Answers May Vary Research Report:

Literacy Strategies, Resources, and Effective Practices
for Adult Learners with Developmental Disabilities

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Contents

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"The primary barrier to learning: inflexible, one-size-fits-all curricula that raise[s] unintentional barriers. Learners with disabilities are the most vulnerable to such barriers."

- Teaching Excellence in Adult Literacy (TEAL) fact sheet: Universal Design for Learning. https://teal.ed.gov/sites/default/files/Fact-Sheets/2_TEAL_UDL.pdf

Introduction

Adults with developmental disabilities tend to have lower literacy skills than non-disabled adults, yet there is little documented information about the specific literacy strategies and resources that can help these learners improve their reading and writing skills. Helping adults with developmental disabilities improve their reading and writing skills will further their capacities to be full participants in the community.

I coordinate one of the only literacy programs in Calgary that serves adults with developmental disabilities. The Speech-Assisted Reading and Writing (SARAW) program at Bow Valley College serves 35 learners per semester, with 54 people waiting to get into the program (indicative of the high need for literacy programming and resources for adults with disabilities).

I wanted to do this research to identify, document and share what resources and strategies SARAW tutors use, and what they find works best with their learners.

Answers May Vary Research Report assessed the reading skills of seventeen learners in the SARAW program using the new *Read Forward* assessment tool. I used *Read Forward* to identify learners' reading levels because it is an easy tool to use and one of the only tools that works for people reading at very low literacy levels. I wanted to identify the reading levels of these learners, so that the information gained in this study could be used by others working with adults reading at these levels. For example, if the practices suggested by this study are used in a more formal setting—perhaps a group setting and/or classroom—the *Read Forward* assessment can be used to identify the adults who will benefit the most from these resources (i.e., those working at *Read Forward* Levels 1B and 1C).[1] (a description of *Read Forward* can be found on page 6)

This study captures and shares SARAW tutors' real-life experiences and expertise in helping adults with developmental disabilities improve their reading and writing skills. Many of the resources, strategies, and effective practices these tutors suggest can be used outside of a formal literacy program. In fact, as this study verifies, many of the most meaningful and effective practices involve using materials encountered in everyday life and a learner's own life experiences. This is in keeping with the strategies recommended by Canadian adult literacy experts for use with any adult with very low literacy skills. In other words, this study verifies that adults with developmental disabilities benefit from many of the same strategies that help most adult literacy learners.

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1 *Read Forward* is an assessment tool developed by Bow Valley College that assesses adult learners at the IALS levels 1–3. For more information on it, see www.readforward.ca.

Answers May Vary Research Report—where the title came from …

The following jumbled text represents what it might be like to not read well—how confusing that might be. It uses real words but the letters from one word are joined at the back and the front of other words:

Th isiswh ati tm igh tbel ik et ono tb ea bl etore adw ell.

When I presented this text at an event, Charles Pankratz, Dean of Academic Foundations at Bow Valley College at the time, looked at the jumbled letters, made an attempt to read what it said, and then asked me "What's the answer?" I asked him to repeat his question, and realized that he was not asking what the text said. He was asking how to fix the problem—how to help people learn to read. And I did not know the answer. I had worked one-on-one with learners who struggled with reading and writing, and usually the answer was different for each person. Different strategies work for different people. Although there may not be one answer, there are commonalities—strategies and resources that help many learners. They may not work for everyone, but they are worth trying.One day, about the same time that Charles asked me "What's the answer?" a literacy co-worker told me that some of her students copied answers from the answer key at the back of their workbooks. It was obvious that this was happening, she said, when they answered a question like "What did you have for breakfast?" with the response from the answer key: "answers may vary."

While there may not be one answer to the problem of low literacy, there is also not only one cause. ABC Life Literacy Canada says that "there is not one single cause for why adults have difficulty with literacy. The reasons are as varied as the individuals themselves, and depend upon past experiences, life situations, and personal strengths, challenges, and interests."[2]

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2 ABC Life Literacy Canada, n.d., 1.

Over the years I've heard many stories about the causes of poor literacy skills. Sometimes it can be as simple as poor eyesight or hearing during key childhood education years. One of my students wrote:

> I had to have glasses at [age] three. My mother found out that I had a visual disability when I used to sit at the TV inches away from the screen. When I got my glasses I used to fall all over the backyard because the distance and depth perception was so different. When I started to go to school they used to put me at the back of the class because they didn't believe I had trouble seeing. I fell behind in school. Three years later they realized I needed to go to a special class because I couldn't keep up.

