the data and re-assurance that we were on the right track, the analysis continued with drafting a preliminary report. The preliminary draft of the report was reviewed by the LaDS steering committee, and their feedback contributed to this finalized report.

3. Findings

3.1 Where SARAW is being used

Most of the programs using SARAW are community based literacy programs and are located either in a community literacy organization, rehabilitation organization, or a college. These are non-credit programs. Three programs are located in colleges as part of adult basic education programs, and are credit courses. The resident or member programs are in rehabilitation organizations for members, and a residential institution for adults with disabilities. The individual support program is part of a community-based organization for adults with disabilities that provide daily living and employment support programs. Table 2 presents the location and the type of programs, which shows that most programs are located in community colleges, rehabilitation organizations, and community-based literacy organizations, and that nearly half of the programs are community-based non-credit adult literacy.

Table 2. Type of Program and Location

Location	Type of Program				TOTAL
	Community Literacy	Adult Basic Education	Resident / Member	Individual Support	
Community Literacy	2				2
College	1	3			4
Rehabilitation	2		1		3
Residential institution			1		1
Supportive Community Living				1	1
TOTAL	5	3	2	1	11

The majority of the programs are open during regular business hours Monday – Friday. One community based literacy program is open 6 days a week, and weekday evenings, and another program is open weekdays and evenings. Four of the eleven programs were in rural settings, which included small cities (less than 100, 000 population), towns and the surrounding region served by the program, and seven programs were in urban communities, which are cities of more than 100,000 population. Only one program has another site where SARAW is offered. In this program SARAW was the primary learning tool.

Table 3. Geographical Location

	Community Literacy	Adult Basic Education	Resident / Member	Individual Support	TOTAL
Urban	3	2	1	1	7
Rural	2	1	1		4
TOTAL	5	3	2	1	11

Findings

Instructors and coordinators stated the approximate number of learners who have used the SARAW computer during the entire time the computer has been in the program. Table 4 presents the number of learners that have used SARAW and the number of years SARAW has been in the program. Most of the programs have had SARAW for more than six years (64%). Other than the two stand-alone programs, the number of learners who have used the computer has been 50 or less (82%).

Table 4. **Number of Learners who have used SARAW**

Number of Learners that have used SARAW	Number of Years SARAW has been in the program			Total
	1-3	4-6	>6	
<20		18%	28%	46%
20-50	9%	9%	18%	36%
>75			*18%	18%
Total	9%	27%	64%	100%

*Represents the two (stand-alone) programs that use SARAW as their primary learning tool

While the actual numbers of learners may seem low for the length of time the programs have used SARAW, the data indicates that learners tend to remain in the program for a longer period of time.

3.2 Program Information

The majority of the programs that use SARAW are adult literacy and learning programs and all programs, except three, are primarily for adults with disabilities. Only two of the 11 programs use SARAW as the primary tool for literacy skill development, while the other nine programs use SARAW as one among many learning tools and resources. In this report those two programs will be referred as 'stand-alone'. The stand-alone programs are known as the SARAW program or SARAW classroom, and the computer is used by all learners in those programs. In the other nine programs only some of the learners use the SARAW computer.

Of the 11 programs 82% have only one computer with SARAW on it, and 91% of the programs use the DOS version of SARAW. This is the original version of SARAW. In nearly all the programs SARAW was the only program on the computer, and learners referred to it as the SARAW computer. One stand-alone program has 12 computers each with the DOS version of SARAW. The other stand-alone program has two computers in the program, one with the DOS version and one with the Windows Premium version, which is an updated version and uses a mouse. One other program uses the Windows Premium version of SARAW on one computer. Six programs also use Speech Assisted Math (SAM) as well as SARAW. SAM was developed by the Neil Squire Society and is a math program for adults with disabilities to assist with learning basic math.

- **Accommodations¹**

Because most of the programs are for adults with disabilities each program had considered accommodations to varying degrees to meet learners' needs. Most of the accommodations are structural adaptation, personal support, and learning resources and tools. However, some instructors and coordinators in some programs indicated that the biggest barrier for (potential) learners is the lack of personal support (e.g. support worker) while the learner is in the program. Table 5 and 6 present the ability of each program to accommodate learners with physical and intellectual disabilities. The "all mobility" option refers to the range of mild-moderate-severe impairment.

Table 5. **Accommodations Ability for Physical Disabilities**

Can Accommodate Physical Disabilities	
Mild and moderate mobility impairment	50%
All mobility impairment	42%
Severe mobility impairment	8%
TOTAL	100%

Table 6. **Accommodations Ability for Intellectual Disabilities**

Can Accommodate Intellectual Disabilities	
Mild and moderate cognitive impairment	67%
All cognitive impairment	25%
Severe cognitive impairment	8%
TOTAL	100%

Although eight of the 11 programs were primarily for adults with disabilities, most learners in the survey did not use additional assistive technology and adaptive devices² while on the SARAW computer.

The two stand-alone programs have assistive technology and adaptive devices and regular contact with the Neil Squire Society to learn about or acquire assistive technology and adaptive devices to meet individual learner needs. Learners in one stand-alone program for adults with physical disabilities have more access to assistive technology and adaptive devices than the other programs. Contact information for SARAW at the Neil Squire Society is: 604-412-7599 or info@saraw.net. Along with structural and support accommodations, the length of time a learner can stay in the program is an important accommodation for people with disabilities in

¹ Rioux, M. et al (2003) Atlas of Literacy and Disabilities. Refers to accommodations as indicators of social inclusion and uses the Barriers and Accommodations Index. The two mostly used accommodations types are supports for personal care and structural adaptation

² Assistive technology and adaptive devices assist learners to interface with a computer effectively (Carpenter, C. 2004; Macht, J. 2000). SARAW has built in DECtalk (voice synthesizer) and word prediction. Examples of external devices include specialized keyboards, pointing devices, and key guards. For information on assistive technology and adaptive devices go to Neil Squire Society at <http://www.neilsquire.ca/index.asp>

Findings

literacy programs. It is necessary to build in longer timelines, which allow learners with disabilities to remain in a program. In the SARAW survey 64% of 11 coordinators and instructors stated that learners are able to stay in the program for an unlimited amount of time. Some noted that learners must demonstrate progress in order to remain in the program. The other 36% indicated learners are allowed remain in their programs up to 5 years, of which the average length of time a learner stays is between 2 –3 years.

• Assessment

Learners are assessed upon entry to the program, which informs the development of learning plan and goals. Assessment also occurs during and when learners exit the program. Ten instructors and coordinators responded to questions about assessment. They indicated that the literacy level of most learners who use SARAW are at level one according to IALS (International Adult Literacy Survey), and only a few are reading at level two³.

Of the 10 instructors and coordinators 60% stated that provincial grade levels for learners using SARAW ranged from below grade 1 to grade 4. 20% indicated that in order to enter the program a learner needed to have some knowledge of the alphabet and very basic skills. The programs used a variety of assessment tools upon entry. Table 7 presents the types of assessment upon entry to the program, with just over half the respondents indicating that they use a standard or formal tool for the initial assessment.

Table 7. **Initial Literacy Assessment**

Standardized or formal assessment (including provincial grade level, Canadian benchmark, Canadian Adult reading Assessment, Common Assessment of Basic Skills, IALS)	55%
Internally developed interview, including written, reading and math	36%
External assessment	9%
TOTAL	100%

After learners are in the program, assessment to measure a learner’s progress uses a shared assessment approach between the learner and the tutor or instructor. This was done in many of the programs by looking at learner portfolios and reviewing learning plans and goals rather than standardized or formal assessment. Table 8 presents the type of assessment to measure progress while in the program. Reviewing learner portfolios was the method of assessment indicated by 50% of eight coordinators and instructors. Learner portfolios may include a file or binder of the learner’s work and discussing activities where the learner demonstrated skills such as presenting their writing at special events, helping other learners, and applying their learning outside the classroom (work or home).

³ Level One is described as individuals that “have difficulty reading and have few basic skills or strategies for decoding and working with text. Generally, they are aware that they have a literacy problem” Level Two “respondents can only deal with material that is simple, clearly laid out and in which the tasks involved are not too complex.” MCL FactSheet, found at <http://www.literacy.ca/litand/1.htm>.

Table 8. **Measuring Progress while in the Program**

Learner portfolios (including review of application of learning)	50%
Standardized or formal assessment (including provincial grade level, Canadian benchmark, Canadian Adult reading Assessment, Common Assessment of Basic Skills, IALS)	25%
In-house assessment	25%
TOTAL	100%

Some examples of in-house assessments include learners completing work or working more independently on the SARAW computer, instructor tests, and comparing previous work with present accomplishments. Most tutors and instructors spoke about the importance of feedback on an ongoing basis. Feedback is incorporated into both the learner portfolios and in-house assessments. Along with praise from instructor and tutor, constructive feedback is a daily occurrence in many programs. One coordinator stated the importance of tutors providing feedback about learner's improvements:

“The tutor is the key, telling them that they have improved. Tutor looking at [learner] profile with [learner]” (coordinator)

Of 11 tutors, 82% indicated that they tell learners that they are improving through verbal encouragement and praise, and 30% of ten responding coordinators and instructors indicated the same.

Table 9 presents the type of assessment used when learners exit the program.

Table 9. **Exit Assessment**

Standardized or formal assessment (including provincial grade level, Canadian benchmark, Canadian Adult reading Assessment, IALS)	22%
Learning goal achievement	22%
Learner portfolio	22%
Internally development method	11%
Assessment for further education	11%
No assessment	12%
TOTAL	100%

In one program the use of two assessments methods (learner portfolio and further education assessment) is used, depending on the learner's situation.

• **Program Fees**

In 60% of the programs there is no fee for enrollment. Of the 40% that indicated there is a fee to enroll, the majority stated that funding is available. Most of the funding was through bursaries from charitable organizations for registration or tuition.

The other form of funding is student grants through provincial student finance boards for registration or tuition, books, school resources and supplies. 40% of coordinators and instructors in programs that have fees indicated that the criteria for funding is studying towards becoming gainfully employed, and 20% indicated that learners qualify based on financial need.

Findings

Fees for the course or program ranged from as low as \$5 per semester to \$435 per course. The lower fee is a membership fee, which included the option to participate in the literacy program. The \$435 fee is for an adult basic education credit course in a college program. The fee in two programs was \$25 per semester. Comments from learners and tutors in programs where the semester fee was \$25 stated that while the fee was not too expensive, learners still needed the bursary.

“If I didn’t have bursary, I couldn’t come.” (learner)

“Other programs were too expensive, found out that they [learners] get bursaries so we came here.” (tutor)

• Program Funding

Only the stand-alone programs were requested to provide information about funding. One stand-alone program budget is less than \$15,000 and has a part time coordinator with 20 or more tutors and 28 learners annually. The other stand-alone program has a budget of more than \$60,000 and has one full time and three part time instructors and an average of 20 or more students annually. The latter stand-alone program did not have tutors at the time the survey was conducted. Instructors and coordinators in a few of the other programs indicated that funding is provided by the provincial government.

• Human Resources

All of the programs have at least one coordinator or instructor, six programs reported they had instructors, and seven programs reported that they have volunteer tutors. Five programs reported having a coordinator responsible for the SARAW computer, however this was only a small part of the work for most of the coordinators, (approximately one hour or less per week). One stand-alone program has a coordinator who works 13.5 hours per week. In the other stand-alone program there is one full time and three part-time instructors who spend the majority of their time instructing directly on the SARAW computer.

Regarding volunteer tutors, 71% of the programs indicated that they have tutors working with learners, and 82% of those tutors work one-one with learners on SARAW. Of the seven programs that have tutors, the average hours per week that tutors work is between 2.9 and 3.3 in both stand-alone and other programs. One stand-alone program has over 20 tutors working with 28 learners, and most of the other programs with tutors has on average about 3 tutors working one-one with learners who use SARAW. While most tutors had a one-one ratio, some tutors indicated that they work with two or three learners at the same time.

Qualifications for instructors, coordinators and tutors highlighted soft skills such as patience, listening, being non-judgmental, flexibility, and respect for others. 71% of

seven instructors and coordinators who responded indicated that instructors were required to have a university degree, particularly in education, or a college diploma. Most identified a university degree. 43% indicated the importance of adult education experience.

Qualifications for a coordinator position included education in the social service field as indicated by 71% of seven instructors and coordinators, with a preference for a university degree (43%). Experience in some of the following was identified as important: literacy - particularly assessment; adult literacy; learning to read process; volunteer management; record administration; and, the ability to work with limited resources.

Tutor qualifications were commented on by eight coordinators and instructors, of which 75% stated that being patient, non-judgmental, flexible, having a positive attitude and a desire to help others learn as important criteria for being a tutor. 62% stated that tutors should be proficient in reading, writing and math. 37% noted that tutors need to be comfortable with or have some knowledge about computers. In one program tutors were required to have a police check, complete 15 hours of tutor training, and pay \$35. Table 10 presents the skills and knowledge that tutors stated they bring to their role.

Table 10. Tutor Prior Skills and Experience

*Teaching and learning	64%
Patience, listening, respect for others	54%
Education in rehabilitation and disabilities, nursing and social work	45%
Personal and family experience with disabilities	18%
Computer skills	18%

*Teaching and learning skills and experience involve: knowing about being a learner and a teacher, being creative, being able to work with a group and one-one, enjoying teaching and learning, and knowing when to help.

While it is difficult to find tutors to work with adults with disabilities, (Macht, 2000) seven coordinators and instructors indicated that tutors on average remained in the program for two years. Coordinators and instructors indicated that they recruit tutors through the following methods: word of mouth (71%), newspaper, newsletters and local community TV advertisement (43%). Of seven coordinators and instructors 29% stated that they have practicum students tutoring learners, and 14% indicated that graduates from their program sometimes return to tutor.

In comparison to the above recruitment methods, tutors indicated how they came to the program in Table 11. Just over half of the tutors interviewed were support workers for individual learners. A couple of the support workers indicated that they learned about the program through other support workers.

Findings

Table 11. **Tutor Recruitment**

Support worker in a disabilities services organization	54%
Word of mouth	18%
Already tutoring in the program	18%
Practicum student	10%
TOTAL	100%

While all the tutors are designated as volunteers, support workers are paid employees in disabilities services organizations and part of their work is to tutor. Of those support workers who are tutors, 33% indicated that they assisted learners to find and enroll in the program. One tutor spoke how she helped the learner find this program:

“I looked for this (program) because I knew [learner] loved school as a child”
(tutor)

Regarding motivation to tutor, 46% of the tutors indicated their motivation to volunteer as a tutor: to help people, to have a purpose, instructor is a friend, and interested in learning and helping others. One tutor chose the program for her practicum:

”Practicum for my program, I like literacy work, its probably my strength”

Tutor training was reported by coordinators and instructors in seven programs. Training consisted mostly of an orientation or initial training on the SARAW computer. Other training included monthly or annual learning sessions, and tutors were provided with a volunteer handbook and monthly newsletter. One coordinator in a stand-alone program provided ongoing training to tutors by dropping into the classroom on a regular basis, providing bursaries to tutors to attend the annual provincial literacy conference, and by bringing in a rehabilitation/literacy specialist to work hands-on with tutors and learners. Of the 11 tutors interviewed 45% indicated they received initial training or orientation on the SARAW computer and 18% trained themselves.

• **Partnerships**

Eight of the 13 coordinators and instructors reported on partnerships with other programs and organizations in their community. Table 12 presents partnership activities with other organization. The majority of partnerships are for infrastructure support, learner referral, and bursaries and donations.

Table 12. Partnership Activities

Infrastructure support for their program	62%
Learner material donations and fee bursaries	50%
*Learner referral to their program	50%
Learner referral to other literacy and education programs	25%
Professional development for tutors, instructors and coordinators	25%

*Referrals to programs were from partnerships with other community literacy organizations, high school and community college.

One community literacy program (stand-alone) located in a college received donations from charitable foundations for learning materials, fee bursaries, and in-kind administration and technical support from the college. Another community literacy program located in a rehabilitation organization received in-kind contributions for office equipment use. The latter program offered donations to other community based organizations through fundraising activities such as selling cookbooks created by learners.

3.3 Who uses SARAW

Slightly more than half of the 20 learners interviewed had intellectual disabilities (cognitive impairment), and slightly less than half of the learners had physical disabilities (mobility impairment). However, nearly half of the all the learners had both intellectual and physical disabilities. One learner did not have a disability, but was learning English as a Second Language. 91% of 11 instructors and coordinators indicated that learners were reading at IALS level one.

Of nine instructors and coordinators, 44% indicated that learners in their programs had cognitive (intellectual disabilities) impairment and mobility (physical disabilities) impairment. 57% instructors and coordinators indicated that along with cognitive and mobility impairment, some learners also had learning disabilities⁴, visual and hearing impairment, or mental illness. Over half of the programs (64%) do not assess physical disability when a learner enters the program.

Of the 20 learners, 40% indicated that they had been enrolled in an adult literacy or learning program prior to the current program. Of those learners that had previously gone to another program, half indicated it was in a classroom with instructor setting, and 75% said the program helped them with reading, writing and/or math. Half of the learners indicated that they left because the program ended or funding changed. Other reasons for leaving previous programs included:

⁴Learning Disabilities Association of Ontario, adopted the following definition, 2001: "Learning Disabilities" refers to a variety of disorders that affect the acquisition, retention, understanding, organization or use of verbal and/or non-verbal information. These disorders result from impairments in one or more psychological processes related to learning ([footnote a](#)), in combination with otherwise average abilities essential for thinking and reasoning. Learning disabilities are specific not global impairments and as such are distinct from intellectual disabilities. Found at: http://ldao.ca/resources/education/pei/def_05_01.php#defn

Findings

- Difficult to keep up with the pace of work
- Too many other learners in the class
- Wanted a full time program
- Long commute getting to the program
- Young children at home

For those learners who had not previously taken an adult literacy program, half indicated that they did not know about those programs, and 33% did not have the opportunity to attend.

In the current program, the length of time learners had used SARAW ranged from a few months to more than six years. Some learners have been in the program for a very long time. One learner had been using the SARAW computer for more than 10 years:

“ I was one of the first users of SARAW here, I advocated for the literacy program in the early 90’s”

The number of learners using SARAW on an annual basis ranged from less than 10 per year to more than 20 per year. Of 11 instructors and coordinators, 64% indicated less than 10 learners per year use SARAW. Another 27% indicated that more than 20 learners per year use SARAW. Those programs, where SARAW was one among other learning tools, tended to have less than 10 learners per year, and stand-alone programs indicated more than 20 learners per year.

3.4 Learners' Experiences using SARAW

The SARAW computer was viewed as an effective learning tool. Of all survey participants, 92% indicated that they were either very satisfied or satisfied with SARAW.

The majority of the learners participate in the programs part-time, 90% indicated that they spend up to four hours per week on the SARAW computer. The other 10% spend between 5 and 9 hours per week on the computer. Learners use SARAW to learn, improve or maintain writing, spelling, and reading skills, and some indicated that they also hope to become more independent because of strengthening their literacy skills.

Almost all of the 20 learners using the SARAW computer have support from a tutor or instructor. Most of learners in the survey work one-to-one with their tutor while they are on the computer and others work more independently with the instructor or tutor available as needed. Most learners use the SARAW computer without additional assistive technology. Learners spoke about the relationship with their tutors and instructors as significant for their experience in the program.

All programs had individualized learning plans and goals, and used a learner-centered approach, and as such the range of personal preferences of what learners liked about the SARAW computer reflects a diversity of interests and learning styles. Table 13

presents what learners like about the SARAW computer, and most indicated more than one component or feature of SARAW. Table 14 presents the components or features of SARAW that tutors, instructors and coordinators indicated as useful or very useful for learners.

Table 13. What Learners Like about SARAW

Writing	65%
Mystery Word Game	65%
The computer speaks	65%
*Spelling	60%
Reading	50%
Sounding Board	40%
Word Pattern Games	10%

*Spelling is not a distinct component of SARAW, however learners indicated that they liked learning how to spell on the computer.

Table 14. **What Tutors, Instructors and Coordinators Indicated as Useful and Very Useful

Writing	57% (12/21)
Mystery Word Game	62% (13/21)
The computer speaks	100% (21/21)
*Spelling	82% (14/21)
Reading	62% (13/21)
Sounding Board	62% (13/21)
Word Pattern Games	60% (12/20)

*Spelling is not a distinct component of SARAW, however learners indicated that they liked learning how to spell on the computer.

**the number of responses by tutors, instructors and coordinators indicating 'useful' or 'very useful' on a 5 option scale: not very useful, somewhat useful, neutral, useful, very useful.

Of the 20 learners, 19 indicated that while they use more than one function on SARAW, they use writing the most. Along with writing learners indicated that they also like Mystery Word, reading, spelling and the sounding board. In the writing component most learners write their own stories using the Language Experience Approach (LEA). Some learners use the writing component to copy newspaper articles that they were interested in. Below are statements by learners about what they like about SARAW

“Writing my story, been working on it since I started here, its called ‘My Life’. Its been two years writing it.”

“So far I just wrote one story and I won an award and went to Toronto to tell my story in front of 300 people”

“I love making up stories.”

“I use the computer to write to my mom.”

“It gets in your brain, when I write the words here [on SARAW], I put them in my computer at home”

Findings

Tutors, coordinators and instructors also indicated that writing was one of the most used components of SARAW by learners and 57% noted that writing was useful or very useful for the learners. One tutor said that the word predict feature in the writing component of the program is helpful for learners with physical disabilities. One learner indicated how much fun working on SARAW is:

“Today I learned how to spell more words and try to guess them, its joyful to be on it, I never used a computer that speaks”

Many learners stated that they like that SARAW is a talking computer, and they also like listening to the voice and that it sounds out mistakes that they can correct. One learner used SARAW to learn English as a Second Language. Some statements by learners:

“I like to listen to SARAW, I like the voice.”

“Sure am learning a lot. Like that the computer talks and helps me. This is the first time I used a computer.”

“Because when I am writing and I make a mistake it lets me know, tells me with the voice.”

“When I am stuck on a word (in a book) then I type it in and learn how it sounds.”

Tutors, instructors and coordinators also indicated that learners like that the computer talks. Like the learners, they stated that learners have fun writing their stories, reading stories and playing word games, particularly Mystery Word. Three instructors and coordinators stated that learners have fun working together, and four tutors indicated that learners like that the computer verbally praises them in the Mystery Word game. One instructor indicated that the DOS version had worked well with a former learner who was blind. More positive comments about the SARAW computer by participants:

“Computer speaks and praise by computer. [learner] enjoys feeling successful, works on own and chooses between games and mystery word.” (tutor)

“SARAW has a variety of options, choosing voice and Mystery Word is a lot of fun.” (tutor)

“Their learning is self directed because it is the computer telling them rather than me.” (tutor)

“Really like when the computer praises them and says their name.” (coordinator)

“Having computer telling them ‘good job’, the computer speaks to them, gives them feedback.” (instructor)

Learners also noted that they know they are improving their reading skills by using SARAW.

“Reading my own stories on the computer when I’m done. The computer tells me then I read it”

Although there is no spelling component on SARAW, learners use SARAW to improve spelling skills. Learners indicated that along with writing, Mystery Word helped them with spelling. Participants indicated that learners improved or maintained their reading and spelling skills in this component. Some of the learners also stated that they liked to read their own stories.

Survey participants spoke about the fun learners have when using SARAW. Nearly all the learners indicated that it is fun to use SARAW, of which 78% described ‘fun’ as: enjoyable to be on the computer, enjoy learning writing, spelling, reading, playing games, sounding out words, like that the computer talks and that you can chose what to do and the voice. Learners, tutors, instructors and coordinators expressed that they enjoy being able to work together, whether it was tutor and learner, learners together or learner and instructor. For many of the learners socializing was significant in the process of learning on SARAW.

Two learners said they liked working together with other learners on the computer. Other things that instructors, coordinators and tutors indicated that were fun for learners are: using the sounding board, being able to work independently on the computer, and showing others their writing.