This learner is now trying to catch up, as an adult, with what she missed in those key early years.

Additional reasons for literacy problems include: brain injuries due to a stroke, car accidents, falling off a roof, "self-inflicted brain injury" (a student's own words to describe a serious drug and alcohol addiction), and serious childhood illnesses. Some people did not have access to quality education as children. I met one adult learner who was kept out of school in the mornings to help with farm work: this learner said that all the reading and writing instruction must have happened in the mornings because he did not learn these skills.

Over the years, I've met people who blame the school system for adults having low literacy skills, but I don't think it is that

simple. Teachers don't always know why a child is not learning. For example, when an adult literacy co-worker, Deborah Morgan, received an award from the International Reading Association (IRA) for her work with adult literacy learners, she talked about the childhood of one of her adult learners. This child's father was abusive and locked her mother up every day in a small closet as the child was leaving for school. The little girl sat in class and worried about whether her mother had enough air to breathe. She didn't tell anyone about the situation at home, but as a seven-year-old she stopped learning and the teachers didn't know why.

The IRA acknowledges the need to know one's students when it says that "there is no single method or single combination of methods that can successfully teach all children to read. As a result, teachers must be familiar with a range of instructional [strategies] and have strong knowledge of the children in their classrooms in order to provide the most appropriate instruction for all learners."[3]

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3 Qtd. in Erikson 2005, 10.

Research Design

Intent

The intent of this project was to answer the following question:

What literacy resources, activities, and strategies are appropriate for tutors to use with adult literacy learners who have developmental disabilities, and who are working at International Adult Literacy Survey (IALS) level 1?

Definitions

Defining Literacy: International Adult Literacy Survey (IALS) Reading Levels

There are a number of ways to define literacy. The Organisation for Economic Co-operation and Development (OECD)[4] defines the following levels of literacy:

Level 1	Very poor literacy skills. An individual at this level may, for example, be unable to determine from a package label the correct amount of medicine to give a child.
A capacity to deal only with simple, clear material involving uncomplicated tasks. People at this level may develop everyday coping skills, but their poor literacy skills make it hard to conquer challenges such as learning new job skills.	Level 2
Level 3	Adequate for coping with the demands of everyday life and work in an advanced society. This roughly denotes the skill level required for successful high school completion and college entry.
Strong skills. Individuals at these levels can process information of a complex and demanding nature.	Level 4/5

In this report, literacy refers to "the ability to understand and employ printed information in daily activities at home, at work and in the community—to achieve one's goals, and to develop one's knowledge and potential." [5]

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4 Qtd. in Canadian Council on Learning.
www.ccl-cca.ca/CCL/Reports/ReadingFuture/LiteracyLevels.html
5 Home page, ABC Life Literacy Canada, http://abclifeliteracy.ca/adult-literacy, accessed 18 March 2012.

Disability

The American Association on Intellectual and Developmental Disabilities describes the difference between the terms developmental, intellectual, and cognitive disability like this:

Developmental Disabilities is an umbrella term that includes Intellectual Disability but also includes other disabilities that are acknowledged during early childhood. Some developmental disabilities are largely physical issues, such as cerebral palsy or epilepsy … Intellectual Disability is one type of a larger universe of many types of Developmental Disabilities. Developmental disabilities are defined as severe chronic disabilities that can be cognitive or physical or both… Intellectual Disability encompasses the "cognitive" part of this definition, that is, a disability that [is] broadly related to thought processes. [6]

Read Forward

Read Forward is an assessment tool developed by Bow Valley College that assesses adult learners at the IALS levels 1–3. The "Answers May Vary Research Report" project found that most SARAW learners were working at *Read Forward* level 1B which identifies adults working at low to mid IALS level 1. Some SARAW learners were working at Level 1C which corresponds to high IALS level 1.[7]

The SARAW Program

The Speech-Assisted Reading and Writing program at Bow Valley College is an adult literacy program designed for adults with physical and/or developmental disabilities. The SARAW program uses the award-winning SARAW software. Students work one-on-one with a tutor on the special talking computer that teaches basic reading, writing, and math skills up to a grade 7 reading level. In addition to the special SARAW software, the classroom contains a wealth of other literacy resources, similar to what is available in any adult literacy program. Many of the most effective resources focus on materials that are fun (such as crosswords and iPad vocabulary games), or are encountered in a learner's everyday life (such as "menu math," worksheets that focus on filling out forms, easy-to-read health brochures, and a

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6 "FAQ on Intellectual Disability," American Association on Intellectual and Developmental Disabilities, www.aaidd.org/content_104.cfm

7 For more information on *Read Forward*, see www.readforward.ca.

plain-language driver's manual) and include the learner's own life experiences.