Survey participants described how SARAW is helping learners improve their literacy. However the most significant improvement indicated was learner self-confidence. Table 15 presents learners’ views about where they are improving. Table 16 presents tutors, instructors and coordinators responses about learner improvement on SARAW.

Table 15. **Improvement in Literacy Skills from using SARAW Identified by Learners**

Self-confidence	90%
*Spelling	75%
Writing	60%
Reading	55%
Phonetic ability	45%

*Spelling is not a distinct component of SARAW, however learners indicated that they improved their spelling on the computer.

Table 16. ****Improvements in Literacy Skills from using SARAW Identified by Tutors, Instructors and Coordinators**

Self-confidence	94% (15/16)*
*Spelling	88% (15/17)
Phonetic ability	72% (13/18)
Reading	71% (12/17)
Writing	59% (13/22)

*Spelling is not a distinct component of SARAW, however learners indicated that they improved their spelling on the computer

** the number of responses by tutors, instructors and coordinators indicating ‘quite a bit’ or ‘a lot’ on a 5 option scale: not very much, a little, neutral, quite a bit, a lot.

Findings

Tutors, instructors and coordinators also indicated that SARAW has helped learners with their literacy skills, as well as strengthened their confidence, communication and relationship skills. Some comments about how SARAW is contributing to building self-confidence in learners:

“Having it in a classroom setting has a good impact on motivation and confidence by peers and how they are using the computer.” (tutor)

“It is so helpful to build confidence in [learners] as they realize they can learn.” (instructor)

“One [learner] is non-verbal this has changed his life, he can communicate with others now.” (tutor)

Three instructors and coordinators indicated that SARAW is unique and one learner said that coming to the literacy class and working on the SARAW computer is the highlight of the week. Survey participants felt strongly that having SARAW is an asset to the program:

“SARAW is good, it is easy for tutors to learn, when I have relief workers it is easy for them to figure out after I write up how to start it up.” (tutor)

“You can learn more things on it and you can’t mess it up too much” (learner)

“A unique computer and [learners] are proud that we have something special in our class. A unique way to show stories and have the different voices reading what you have written, a sense of pride.” (instructor)

In one stand-alone program the learners receive a free computer for home use while they are in the program, and they are provided with technical support:

“The whole concept of SARAW is innovative for [learners]. Each [learner] gets a SARAW computer in their home while they are in the program as well as home technical support. We get a lot of donated computers.” (instructor)

Although some participants indicated some technical challenges with the SARAW computer (see Challenges and Barriers section), particularly that the computer was dated (DOS version), and that it froze frequently (Windows version) the majority of the survey participants stated that the SARAW computer has an overall positive impact on learners. Key to learning using the SARAW computer is the relationships between tutor/instructor and learners. Relationships were found to be critical for development and maintenance of literacy skills, which in turn has proven to be very rewarding for learners’ social relationships, personal sense of confidence and self-esteem.

3.5 Learners' Experiences in the Programs

Learners spoke positively about the program they were in. They expressed their thoughts about the people they were learning with (tutor, instructor, other learners, and coordinators), the learning activities and materials, how much they were learning, and what they liked about the classroom.

• The People

The central feature of their learning experience expressed by learners is the relationships they have with tutors, instructors and coordinators, and other learners. They stated that they like their tutor and/or instructor, and in those programs where learners work together, they indicated that they like working with other learners.

“The people here.” (learner)

“We [tutor and learner] laugh a lot.” (learner)

All three groups (learners, tutors, instructors and coordinators) indicated that a sense of community with others in the classroom and the relationships among learners, tutors, and instructors is important. Some learners referred to each other as friends.

“Meet new friends.” (learner)

In the programs that use a combination of group, one to one and independent, some learners stated that they liked getting help when they needed it and helping other learners and their instructor by answering the phone and turning on the computers. One learner stated that sometimes he brings donuts into the class for everyone to share.

Learners either expressed directly or implied the importance of a significant and active tutor or instructor role in prompting, helping and reviewing their work. While learners commented on the importance of having a good relationship with a tutor, tutors and some coordinators and instructors explained more specifically the importance of the tutor or instructor as a facilitator/teacher who builds and maintains a personal and professional relationship with each learner.

“It is the teacher and volunteers who really make the difference in how they work with the [learners].” (tutor)

“Tutor feedback to [learner's] increased conversations and questions.” (coordinator)

“Instructor is key person and has a terrific way of teaching literacy.” (tutor)

Findings

In this regard, the important teaching qualities indicated by learners, tutors, instructors and coordinator are:

- Listening
- Advising
- Encouraging
- Patience
- Role modeling
- Team building and cooperation

Regardless of the type of activity, such as writing, typing, reading, sounding or mathematics, these qualities are essential for positive relationships. The methodology that appears to underpin successful facilitation and instruction is that of practical, hands-on, experiential activities. As well, utilizing such diverse techniques as group projects, one-to-one attention, stories (particularly those of the learners themselves), and pictures is essential. The qualities, strategies and techniques demonstrated in the interactions between learner and tutor, instructor or coordinator reflect adult learning principles in action.

• Learning Activities and Materials

Along with the SARAW computer, learning activities included other materials and tools. Whether the activity focused on writing, reading, spelling, math, or other literacy skills the learner was supported by the tutor and/or instructor through encouragement, repetition, questions, and conversations.

Including learning on SARAW, most learners worked with either a tutor or instructor, and in one program peers frequently helped each other with reading, writing, and math. While learning activities other than the SARAW computer were not as fully investigated, learners worked in groups, independently, in pairs, or one-one with tutor or instructor. All participants were asked what materials or tools they used for learning (other than SARAW). Of those learning activities and materials that are used in the programs, 27 participants indicated which ones were most helpful. Table 17 presents learning activities and materials that are most helpful for learners. The responses are ordered by frequency, beginning with most frequently indicated.

Table 17. **Most Helpful Learning Activities and Materials**

1. Using other computer programs, including games and typing skills (e.g. Mavis Beacon Teaches Typing)
2. Journaling
3. Reading, writing, spelling using printed exercises (worksheets)
4. Personal reading material
5. Using math sheets and manipulatives
6. Reading daily newspapers and newsletters
7. Writing exercises
8. Reading flash cards and sheets
9. On the internet: Reading on websites of interest by learners, and using email to write to friends and family
10. Doing math problems on the Speech Assisted Program (SAM)
11. Laubach and other workbooks
12. Phonic exercises
13. Community print material such as local restaurant menus, local flyers, phone book
14. Companion to SARAW exercise workbook

Activities and materials that were frequently indicated as being both used and most helpful were reading, writing and spelling printed exercises (worksheets), math sheets and manipulatives. Interestingly the following activities and materials are indicated as most helpful: other computer programs, journaling, personal reading material and writing exercises.

In the programs where learners used the Internet, instructors and tutors spoke about the various activities that learners engaged in while online. Of eight instructors and coordinators 50% indicated that learners use the Internet to email friends or pen pals in other adult literacy programs or email family or friends. 50% instructors and coordinators indicated that learners use the Internet to learn how to find websites of interest and use the image search tools. 25% of the instructors indicated that learners use online newspaper or newsletter websites to find interesting stories, which they then write about. Some comments about Internet use are:

“To email friends, I write on paper what (learner) wants to say and then [learner] types it in, it is very helpful to communicate with friends.” (tutor)

“Look for story [learner] is interested in reading and use genie voice synthesizer on web to help [learner] read along, then write a summary on Word.” (instructor)

In one program learners used email to write to the instructor for feedback on grammar and sentence structure. In another program the instructor had a group activity in which learners joined a website on healthy walking and would log their kilometers walked onto the site.

Findings

• Learning Environment

In order to learn about how the learning environment contributes to a positive learning environment, participants were asked what they liked about the room that SARAW is in. While learners referred to the relationships and learning activities previously noted, they also indicated that they like the physical space. 82% of instructors and coordinators indicated that the setting was private and 55% indicated that the setting was in a single-use, large or small room. 36% indicated that the SARAW was in a small multi-use room. In 9 out of the 11 programs the room that the SARAW computer is in is referred to as the classroom. The two other programs did not have a specific classroom, but did have a designated area where the SARAW computer is used.

All of the 20 learners in the study indicated that they like the room that the SARAW computer was in. Learners noted that they liked the room set up and decoration (aesthetics and familiarity), and they liked working with other learners, their tutors, and instructor. This was verified by instructor, coordinator and tutor responses. All three groups indicated that having a nicely set up room, decorated with learner's work is what they liked.

“Pictures of [learners] on the wall is great then [learners] can recognize each other, things on walls are written in plain language to make it easier to read by [learners].” (tutor)

Learners, tutors, coordinators and instructors also indicated they liked that the room was quiet and private, even though 81% indicate that they do not use headphones while on the SARAW computer.

Along with describing the classroom positively, learners indicated that they liked working on the computer, going to school/college and learning. Tutors, instructors and coordinators agreed that learners liked working on the computer, going to school/college and learning. One instructor stated that the classroom had more than enough room for learners to maneuver their wheelchairs. Tutors indicated that for learners coming to the literacy program and using SARAW is the highlight of their week:

“We are in the college a lot, it's a big part of our week, we are all over the city, but this is the favourite part, at the college.” (tutor)

“Very important part of [learner's] week, it fits well for this [learner].” (tutor)

Although all learners' responses to questions about the learning environment were positive, a few tutors, instructors and coordinators commented that the room was noisy at times, that the SARAW computer was not in the ideal spot, and that at times the room was very busy.

• Challenges and Barriers

When asked about challenges and barriers, learners, tutors, instructors and coordinators described the following as creating challenges and barriers to the program:

- Transportation to and from the programs
- Building is not wheelchair accessible
- Difficulties with tutor recruitment
- Length of wait-time to enter the program
- Time limitations while working on SARAW
- Limited assistive technology and adaptive devices
- Dated computer (DOS)
- Lack of contact for information and technical support for SARAW

The majority of participants in the SARAW survey noted that many learners depend on accessible transportation (handi-bus) to get to the program. Some transportation barriers were noted as:

- Long commute to the program
- Taking public transit is difficult for learners with physical disabilities
- There is no transportation for some learners living in rural areas
- Handi-bus being late and a cumbersome schedule.

Regarding tutor recruitment and learner wait lists, 46% of instructors and coordinators indicated that the length of time people with disabilities wait to enter the program ranges from 4-12 months. Only 20 % of those on a waiting list would likely enter the program in 3 months or less. One coordinator stated that learners without support workers have to wait longer for tutor volunteers from the community. Most instructors and coordinators indicated a need for more tutors.

Learners and tutors indicated that the program schedule limits the amount of time learners spend on the SARAW computer and they would like more time on the computer. Coordinators and instructors indicated that learner weekly schedules are not very flexible and sometimes it is challenging to fit the program schedule with learners' busy lives. Other comments from tutors, instructors and coordinators about why it might be hard to find the time that works for learners to use the SARAW computer were: having to share the room with other programs, tutor scheduling, and having only one computer with SARAW on it. One instructor noted that there have never been too many learners using the SARAW computer for this to be a problem.

Many programs using SARAW have difficulty locating information on where to find assistive technology and adaptive devices that are affordable and that they can maintain. Of all those interviewed 23% in the survey indicated that learners had some difficulty using SARAW because of lack of assistive technology and adaptive devices. Of the learners 20% indicated that it was difficult to use the keyboard or mouse because of their physical disabilities. 36% of the tutors, and 38% of the

Findings

instructors and coordinators also indicated difficulties with the keyboard and mouse for some learners with physical disabilities.

While 80% of the programs in the study use the DOS version, two instructors commented on the limitations of older computer technology. One coordinator stated the need for an updated version. Two instructors stated that because the computer is so old it, it is not inviting to use:

“Its archaic, we use it because it still works.” (instructor)

“The technology is outdated, if it was modernized it might be used more.”
(instructor)

Three programs (27%) use the Window premium version. Instructors, and coordinators in those programs stated that the screen freezes, the pull down menu is problematic, and they had trouble-shooting difficulties. One coordinator indicated that the Windows version is too complex, and that it is not easy to install on other computers.

“Make it easier to transfer to other computers, even our Information Technology people have difficulty. If there is a problem with SARAW, if it breaks down it is very hard to fix because there isn’t anyone who know about it.” (coordinator)

Three instructors and coordinators indicated a need for contact between literacy programs using SARAW and the Neil Squire Society:

“Neil Squire needs to let people know about the advantages of the new versions, and how to get them up and running, need to get regular updates from Neil Squire and keep regular contact for being informed about updated versions and to answer questions. Could get once a year newsletter and be connected through email.”
(coordinator)

“Would like periodic updates on the program, at one time we got information about SARAW but never received anything for a while” (instructor)

“It would be good to know where to get help when we have problems with SARAW, right now we don’t know where to get help for technical problems.”
(coordinator)

Other suggestions to improve learner use of SARAW by tutors, instructors and coordinators are: build in a plain language dictionary, include more instructions on the computer to support independent learning; expand literacy levels below grade 2 and above grade 7, and remove repeat letter when key held down.

Despite the barriers and challenges 92% of the participants are satisfied with SARAW and liked the programs they are in. However addressing the challenges and reducing the barriers experienced by learners can only improve the learning situation for all involved.

• Measuring Progress and Celebrating Achievement

Along with literacy level assessment when learners enter (and to a lesser degree exit) the programs, assessing learning while learners were in the programs was part of ongoing support, encouragement and feedback between learners and tutors and instructors. Measuring progress in many programs was a shared activity, and most learners were aware that they were improving or maintaining their reading and writing.

Of 20 learners 70% commented on how they like to learn. Six learners indicated that they like to learn by listening. Other ways of learning noted by learners were reading, watching, and computers. Participants indicated that they like when learning was fun and engaging. One learner sees learning and coming to school as one:

“I like working with my tutor, she’s fun. I write to my mom. Like coming to school.”

Along with ways learners like to learn, they spoke about how they know they are learning. Of 20 learners 14 commented on how they knew they had improved in reading, writing, and spelling. Of 14 learners 79% stated that they had improved in reading; 64% stated that they had improved in writing and spelling. Of seven learners 50% indicated they had improved in math.

Learners indicated they knew they had improved because they can read their own stories better, writing has become easier, they are reading more things such as newspapers and books, and they are recognizing words easier. Other indicators of improvement that learners noted are: being able to spell more, write their address, realize that they are writing more often and sounding out words was easier. Learner statements about improvement are:

“Sometimes I surprise myself and see a difference with harder reading.”

“I know letters now.”

“I am reading more things, reading the weather in the newspaper.”

“My writing is neat, getting better.”

“In my journal I can write all I want.”

“The more I write the more I learn how to spell. The more I think the less mistakes I make.”

One learner had begun writing grocery lists, and another noticed that she is writing better on the SARAW computer in class and on her computer at home. Many learners expressed self-confidence when showing their writing to others, including showing their work and achievements to the survey researcher.

Most tutors and instructors and coordinators also commented on how learners know they had improved. Some noted that when learners realize that are getting better, they gain confidence. Learners felt proud when they spell, read, or write a word correctly.

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Tutors, instructors and coordinators also noted that learners demonstrate improved self-confidence when showing their work to other learners, family and friends, and helping each other and giving each other positive feedback.

“All of a sudden you can see the difference, it’s not a struggle to figure out the little things any more.” (tutor)

“[Learners] know themselves that they are getting better, things are easier for them.” (coordinator)

Tutors, instructors and coordinators describe how they inform learners that they are improving, such as going over previous work to show improvement. Instructors and coordinators indicated that they use a shared assessment approach when reviewing portfolios and reviewing the learning goal with learners.

From time to time some learners may experience a plateau in their learning. Plateau of learning progress is when there is no indication of further or continual learning. Of 24 tutors, instructors and coordinators 73% indicated that they have worked with learners who have experienced a plateau in their progress. When this happens tutors tend to seek practical options for learners such as using other materials, activities, computer programs, or SARAW functions. Tutors also seek training for practical teaching solutions. Coordinators and instructors indicated that when learners plateau they tend to assess, and at times move learner onto another level or exit the program.

Some instructors, coordinators and tutors indicated that they also use repetition and work on maintaining literacy skills, for some learners this was case. Interestingly 27% stated that they don’t think learners plateau.

“I don’t think a [learner’s] learning ever plateaus.” (instructor)

While there are different viewpoints among tutors, instructors and coordinators about when and if learners plateau, trying different activities and learning materials was a frequent response particularly by tutors. Some tutors and instructors identified factors that can influence a learner’s progress such as the pace of learning, and individual interest. For some learners maintaining their literacy skills is the learning goal and plan.

Celebrating learning was part of every program. Celebrations were identified as events such as class parties and ceremonies, going out for lunch or supper with the tutor, getting feedback, and credits and transcripts.

Of 14 learners who responded to questions about celebrating learning 36% indicate that they celebrate their achievements with special events such as class parties at the end of the year and at Christmas, and presentations where they read their stories and receive certificates and their family and friends are present. Of 21 tutors, 53% instructors and coordinators indicated that learner achievement was recognized through year-end ceremonies with most including a certificate for completion, attendance, and graduation. Celebration events were noted as year-end and Christmas

parties, barbeques, literacy parties and recognition day. Some examples of statement about celebrating achievement are:

“Certificate at the end of the year, [learner] has all of them on wall at home.”
(tutor)

“Read stories to audience, read stories that I wrote about my brother.” (learner)

“Year-end party and Christmas party, its fun and [learners] meet each other.”
(coordinator)

Another 36% of 14 learners indicated that they celebrate how well they are doing by going out for lunch, coffee, dinner, shopping or to the theatre and 18% of 11 tutors indicated that they recognize learner achievement by going out for coffee or do something different. 14% learners stated that sometimes they have a break from their regular work to watch a movie.

“Having a break from your normal work.” (learner)

Along with breaks from routine the survey participants viewed verbal praise as celebrating learner achievements. Two instructors in college programs stated that learners receive transcripts or credits. In one programs learner receive a grade on “in progress” and when they have reached the level to enter basic education programs they receive a “pass”.

Suggestions from tutors to further recognize learner achievement are:

- Have the year end party outside of work time so working learners can attend
- Include on the certificates what learners have learned
- For programs in colleges learners can get a student card.

3.6 Applying learning to daily life

Learners spoke about their interesting and full lives, many indicated that they live independently, some stated they live in supported housing, some live in nursing homes, and one learner lives in a residential institution with the program on site. Many learners have jobs, some have children, and some volunteer. Many indicated that they have good friends in the program.

While the survey did not extensively investigate learners’ lives outside of the program, a number of learners spoke about family, friends, work and their community, particularly how being in the program has helped them as an employee, a parent, a friend, and a community member. Comments from learners about how their literacy learning has impacted their lives:

“Doing things more for myself, being more independent. My roommates think I’m doing okay, they like it when I come home with certificates.”

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“Do price checking at work, feel more confident at work. My boss at work has noticed I can do more at work, changes at home too.”

“Reading to my children at night, glad to be at this program and hope to be here for a long time.”

“Can use my voice machine much better now.”

“At work I can find things better because I can find the word on the package or box. My boss has noticed I can read better. When I am grocery shopping I can see the words easier.”

“Write a letter to a friend, printed it, mailed it and heard back from my friend, it was great.”

Of the 17 learners that responded seven indicated that their literacy learning is helping them at work, including being able to read labels on food packages, and able to read numbers better for things such as price checking. Two learners said being in the program is helping them keep their job. Four learners indicated that they feel more independent and have increased confidence, including the ability to do public speaking. Two learners said they are better at reading flyers and buying groceries because they can read better. Six learners said they read more at home, in particular they can read their mail better, read what is on TV better, read more books, and read to their children. One learner is now able to use her communication box better. Three learners said that others have noticed improvements including their bosses at work and roommates at home.

Of 20 learners 57% of learners indicated that they plan to take another literacy or learning program when they finish. Some stated that they would like to stay in the current program for a long time. Of those that indicated that they will take another program, 44% intend to go to a community based literacy program, 33% stated that they would like to take an Adult Basic Education (ABE) course at a college, and 22% stated other, such as an art class or computer class.

4. Case Studies

The intent of including case studies is to provide a descriptive picture of a typical day in two different programs. One program is a stand-alone, with the SARAW computer being used by all the learners. In the other program the SARAW computer is used by less than half of the learners. Both programs are exemplary examples of practicing adult learning principles. Learners who participated in the survey from these programs spoke highly of their experiences, and some indicated that coming to these programs is the best part of their week.

- **Bow Valley College**

The SARAW program is located in a small comfortable classroom at Bow Valley College in Calgary, Alberta. The classroom has two computers with SARAW. One has the original DOS version, and the other has Windows Premium version. SAM (Speech Assisted Math) is also on the computer with the DOS version of SARAW. The walls are decorated with information, picture posters, and one wall is designated as the learner wall. On this wall learners have their photos and a short introduction written by each learner. Another wall is called the communication wall and is used by the coordinator to keep in touch with tutors and learners. There are two tables and a few chairs for learners and tutors to work on other materials found on a well-stocked bookshelf of easy to read novels, workbooks, picture dictionaries, manuals and binders with work sheets on a range of daily living topics, math and currency tools, and learning games. The room is set up with plenty of space for wheelchairs.

The Bow Valley College SARAW program is a stand-alone and a community based literacy program. It is a non-credit program that is open 6 days a week year round but follows the semester cycles of the College. It is closed on Sundays and statutory holidays. Managed by a part-time coordinator the program is structured as a one-one tutor-learner program, with some tutors working with 2 or 3 learners at once. Currently there are 20 tutors working with 28 learners.

A typical day in the SARAW program sees a number of learner-tutor pairs (or groups) in the classroom for approximately 2 hours. Most learner-tutor matches are one-to-one, although there is one tutor working with up to three learners in the classroom at one time. Most learners come once a week, with a few able to come twice a week. At times the coordinator will pop into the classroom just to say hello or to convey some particular information to a learner and tutor. The day might also include a scheduled hands-on training with a rehabilitation literacy specialist who would spend approximately one hour with learner and tutor to help them learn strategies to strengthen their efforts on literacy skills development.

Learners in the SARAW program stated that they really like coming to the college, and tutors mentioned that being part of the college community is very important to learners. As many of the tutors are the learner's support workers, they spend a lot of

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time together, and many indicated that coming to the SARAW program at the college was one of the most valuable events of the week for both the learner and tutor.

“I like coming to school.” (learner)

“[learner] is coming to the college three days a week and is being introduced to the community which never had until 2 years ago.” (tutor)

“We are in the college a lot, it’s a big part of our week, we are all over the city, but this is the favourite part, at the college.” (tutor)

Tutors encourage and support independent efforts by learners from turning on the SARAW computer to navigating through the steps to bring up the component that the learner wants to work on. An example is one learner who likes playing Mystery Word has learned how to start the computer and open this component. The tutor asks if the learner wants to begin with the easy level or a harder level on Mystery Word. Many of the learners use the writing component to create their own stories using a Language Experience Approach. This approach is used with almost all of the learners.

There is strong commitment to, and respect for learners that is demonstrated by tutors and coordinator. The relationship between tutor and learner is vital in this program, as it is structured as a one-to-one tutoring program.

• **Thames Valley District School Board Literacy Program**

This Literacy Program is offered in partnership with the Woodstock District Developmental Services (WDDS), which has a number of programs including Arc Industries, an on-site employment program, Job Links, an in the community employment program and other programs. WDDS has a welcoming and friendly atmosphere. The literacy program is open from 9:00 am to 3:00 pm Monday to Friday.

The literacy program, or the literacy classroom as learners call it is an enclosed large room located in the centre of the Arc Industries section of WDDS, and is connected to the administration area, the workshop and cafeteria. Some of the learners work at Arc Industries, and others have jobs in the community. The SARAW computer is currently used by approximately 12 of the 28 learners in the program. The classroom has one full-time instructor, about three tutors, and one practicum student. Other volunteers help with special events such as celebrations. Learners attend the program on a part-time basis and each learner has their own schedule and attends the literacy program one or two days per week.

The literacy classroom has one SARAW computer with the original version of DOS. The classroom is a large almost square shaped room and has approximately 12 computers along two walls, and a large table in the centre, which seats approximately 8-10 individuals. The instructor has a desk in one corner, which also has the only computer linked to the Internet. Some learners access the Internet there. There are

tables along another wall with workbooks and a variety of reading books, many are easy to read. Also on the tables are math and currency tools, and other materials. The room is decorated with learners work on the walls, and photos and newspaper articles of events celebrating learners' projects and work such as creating a cookbook and one learner's award for public presentations of his story.

Learners use the other computers for various activities, including a basic math program, and games such as wheel of fortune. One learner uses a chapter on floppy disc from the Companion to SARAW. Learners have binders for their work, which includes their learning goals.

A typical day in the literacy classroom begins at 9:00 am, with learners choosing an individual activity. For those learners working on SARAW, some will work together using a peer learning approach, or if a tutor is available the tutor will work with a learner. The class chooses a letter every day to build key words, sentences and stories from, and some learners use SARAW to help them find words beginning with the letter of the day, and then work on writing sentences with that word in it. Depending on individual learners, some will practice spelling those words and others will use the words to develop sentences. The instructor will write the letter and words on a flip chart and the learners will choose how they will incorporate the letter and words into their work.

The day is organized for both individual learning time (with or without a tutor), and for group work. Most learners come to the program for the morning or afternoon, as many of the learners have jobs and spend only part of the day in the class. On average learners are in the classroom 2-4 days per week, depending on their life and work schedule. Although many learners work independently and with tutors, the predominance of supportive peer relationships contributes greatly to the learning environment. Some comments about the learning environment are:

“Can learn more on a personal basis in this room.” (learner)

“The sense of community is what students like.” (instructor)

This program involves a number of group activities led by the instructor. One project was the creation of a cookbook by learners, they also planned a launch celebration, which had all the dishes in the cookbook available for friends and visitors to test. They also used this cookbook as a fundraiser for a local charity. Another project was an exercise activity. A group of learners participated in an initiative by a national magazine, which involved tracking the number of kilometers walked and entering them into the magazine website.

On the first day of the researcher's visit, there was a celebration of the learners' writing achievements. With the guidance of the instructor and support of tutors most of the learners participated in a public presentation entitled “Someone who made a

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Difference in my Life”. Learners presented their writing to this special person, and friends and family were invited. Learners used public speaking and reading skills in this powerful event that celebrated care, courage, and friendship. Some of the learners had prepared their speech/dedication on SARAW.

Learners also use the Language Experience Approach to develop their reading and writing skills. Many learners using SARAW have their own stories on the computer. One learner spoke about reading his story to a large audience and winning an award for it:

“So far I just wrote one story and I won an award and went to Toronto to tell my story in front of 300 people.”

Learners in the program spend some of their time on the different computers, including SARAW, and some of the time working on paper, workbooks or with math manipulatives. The instructor mostly works with learners as a group, and the tutor spends more time working one-on-one with learners both on SARAW and other activities. Their approach is encouragement, patience, and positive communication. The rehabilitation organization, which houses the program is very supportive. At three o’clock the learners leave the classroom, some reluctantly as they feel being in the program is the highlight of their week.

5. Conclusion and Recommendations

Based on the data analysis of the participant responses, conversations and observations in the case studies, the SARAW computer is an effective learning tool for learners with disabilities. Much of this is due to the effort and commitment of the learners and their tutors, instructors and coordinators. Their respectful and cooperative interactions while using SARAW and other learning materials and tools greatly contribute to the positive experiences indicated by learners in the survey. Learners expressed how much they liked their tutors and instructors, and how much they liked working with others.

Although SARAW was initially developed for adults with severe physical disabilities, this survey found that it is also an appropriate tool for adults with intellectual disabilities and ESL. Learners enjoyed using SARAW, and many indicated that they knew their reading and writing is improving. While the SARAW computer is dated (DOS version) it has had a notable positive impact on learners' literacy skill development and self-confidence. Significant factors contributing to learners' experiences on SARAW and in the program include:

- Respectful, professional and caring relationships among learners, tutors, instructors and program coordinators greatly contribute to positive learning experiences.
- Adult learning principles are applied on an individual basis and group basis, including incorporating learner's life experiences, learner involvement in learning goal planning, the presence of a spirit of collaboration, and self-directed learning.
- Having a variety of learning materials and tools for learners to choose from supports self-directed learning.
- Accommodations for learners with disabilities, specifically having a support person assist with accessibility to the program, as well as the support person engaging in the learning process strongly contributed to the learning experience.
- A participatory approach to assessment increases awareness of learner's achievements, and contributes to learner's self-confidence.
- Celebrations and recognition of achievement through feedback, events and certificates is important to the learners.
- The program is affordable, either there is no fee or bursaries and grants are available.
- Instructors and program coordinators are qualified for their roles.
- Tutors bring important skills and experience to the program, including respect for others, patience, value learning, skills and have experience in education, disabilities and computer technology.
- Tutors receive initial training, and access to the program coordinator or instructor for information and support.
- Many programs have partnerships with host organizations, community organizations and services, and local funders.

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Challenges and barriers experienced by learners in the programs include:

- Lack of information about where to find assistive technology and adaptive devices for the SARAW computer.
- Transportation difficulties with handi-bus services.
- Limited time on the SARAW computer, partly due to scheduling of program and learner's personal and work commitments, and partly due to limited number of tutors.
- Out dated computer that SARAW is on (DOS version).
- Technical problems with the Windows version of SARAW, such as screen freezing.
- Lack of information about where to find technical support for maintaining SARAW.

The intent of the SARAW survey is to learn about different delivery models and educational settings where adult with disabilities use SARAW to help them develop and strengthen reading and writing skills. Most of the programs using SARAW are community based literacy programs and are located either in a community literacy organization, rehabilitation organization, or a college. Most programs are using the original DOS version, and the learning environment is mostly in a classroom setting where learners work (one-to-one) with tutors and other learners. The delivery models of the programs in the survey are based on a learner-centred approach, which incorporates self-directed learning, adult learning principles, relevant learning activities and materials to every day living, and accommodations for accessibility. Although much work is needed to increase accessible literacy programs for adults with disabilities, the programs in this survey demonstrate effective literacy practices

Recommendations

While there are some limitations with the SARAW computer, it is clear that the SARAW computer is an effective tool for adults with disabilities to develop, strengthen and maintain their literacy skills. Based on the findings in the survey and related studies on literacy and disabilities the following recommendations are suggested to advance literacy programming for adults with disabilities:

- Have more SARAW computers in literacy programs where there is demand for use by learners to meet the need for more time so that learners can work on the computer.
- Neil Squire Society to provide information on assistive devices and adaptive technology for SARAW, particularly adaptive devices for keyboard and mouse (e.g. key guard, alphabetical keyboard, larger rolling ball mouse).
- Correct problems with the Windows Premium version, particularly the pull down window problem and program freezing problem.
- Include more instructions on SARAW for learners to work more independently on the computer.

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- Make it easier to install the DOS and Window Premium versions onto computers.
- Neil Squire Society to communicate on a regular basis with programs about technical and other information for SARAW maintenance and troubleshooting.
- Expand SARAW to lower than grade 2 and higher than grade 7 levels.
- Have more stories in the reading component and relate them to everyday life.
- Have more programs funded to support learners with having a SARAW computer in their home (currently there is only program with this option).
- Increase tutor training, including more professional development opportunities.

Not enough people with disabilities know about literacy programs, and not enough literacy programs know about SARAW and how to support learners with disabilities. While there have been some strides made in making literacy programs more accessible, and increasingly best practices in literacy programs for adults with disabilities are being identified⁵, adults with disabilities with low literacy continue struggle to find accessible programs. Macht offered 13 recommendations in the report “Literacy and Disabilities” (2000), which continue to be applicable today. Ten of those 13 recommendations⁶ relate directly to the findings in the SARAW survey:

- Stakeholders in British Columbia [and across Canada] should articulate a goal to have all literacy programs in the province be fully accessible and inclusive.
- People with disabilities who are participants or potential participants in literacy programs should be consulted to determine their needs.
- Linkages between disability groups and literacy groups should be established at the program level.
- Literacy programs should ensure that their volunteers are fully aware of and trained to deal with issues presented by students with disabilities.
- Disability organizations should make an effort to recruit and train their own literacy volunteers.
- A credential system should be developed for literacy instructors, especially volunteers, that recognizes practitioners working in the various areas of disabilities.
- Efforts should be made to increase the use of computers in adult literacy programs.
- A comprehensive directory of all disability related literacy programs should be compiled. CAILC has developed a website: and is listing literacy programs for adults with disabilities, www.nald.ca/lil/english/litinfo.htm

⁵ Literacy Ontario. (1998) *Best Practices in Literacy for Adults with Developmental Disabilities*. Ministry of Education and Training. Toronto. Found at: <http://www.edu.gov.on.ca/eng/training/literacy/practice/practice.pdf>

⁶ Excerpt from Macht, J. (2000). *Literacy and Disability*. Persons with Disabilities Advisory Committee, BC. P. 2. Found at: www.nald.ca/fulltext/litdis/cover.htm

Conclusion and Recommendations

- A best practice inventory of literacy programs for people with disabilities should be developed. The guide “It Gets In Your Brain: Effective Practices in Adult Literacy using SARAW with People with Disabilities” contributes to the development of a best practices inventory.
www.nald.ca/fulltext/study/practice/guide.pdf
- 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.

Using the SARAW computer in literacy programs is one way to effectively respond to the need to increase literacy programs that are accessible for people with a wide range of disabilities. The SARAW computer, even with its limitations, is a valuable tool for adults with disabilities to develop, improve and maintain their literacy.

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Appendices

a. Literacy and Disabilities

Movement for Canadian Literacy

Literacy and Disabilities

Despite rapid advances in technology and learning tools, people with disabilities are still being left behind on their journey towards literacy.ⁱ

Literacy rates among people with disabilities in Canada

Statistics on the literacy rates among people with disabilities is limited. While there are some statistics on disabilities and some on adult literacy, there is a need for further research on literacy rates among people with disabilities.

- One in seven (3.4 million) Canadians aged 15 years and over has a disability.ⁱⁱ The rate is even higher among Aboriginal peoples. One in five (20%) Aboriginal peoples aged 15 years and older have a disability.ⁱⁱⁱ Women are more likely to have a disability than men^{iv}.
- Approximately 50% of Canadian adults with disabilities experience literacy barriers.ⁱⁱⁱ Literacy barriers can include print or verbal: unnecessary words, small or congested fonts, complicated or professional jargon, acronyms, and access to information or services only through websites.
- 20% of adults with disabilities have less than a grade 9 education, as compared to 8.1% of adults without a disability who have less than a grade 9 education.ⁱⁱⁱ
- 50% of adults with disabilities have an annual income of less than \$15,000.ⁱⁱⁱ Nearly 50% of adults with limited literacy live in low-income households.^v Only 56% of people with disabilities are employed, and most are working in low paying jobs.^{vi}
- People with disabilities make up a disproportionate amount of the 42% of Canadian adults who function at the two lowest literacy levels.^{vii}

Literacy needs among people with disabilities

The best way to understand the literacy needs of people with disabilities is to listen. Listening to individuals with disabilities, as well as organizations that represent them can help everyone to understand the relationship between literacy and disabilities. Here is what we currently know:

- All national surveys on either literacy or disabilities have identified that people with disabilities are disadvantaged when accessing education, employment, housing, and other community services.ⁱⁱⁱ
- There is a wide range of disabilities (physical, intellectual, visual, hearing, psychiatric, and learning). The severity and type of disability has different degrees of impact on an individual's literacy.^{vi}
- There is a serious lack of public awareness about adult literacy and disabilities.^{vii} Stereotyping and assumptions about the capacity of people with disabilities to learn and to work are harsh social barriers.
- Many mainstream literacy programs do not have the skills or resources to accommodate people with disabilities^{viii}

Appendices

- Aboriginal people with disabilities are more likely to have low literacy and experience systemic racism, which impedes accessibility to community services including literacy programs.^{iii ix}
- *Note: In this fact sheet, we refer to disabilities that are physical, intellectual, visual, psychiatric and/or hearing-related. Information on learning disabilities is contained in another MCL fact sheet.*

What can be done?

To build a society that values inclusion it is important to challenge the assumption that literacy is only reading and writing on paper. There are multiple literacies and multiple ways of communicating. The disabilities communities define literacy from an inclusive perspective which includes sign language, Bliss symbols, Braille symbols, adaptive communication devices, gestures and sounds. Here are some ways to help make Canada a society that truly includes everyone:

- Support people with disabilities to voice their ideas and needs about literacy and life long learning. Individuals involved in disabilities organizations can initiate conversations with each other about local literacy or continuing education programs, and find out what courses or programs accommodate people with disabilities.
- Build and strengthen relationships and partnerships between literacy programs and community disabilities programs. Develop training for staff and volunteers to learn about current issues in literacy and disabilities and to develop strategies to reduce barriers.
- Community disabilities programs can increase their awareness of literacy and incorporate plain language strategies and literacy related activities into their programs and services. Some disabilities organizations have written their by-laws and policies in plain language.
- Adult literacy programs can increase their accommodations for people with disabilities. This includes staff and tutor training about disabilities, physical setting, assistive technologies and adaptive devices, inclusion of support person(s), flexible learning timelines, and appropriate assessment tools.
- Family literacy programs can provide accommodations for families with children and/or parents with disabilities that will improve accessibility and participation. Examples of programs that have an inclusive approach are Rhymes that Bind and Books for Babies.
- Challenge current practices and policies that perpetuate the myth of “train the best and leave the rest”^{vi} way of thinking. While literacy is important for employment, improving one’s reading and writing skills is also important for family and community participation. Literacy programs that accommodate students with developmental disabilities found that most students experienced increased self-confidence, willingness to take risks, and greater awareness of their own learning.^x
- Develop knowledge to better understand the complex relationship between literacy and disabilities.
- Create funding and policies that include literacy and numeracy provision for people with disabilities as per recommendations 14, 15 and 16 in the 2003 *Report of the Standing Committee on Human Resources Development and the Status of Persons with Disabilities*.

Suggested *Literacy and Disabilities* Resources

EnableLink. Online resource for disabilities communities by the Canadian Abilities Foundation. <http://www.enablelink.org/>

Literacy for Independent Living. On-line resource for the literacy and disabilities communities, by the Canadian Association of Independent Living Centres (CAILC). <http://www.nald.ca/ava/english/textonly/aboutTO.htm>.

National Adult Literacy Database. The National Adult Literacy Database (NALD) has a growing collection of online resources and links for literacy and disabilities. http://www.nald.ca/fulltext/search/search_results.asp?oid=1&search_string=22&language_type=1&search_type=6

Neil Squire Society provides education, technology and career development for people with physical disabilities, including programs such as Speech Assisted Reading and Writing, Access to Literacy, Computer Comfort and Educational Options. <http://www.neilsquire.ca>.

Raising Adult Literacy Skills: The Need for a Pan-Canadian Response. Report of the Standing Committee on Human Resources Development and the Status of Persons with Disabilities, 2003. <http://www.parl.gc.ca/InfoComDoc/37/2/HUMA/Studies/Reports/humarp03-e.htm>.

Roeher Institute has resources and research on literacy and intellectual disabilities. <http://www.roeher.ca>.

Visunet is the CNIB (Canadian National Institute for the Blind) networked library service for Canadians unable to read print. This includes an on-line library catalogue, internet and telephone access to daily newspapers in French and English, help centre for online resources, and a full text access to electronic and digital media materials. <http://www.cnib.ca/eng/index.htm>.

Working in Literacy with Deaf and Hard of Hearing Adults. A report on the importance of making adult literacy programs accessible to deaf, deaf-blind and hearing-impaired people. Louise Ford and Cheryl Wilson-Lum, Literacy Programme, Capital Region Centre for the Hearing Impaired, 1993. <http://www.ottawadeafcentre.org>.

i Literacy for Independent Living-Canadian Association for Independent Living Centres, 2003.

www.nald.ca/lil/english/litinfo.htm

ii Statistics Canada (2003). Participant and Activity Limitation Survey: A profile of disability in Canada, 2001. The Daily. December 3, 2003. Ottawa. www.statcan.ca/Daily/English/021203/d021203a.htm

iii Rioux, M., Zubrow, E., Stutt Bunch, M., Miller, W. (2003). Atlas of Literacy and Disability. Canadian Abilities Foundation. Toronto. www.abilities.ca

iv Social Development Canada (2004). Advancing the inclusion of persons with disabilities. Ottawa. <http://www.sdc.gc.ca/en/hip/odi/documents/advancingInclusion04/summary.pdf>

v Shalla, V. & Schellenberg, G. (1998). The Value of Words: Literacy and Economic Security in Canada. Ottawa, Ontario: Ministry of Industry. <http://www.statcan.ca/english/freepub/89-552-MIE/89-552-MIE3.pdf>

vi Macht, J. (2000). Literacy and Disability. Persons with Disabilities Advisory Committee, BC. www.nald.ca/fulltext/litdis/cover.htm

vii Kapsalis, C. (1999). The Effect of Disability on Literacy Skills. (Data Probe Economic Consulting Inc.) Nepean.

viii Sussman, S. (2003) Moving the Markers. New Perspectives on Adult Literacy Rates in Canada. Movement for Canadian Literacy. Ottawa. <http://www.literacy.ca/public/moving/moving.pdf>

ix St. Denis, V. and Hampton, E. (2002). Literature Review on Racism and the Effects on Aboriginal Education. Indian and Northern Affairs. Ottawa. http://www.ainc-inac.gc.ca/pr/pub/krw/rac_e.pdf

x Sanders, M. (1991) Meeting Challenges: A literacy project for adults with developmental disabilities. Prospects Adult Literacy Association. Edmonton

b. Learner Questionnaire

LADS Student Questionnaire SARAW

Note to Researcher:

Due to the diversity of students in various programs, the interview can be adapted to best suit the student's way of communicating:

Options to conduct the interview:

- On-site:
 - Introduction and warm up conversation to establish rapport and comfort for the student.
 - Ask or assess how to best conduct the interview:
 - Linear question and response - follow the questionnaire in correct order, or:
 - Conversational - follow the student's lead in natural flow of the conversation. If you choose this way use the questionnaire as a guide to ask questions, and suggest to the student to show you how s/he uses the computer
- Phone:
 - Introduction and warm up conversation to establish rapport and comfort for the student.
 - Ask or assess how to best conduct the interview:
 - Linear question and response - follow the questionnaire in correct order, or:
 - Conversational - follow the student's lead in natural flow of the conversation. If you choose this way use the questionnaire as a guide to ask questions.

Interview Option: _____

Notes: _____

Section B: Software Program Features:

(Circle all responses)

B1) What do you like about the SARAW computer?

- 1) Writing
- 2) Reading
- 3) Spelling
- 4) The computer speaks
- 5) Mystery Word game
- 6) Word Pattern games
- 7) Sounding Board
- 8) Other (please specify) _____

B2) What do you do the most on the SARAW computer?

- 1) Writing
- 2) Reading
- 3) Spelling
- 5) Mystery Word game
- 6) Word Pattern games
- 7) Sounding Board

B4) Between the time you started using the SARAW computer, what have you gotten better at?

- 1) Writing
- 2) Reading
- 3) Spelling
- 4) Can say (sound out) words better
- 5) Feel better about myself
- 6) Other 1: _____
- 7) Other 2: _____

Section H: Opinions and Attitudes of Students

H1) Why do you use SARAW

- 1) To learn to spell (better)
- 2) To learn to read (better)
- 3) To learn to write (better)
- 4) To become more independent
- 5) To keep up your reading and writing skills
- 6) Other1 _____
- 7) Other 2 _____

H2) Is it fun to use SARAW?

- 0) NO
- 1) YES

Appendices

(If NO skip to H4)

H3) If yes please specify why?

H4) If no please specify why

H5) Can you tell me about one time when you felt really good using the SARAW computer?

Section F: Teaching and Learning Strategies

F1) Do you use other things to help you learn (for example worksheets, internet)?

0) NO

1) YES

(If NO, skip to question F4)

F2) What other things are you using as well as the SARAW computer?

	NO	YES
1) Companion to SARAW: exercise workbook	0	1
2) Printed exercises	0	1
3) Internet	0	1
4) Speech Assisted Math (SAM) Program	0	1
5) Other 1		

Please specify: _____

6) Other 2

Please specify: _____

7) Other 3

Please specify: _____

F3) Which ones do you think help you the most?

1) Companion to SARAW: exercise workbook

2) Printed exercises

3) Internet

4) Speech Assisted Math (SAM) Program

5) Other 1

Please specify: _____

6) Other 2

Please specify: _____

7) Other 3

Please specify: _____

F4) How do you like to learn? Why?

F5) How does your tutor/instructor help you? Please specify.

Section G: Learning Environment

G4) Do you like the room that the SARAW computer is in?

- 0) NO
- 1) YES

(if no go to questions G6)

G5) If yes, what do you like about the room?

G6) These next questions are about some things that might make it hard for your to use the SARAW computer.

Is it hard:

- | | | |
|-----|----|---|
| YES | NO | 1) To use the computer because it does not have special parts (assistive technology) to make it easy to use |
| YES | NO | 2) To get the time that works for you to use the SARAW computer |
| YES | NO | 3) To get from your house to the program
Please specify barrier _____ |
| YES | NO | 4) To work in the room
Please specify _____ |
| YES | NO | 5) Because your tutor/instructor is not helpful
Please specify _____ |
| YES | NO | 6) Because the program or course is too expensive to keep going
Please specify _____ |
| YES | NO | 7) Other reasons
Please specify _____ |

Section L: Student Assessment and Evaluation

L1) How do you know when your have gotten better at:

- 1) Reading
- 2) Writing
- 3) Spelling
- 4) Math (if applicable)

L2) What kinds of things do you and your tutor/instructor do to celebrate how well you are doing?

Section D: Previous Literacy Programs Experience

D1) Have you gone to other adult literacy programs?

- 0) NO
- 1) YES

(If the answer is NO, skip to question D6.)

Appendices

D2) What kind of program?

- 1) One-one with a tutor
- 2) Classroom with an instructor
- 3) Drop-in class
- 4) Other _____

D3) Did it help you with reading and writing (and math if applicable)?

- 0) NO
 - 1) YES
- (If the answer is yes, skip to D5)

D5) Why did you leave the other literacy programs?

- 1) Too hard to keep up with the work
- 2) Hard to get to there
- 3) Could not go because you got sick
- 4) Didn't get enough help from the tutor or instructor
- 5) It cost too much
- 6) Other _____

(Skip to question next section)

D6) If you have NOT attended another literacy program, can you tell us why?

- 1) I did not know about that it was available to me
- 2) I did not have the opportunity
- 3) Did not have the funding
- 4) Other (please specify) _____

Section E: Future Literacy and Adult Education programs

E1) Do plan to take another course or to go on to another literacy program after you finish?

- 0) NO
- 1) YES

(If the answer is NO, skip to question E3)

E2) If yes what course or program?

- 1) Community-based literacy program
- 2) Adult basic education program at a college
- 3) Other (please specify) _____

E4) Now that you can read and write better, how do you use your new skills at home or at work?

Section N: Overall Impression Follow up

N1) Now that you have had a chance to think about the SARAW program, are you happy with the SARAW program?

(1 = not happy at all, 2 = unhappy, 3 = neutral, 4 = happy, 5 = very happy)

1 2 3 4 5

N2) If you could change one thing about the SARAW computer what would that be?

c. Tutor Questionnaire

LADS – Volunteer Tutor Questionnaire - SARAW

The purpose of this research is to learn how people are using the SARAW literacy computer to assist them to develop and strengthen their literacy skills. In particular, we are interested in learning about **innovative** ways people are using the SARAW literacy computer.

What we mean by **innovative** is how people have adapted how they use the SARAW computer to best meet the needs of students, and how SARAW best fits your program

Section A: Description of SARAW computer use:

A1) Please tell me about the 'program' that the SARAW computer is in?
'Program' can mean a course, an employment program, a literacy program, etc.

Section G: Learning Environment

G7) How many students do you work with at one time?

1 ____ 2 ____ 3 ____ more than 3 ____

G2) How much time does each student spend on the computer per visit/class /session?

Duration _____ Per week _____

G1) If there is more than one student in the room at one time, do you use headphones?

- 0) NO
- 1) YES

G4) Do students like the room that the SARAW computer is in?

- 2) NO
 - 3) YES
- (if no go to questions G6)

G5) If yes, what do you think the students like about the room?

G6) What difficulties or barriers do students experience accessing SARAW?

YES	NO	1) Hard to use the computer because it does not have special parts (assistive technology) to make it easy to use
YES	NO	2) Hard to get the time that works for students to use the SARAW computer
YES	NO	3) Hard to get to the program Please specify barrier _____
YES	NO	4) Hard to work in the room Please specify _____
YES	NO	5) Not enough tutor/instructor time with each student Please specify _____
YES	NO	6) The program or course is too expensive for the student Please specify _____
YES	NO	7) Other reasons Please specify _____

Section F: Teaching and Learning Strategies

B1) There are a number of functions that SARAW has, please rate each function as it is most useful to the students?

(1 = not very useful, 2 = somewhat useful, 3 = neutral, 4 = useful, 5 = very useful)

1) Writing	1	2	3	4	5
4) Reading	1	2	3	4	5
5) Spelling	1	2	3	5	5
6) The computer speaks	1	2	3	4	5
7) Mystery Word game	1	2	3	4	5
8) Word Pattern games	1	2	3	4	5
9) Sounding Board	1	2	3	4	5
10) Other	1	2	3	4	5
(please specify) _____					

F1) Do you use other learning materials/tools/resources with students who use the SARAW computer?

- 2) NO
 - 3) YES
- (If NO, skip to question F5)

F2) Please tell me what other learning material/tools/resources the students use?

	NO	YES
1) Companion to SARAW: exercise workbook	0	1
2) Printed exercises	0	1
3) Internet	0	1
4) Speech Assisted Math (SAM) Program	0	1
5) Other 1		
Please specify: _____		
6) Other 2		
Please specify: _____		
7) Other 3		
Please specify: _____		

Appendices

- F3) What other material/tools/resources work well with students?
- 1) Companion to SARAW: exercise workbook
 - 2) Printed exercises
 - 3) Internet
 - 4 Speech Assisted Math (SAM) Program
 - 5) Other 1
Please specify: _____
 - 6) Other 2
Please specify: _____
 - 7) Other 3
Please specify: _____
- F4) If you use the internet, please tell me how the students use it?
- F5) What specific teaching methods work well for the students? Please specify why.
- F6) What is most fun about the SARAW computer for the students?
- F7) When a student's learning has plateaued or peaked what do you do?

Section L: Student Assessment, Evaluation and Range of Disabilities

- B4) Generally speaking when you think about the students that use SARAW to what degree does SARAW help them to improve?

(1 = not very much, 2 = a little, 3 = neutral, 4 = quite a bit, 5 = a lot)

1) Writing - ability to create text	1	2	3	4	5
2) Reading – ability to read and comprehend	1	2	3	4	5
3) Spelling – ability to spell words	1	2	3	4	5
4) Can sound out words better – phonetic ability	1	2	3	4	5
5) Confidence - feel better about themselves	1	2	3	4	5
6) Other 1: _____	1	2	3	4	5
7) Other 2: _____	1	2	3	4	5

- L8) How do the students know when they have improved?
-) What indicators do you use to let students know they have improved?
- L10) How is student achievement recognized?

Section H and I: Tutor Training, Recognition, and Retention

- I1) How did you learn about SARAW?
- H8) Why did you choose to be a volunteer tutor with this program?
-

H9) What knowledge and skills have you brought to your role as tutor that is helpful for the student's learning?

H1) How often do you receive training?

Frequency _____

H2) What type of training do you receive?

- 1) Initial training
- 4) Supplementary training
- 5) Other (please specify) _____
- 6) Other (please specify) _____

H3) Tell me about the types of training that is most helpful for your work with the student?

H4) What type of support do tutors receive at this program?

- 1) Access to coordinators for information, questions, problem solving
- 7) Transportation/parking costs
- 8) Flexible schedules
- 9) Professional development
- 10) Other 1 (please specify) _____
- 11) Other 2 (please specify) _____

H5) What type of recognition do you receive for volunteering?

H6) What is the most rewarding part of being a tutor?

H7) How long have you volunteered with students using the SARAW computer?

- 1) 6 months
- 2) one year
- 3) two years
- 4) more than two year (please specify) _____
- 5) Other (please specify) _____

Section N: Overall Impression

N1) Overall, what is your level of satisfaction with your experience with SARAW?

(1= not satisfied at all, 2= somewhat satisfied, 3 = neutral, 4= satisfied 5 = very satisfied)

1 2 3 4 5

Appendices

- N2) Thinking about how the SARAW computer is used in this program, are there changes that you would like to see that can improve how students use this computer?
- N3) This study is looking at how people are using the SARAW computer in innovative ways, is there anything else you would like to share about how your program uses SARAW?

d. Instructor/Coordinator Questionnaire

LADS - Coordinator/Instructor Questionnaire - SARAW

The purpose of this research is to learn how people are using the SARAW literacy computer to assist them to develop and strengthen their literacy skills. In particular, we are interested in learning about **innovative** ways people are using the SARAW literacy computer.

What we mean by **innovative** is how people have adapted how they use the SARAW computer to best meet the needs of students, and how SARAW best fits your program

Are you a: Coordinator _____ or Instructor _____

Section A: Description of SARAW computer use:

A1) Please tell me about the 'program' that the SARAW computer is in?
'Program' can mean a course, an employment program, a literacy program, etc.

Section K: Literacy Program Questions

K1) How long have you had the SARAW computer?

- 1) Less than a year _____
- 2) 1 – 3 years _____
- 3) 3 - 6 years _____
- 4) More than 6 years _____

K23) Overall how many students have used the SARAW computer?

- 1) Less than 20
- 2) 20 – 50
- 3) 50 –75
- 4) More than 75

K2) Is SARAW part of another program or is it a stand-alone program?

- 1) Stand alone
- 2) Within another program
- 3) Other (please specify) _____

K4) Is your program located in a rural or urban location?

- 1) Urban _____
- 2) Rural _____

K5) Is your program located in:

- 1) Community literacy program
- 2) College

Appendices

- 3) Rehabilitation Organization
4) Library
5) Other (please specify) _____
- K8) Do you offer SARAW at more than one location?
- 0) NO
1) YES
- K6) Do you have partnerships with agencies and organizations?
- 2) NO
3) YES
If yes: please specify type of agency/organization and partnership activity
- 1) Agency/organization: _____
Activity: _____
- 2) Agency/organization: _____
Activity: _____
- 3) Agency/organization: _____
Activity: _____
- 4) Agency/organization: _____
Activity: _____
- K11) When is the program open each week?
(check all that apply)
- 1) Monday to Friday daytime
4) Monday to Friday evenings
5) Weekends
- K18) Do you have a waiting list for people to use the SARAW computer?
- 0) NO
1) YES
(If NO, go to K 22)
- K21) On average, what is the length of time a student is on the waiting list before they enter the program?
- Duration _____
- K22) How many students who use SARAW do you serve annually?
- Number _____
- K24) How long can students remain in your program? Please specify
- 1) # months ____
2) # semesters ____
3) # years ____
4) Unlimited ____

Section G: Learning Environment

K3) How is SARAW offered?

- 1) One on one by an instructor or tutor
- 2) Small group classroom (5 or less)
- 3) Large group classroom (more than 5)
- 4) Classroom with instructor only
- 5) Classroom with instructor and tutors
- 6) Unassisted drop-in
- 7) Other _____

K9) What type of setting is the SARAW computer in?

- 1) large single use room
- 2) small single use room
- 3) large multi-use room
- 4) small multi-use room
- 5) Other (please specify) _____

K10) Is the setting private, so student can work undisturbed?

- 0) NO
- 1) YES

K13) How many workstations/computer do you have running SARAW?

Number _____

K14) How many of the computers run the older DOS version of SARAW?

Number _____

K15) How many computers also run the DOS version of SAM, Speech Assisted Math, the numeracy program?

Number _____

K16) How many computers are running the LITE version of the SARAW program for WINDOWS?

Number _____

K17) How many computers are running the PREMIUM version of the SARAW program for WINDOWS.

Number _____

G2) How much time does each student spend on the computer per visit/class /session?

Duration _____ Per week _____

Appendices

K12) What is the ratio of student to tutor or instructor?

Student/Tutor or Instructor_____

G1) If there is more than one student at one time, do you use headphones?

- 2) NO
- 3) YES

G4) Do students like the room that the SARAW computer is in?

- 11) NO
 - 12) YES
- (if no go to questions G5)

G5) If yes, what do you think the students like about the room?

G6) What difficulties or barriers do students experience accessing SARAW?

- YES NO 1) Hard to use the computer because it does not have special parts (assistive technology) to make it easy to use
- YES NO 2) Hard to get the time that works for students to use the SARAW computer
- YES NO 3) Hard to get to the program
Please specify barrier _____
- YES NO 4) Hard to work in the room
Please specify _____
- YES NO 5) Not enough tutor/instructor time with each student
Please specify _____
- YES NO 6) The program or course is too expensive for the student
Please specify _____
- YES NO 7) Other reasons
Please specify _____

Section F: Teaching and Learning Strategies

B1) There are a number of functions that SARAW has, please rate each function as it is most useful to the students?

(1 = not very useful, 2 = somewhat useful, 3 = neutral, 4 = useful, 5 = very useful)

1) Writing	1	2	3	4	5
13) Reading	1	2	3	4	5
14) Spelling	1	2	3	5	5
15) The computer speaks	1	2	3	4	5
16) Mystery Word game	1	2	3	4	5
17) Word Pattern games	1	2	3	4	5
18) Sounding Board	1	2	3	4	5
19) Other	1	2	3	4	5
(please specify)_____					

F1) Do you use other learning materials/tools/resources with students who use the SARAW computer?

12) NO

13) YES

(If NO, skip to question F5)

F2) Please tell me what other learning material/tools/resources the students use?

	NO	YES
1) Companion to SARAW: exercise workbook	0	1
2) Printed exercises	0	1
3) Internet	0	1
4 Speech Assisted Math (SAM) Program	0	1
5) Other 1 Please specify: _____		
6) Other 2 Please specify: _____		
7) Other 3 Please specify: _____		

F3) What other material/tools/resources work well with students?

1) Companion to SARAW: exercise workbook

2) Printed exercises

3) Internet

4 Speech Assisted Math (SAM) Program

5) Other 1

Please specify: _____

6) Other 2

Please specify: _____

7) Other 3

Please specify: _____

F4) If you use the internet, please tell me how the students use it?

F5) What specific teaching methods work well for the students? Please specify why.

F6) What is most fun about the SARAW computer for the students?

F7) When a student's learning has plateaued or peaked what do you do?

Section L: Student Assessment, Evaluation and Range of Disabilities

L1) What are the literacy levels of the students using SARAW?

L2) What type of assessment do you use when students enter the program?

1) Standard: (IALS, grade, Canadian Benchmark) Specify: _____

Appendices

- 14) CARA
15) Canadian Achievement Test:
16) CAB
17) Other (please specify) _____
- L3) What type of assessment do you use during the time the student is in the program?
- 1) Standard: (IALS, grade, Canadian Benchmark) _____
20) CARA
21) Canadian Achievement Test:
22) CAB
23) Other (please specify) _____
- L4) What type of student assessment do you use when a student exits the program?
- 1) Standard: (IALS, grade, Canadian Benchmark) _____
4) CARA
5) Canadian Achievement Test:
6) CAB
7) Other (please specify) _____
- K7) Do your students have: (check all that apply)
- 1) Mobility Disability
2) Cognitive Disability
3) Visual Impairment
4) Other (please specify) _____
- L5) Do you assess the level of physical disability when students enter the program?
- 5) NO
6) YES
- L6) What range of disabilities does your program accommodate?
- | | | | |
|-----------------------------|-------|----------|--------|
| A) Mobility impairment: | Mild | Moderate | Severe |
| B) Cognitive impairment: | Mild | Moderate | Severe |
| C) No Disabilities | _____ | | |
| D) Other 1 (please specify) | _____ | | |
| E) Other 2 (please specify) | _____ | | |
- L7) What range of disabilities are difficult for your program accommodate?
- | | | | |
|-----------------------------|-------|----------|--------|
| A) Mobility impairment: | Mild | Moderate | Severe |
| B) Cognitive impairment: | Mild | Moderate | Severe |
| C) No Disabilities | _____ | | |
| D) Other 1 (please specify) | _____ | | |
| E) Other 2 (please specify) | _____ | | |
- Why is it difficult?

B4) Generally speaking when you think about the students that use SARAW to what degree does SARAW help them to improve?

(1 = not very much, 2 = a little, 3 = neutral, 4 = quite a bit, 5 = a lot)

1) Writing - ability to create text	1	2	3	4	5
2) Reading – ability to read and comprehend	1	2	3	4	5
3) Spelling – ability to spell words	1	2	3	4	5
4) Can sound out words better – phonetic ability	1	2	3	4	5
5) Confidence - feel better about themselves	1	2	3	4	5
6) Other 1: _____	1	2	3	4	5
7) Other 2: _____	1	2	3	4	5

L8) How do the students know when they have improved?

L9) What indicators do you use to let students know they have improved?

L10) How is student achievement recognized?

Section C: Student Funding and Fees

C1) Are students required to pay a fee to attend the program?

- 0) NO
 - 1) YES
- (If the answer is NO, skip to next section)

C2) Is funding available for students to attend the program?

- 0) NO
 - 1) YES
- (If the answer is NO, skip to C6)

C3) What type of funding is available?

- 1) Bursary (e.g. Rotary Club)
- 2) Grant (Student Finance-government)
- 3) Loan
- 4) Other (please specify) _____

C4) What does the funding cover?

- 1) Tuition
- 2) Living Expenses
- 3) Books
- 4) School Supplies
- 5) Other (please specify): _____

C5) How do students qualify for funding?

- 1) Students need to be on social assistance

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- 2) Students need to be studying towards getting gainfully employed
3) Other (please specify) _____
- C6) How much do students pay per year or semester?

Section J: Program Funding for stand alone SARAW programs only

- J1) What percentage of the program funding comes from:
- A) Federal government _____
 - B) Provincial government _____
 - C) Granting/charitable Foundations _____
 - D) Private donations _____
 - E) In-kind contributions _____
 - F) Fundraising _____
 - G) Other (please specify) _____
- J2) What is your annual budget for the SARAW literacy program?
- A) Less than \$15,000. _____
 - B) \$30,000. - \$30,000. _____
 - C) \$30,000 – 60,000. _____
 - D) More than \$60,000. _____

Section M: Human Resources

- M1) How many paid instructors does your program have?
- Full time ____ Part time ____
- M2) How many hours per week do instructors work with students specifically on the SARAW computer? Please specify positions and their hours.
- 1) Instructor 1 _____ hours _____
 - 2) Instructor 2 _____ hours _____
- M3) How many hours per week does the program coordinator work specifically on SARAW?
- Number _____
- M5) What are the required or preferred qualifications for the coordinator position of the program?
- M6) What are the required or preferred qualifications for the instructor position?
- 1) Instructor 1
Qualifications:
 - 2) Instructor 2
Qualifications:

-
- M7) Do you have volunteer tutors working with students who use the SARAW computer?
- 0) NO
 - 1) YES
- (if no skip to section N)
- M8) What are the required or preferred qualifications or criteria for volunteer tutors?
- M9) What is the average number of volunteer tutors you usually have?
- Number _____
- M10) How many hours per week do volunteer tutor work?
- Number _____

Section H and I: Tutor Training, Recognition, and Retention

(If program does not have tutors, skip to next section)

- I1) How are tutors recruited?
- 1) volunteer centre
 - 2) newspapers
 - 3) TV advertisements
 - 4) radio advertisements
 - 5) Word of mouth
 - 7) Other (please specify) _____
- H1) How often do tutors receive training?
- Frequency _____
- Skip to H4 if the frequency is zero.)
- H2) What type of training do they receive?
- 1) Initial training
 - 24) Supplementary training
 - 25) Other (please specify) _____
 - 26) Other (please specify) _____
- H3) What do you think is the most helpful training for tutors and instructors?
- H4) What type of support do tutors receive?
- 1) Access to coordinators and instructors for information, questions, problem solving
 - 27) Transportation/parking costs
 - 28) Flexible schedules
 - 29) Professional Development

Appendices

30) Other 1 (please specify) _____

31) Other 2 (please specify) _____

H5) What type of volunteer appreciation and recognition do tutors receive?

H6) What do you think is most rewarding for tutors in this program?

H7) On average how long do the volunteer tutors stay?

1) 6 months

2) one year

3) two years

4) more than two year (please specify) _____

5) Other (please specify) _____

Section N: Overall Impression

N1) Overall, what is your level of satisfaction with your experience with SARAW?

(1= not satisfied at all, 2= somewhat satisfied, 3 = neutral, 4= satisfied 5 = very satisfied)

1 2 3 4 5

N2) Thinking about how the SARAW computer is used in your program, are there changes that you would like to see that can improve or expand how students use this computer?

N3) This study is looking at how people are using the SARAW computer in innovative ways, is there anything else you would like to share about how your program uses SARAW

e. Programs Participating in the SARAW Survey

Program Name	Address	Phone	Type
Literary and Basic Skills Program, Hamilton-Wentworth District School Board	Hamilton Association of Community Living 191 York Blvd. Hamilton, ON. L8R 1Y6	905-528-0281 ext. 256	Community based literacy
Foundations for Independent Living	Capilano College 2055 Purcell Way, North Vancouver BC V7J 3H5	604-986-1911 ext. 2588	Adult Basic Education
College and University Preparatory (Upgrading) Program	Lethbridge Community College, Tabor Campus 5302-48 Street, Tabor, AB T1G 1E8	403-223-1045	Adult Basic Education
Individual Support Program	Network South Enterprises Inc. 188 Goulet Street, Winnipeg, MN R2H 0R8	204-474-1959	Individual Support
Pincher Creek READ\WRITE Literacy Program	Pincher Creek READ\WRITE Box 1206, Pincher Creek, AB T0K-1W0	403-627-4478	Community based literacy
Literacy Program	Rehabilitation Society of Calgary 7 - 11 th Street NE Calgary, AB T2E 4Z2	403-263-8341	Membership
The Learning Centre	Rideau Regional Centre Ministry of Communtiy and Family Services Box 2000, Smith Falls, ON K7A 4T7	613-284-0123	Residential
SARAW Program	Bow Valley College 332 – 6 Avenue, SE Calgary, AB, T2G 4S6	403-420-1503	Community based literacy
Literacy Basic Skills: Access for Success	Humber College South Campus Room B1093199 Lakeshore Blvd. West Toronto ON M8V 1K8	416-675-3111 Ext. 3277	Adult Basic Education
Literacy and Basic Skills Program, Thames Valley District School Board	Woodstock and District Development Services 212 Bysham Park Drive Woodstock ON N4T 1R2	519-539-7447	Community based literacy
One-on-one Tutoring	Tri-County Literacy Council 101 Second Street West Cornwall, ON, K6J 1G4	613-932-7161	Community Based literacy

f. Grouped Data

	Topic/Theme	QUALITATIVE	QUANTITATIVE
1	Program funding	J1 J2 Funding K6-2,-3 Partnership agency, activities	
2	Location and type		K2 Stand alone or part K4 Location K5 Program location K8 More than one location Excel C. Program type
3	Length of time and # learners		K1 Length of program K23 Total # of students K2 Stand alone or part
4	Learner number and program type		K2 Stand alone or part Excel C. Program type K23 Total # of students
5	Wait list and annual # learners	K24 Long student can stay	K18 Wait list K21 Duration on wait list K22 Students served annually Excel C. Program type
6	# of SARAW versions running		K13 Computers run SARAW K14 DOS K15 DOS/SAM K16 Windows lite K17 Windows premium
7	Open, setting, headphones		K11 Program open K9 Setting K10 Private setting G1 Head phones
8	Ratio and how offered		K3 SARAW offered K12, G7 Ration
9	Learning Environment	G5 Why like room	G4 Do you like room
10	Time on computer	G6-5 Not enough TI time	G2 Time students on computer G6-5 not enough TI time
11	Assistive technology Accommodations	L7.1 Why difficult accomodate G6-1 Assistive Tech M9 # of tutors M10 Hrs / wk N2 Changes to improve	G6-1 Assistive Tech K7 Disabilities learners have L6-A Range mobility can L6-B Range cognitive can L6-D Other can L7-A Range mobility cant L7-B Range cognitive cant L7-D Other cant K12/G7 Ratio
12	Time and noise barriers	G6-2 Hard to get time that works G6-5 Not enouh TI time	G6-2 Hard to get time that works G6-5 Not enouh TI time

g. Possible Trends to be Found in the Data

Main categories of what we want to report on (can be 'chapters' in info guide)	Details - what we want to know
Where How When Why is SARAW being used?	in what settings (educational institute, community agency) using what method of delivery (1-1, group) Urban or rural through what agencies (rehab, literacy) stand-alone or integrated into another program? literacy level of students served When - Day time, evening, weekend Ratio of student/teacher or tutor Re Why - is there a need for the program because mainstream literacy programs are unable to serve adults with disabilities? Barriers/access issues including: more 1 – 1 attention needed, progress is slower, physical access issues, health (and absentee) issues, transportation, shortage of teachers or teachers, expense... types of disabilities served who teaches/tutors – paid staff, volunteers? and are there regional differences across Canada (provincial trends)? Average time spent in SARAW (per week & # of months/years)
Snapshot of 'average' SARAW student	
Innovative practices	What are the challenges in delivering literacy programming to adults with disabilities? And how do programs overcome the challenges? How do agencies reduce barriers/make literacy programming accessible to adults with disabilities? If programs use volunteers, how do they recruit volunteers to work with adults with disabilities? Literacy strategies that work well – teaching reading Literacy strategies that work well – teaching writing Literacy strategies that work well – teaching math Literacy strategies that work well – incorporating literacy into daily life (& literacy and life skills) Supplementary resources that work well Do tutors/instructors create their own teaching materials? (If so, can we get permission to samples in the guide?)

Appendices

	Are learning goals established by the student?
	If so, is progress measured against these goals?
	Is there any collaboration or partnerships happening between literacy and disability agencies? Between others?
	More re flexibility in approaches to evaluation...
	Is the program learner centered? The learning self-directed?
	What supports do programs use to increase accessibility?
	Re awareness of the literacy needs of adults with disabilities...
	Are peer instructors used?
	Re balancing individual instruction & support – with group work...
	Does the instruction allow for absentee (i.e. sick) time?
Successes	Outcomes – literacy levels
	Outcomes – soft outcomes – self-esteem, independence etc
	Most popular parts of the SARAW computer program
	The best thing about the literacy program
	How success is measured and acknowledged
	Why does SARAW work well
	How students plan to use writing and reading
	Students' favourite time at SARAW
	How are students assessed when they start
	How are students evaluated as they progress
Program Operations (including funding)	Percentage of time spent doing intake (recruiting students and tutors) compared to time spent running the program (supporting volunteers, instructing students, admin)
	Differences in % of time – rehab agency vs. educational program
	Waiting lists – how many students (average)
	Waiting lists – how long a wait (average)
	How much money does it cost to run a SARAW program
	Where do programs get the funds to run SARAW
	Are there differences in funding sources across Canada (i.e. provincial trends)?
	What is the cost to the student
	Financial assistance available to students
	Is there a problem getting funding to keep the program running?
Is funding connected to an employment program?	