Tutors in the program are either support workers who come with their learner from a disability-serving agency or volunteer tutors. All tutors receive training from the SARAW coordinator.

Adult literacy programs focus on learner competencies and learner goals.

Literature Review
Context

According to Statistics Canada, one in seven Canadians lives with a disability, and many of these have a lower educational attainment on average than those without disabilities.[8] Fifty percent of Canadian adults with disabilities experience literacy barriers[9] and 20 percent of adults with disabilities have less than a grade 9 education, compared to 8.1 percent of adults without a disability who have less than a grade 9 education.[10]

Of all people with physical disabilities, 48 percent function below level 3 (15% at level 1) on the International Adult Literacy Survey (IALS) scale compared to 36 percent of people without disabilities who function below level 3.[11] One in six Albertans live with a disability that has an impact on their capacity to fully participate in learning and work.[12]

There are many reasons for the discrepancy in literacy skills between adults with disabilities and those without. One is access to programming. According to Literacy Ontario's *Best Practices in Literacy for Adults with Developmental Disabilities*:

> A number of barriers continue to prevent adults with developmental disabilities from attending literacy programs … Historically, program personnel may have believed that they would be unable to serve the needs of adult learners with developmental disabilities. Because of that mistaken belief, many learners have not been served.[13]

According to ABC Life Literacy Canada's fact sheet called *What Are the Causes of Low Literacy?* "often, adults with intellectual disabilities have not received the learning

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8   Statistics Canada 2003.
9   Gardner 2005.
10 Gardner 2005.
11 Kapsalis qtd in Macht 2000, 11.
12 Alberta Advanced Education 2005, 14.
13 Literacy Ontario 1998, 3.

> "It is often not specifically the disability that serves as a barrier, but people's view of disability."

supports they need to develop their literacy skills to their full potential."[14]

Another reason that adults with disabilities have lower literacy skills than non-disabled adults may be society's attitudes. "There is a serious lack of public awareness about adult literacy and disabilities. Stereotyping and assumptions about the capacity of people with disabilities to learn and to work are harsh social barriers."[15] In other words, it is often not specifically the disability that serves as a barrier, but people's view of disability.

Need

There is a real need for and value in providing literacy skills upgrading to people with disabilities. In her book *Meeting Challenges: A Literacy Project for Adults with Developmental Disabilities*, Maureen Sanders says that

> in recent years, considerable emphasis has been placed on enabling people with disabilities to live as independently as possible. But it is very often the lack of literacy and numeracy skills that prevent people from achieving their potential for independence[16] . . . The inclusion of adults with developmental disabilities in volunteer tutoring programs is not only fair and just, but also desirable, attainable and worthwhile.[17]

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14 http://abclifeliteracy.ca/adult-literacy
15 Gardner 2005.
16 Sanders 1991, 1.
17 Sanders 1991, 2.

Unfortunately neither literacy nor numeracy is a high priority in already overtaxed agencies that serve adults with disabilities, and adult literacy programs sometimes believe that they don't have the skills and resources to serve adults with developmental disabilities. As well, those who work directly with adults with developmental disabilities are not always aware of the extent of their clients' lack of literacy skills or the real value that improved reading and writing skills can have in those individuals' lives. As Karen D'Cruz noted when she worked with SARAW as a practicum student,

> What really stood out to me in the preliminary findings were tasks with which the students struggled, such as locating information on work schedules, circling or filling out information on forms, and identifying phone numbers. Helping students learn to perform these tasks would help them in their everyday interactions, making them more independent. As well, the scores on the tests surprised me. Having spoken with many of the students, it was very surprising to see how they struggled with literacy in print. A disconnect in skill level between verbal language and written language became apparent. When working on developing literacy skills, tutors or workers often do not fully grasp how much their students struggle with literacy or what materials to use to help them advance their skills.

Literacy Ontario in their *Best Practices in Literacy for Adults with Developmental Disabilities* describes the situation like this:

> Improving upon limited literacy skills can be a meaningful experience for any adult. However, improved literacy can be even more important for adults with developmental disabilities than for adults without disabilities. Literacy can have a significant effect and impact across life domains for individuals with disabilities (Erickson, Koppenhaver, and Yoder, 1994). Time after time, the literacy programs reviewed demonstrated that developmentally disabled individuals who gain some competency in literacy have higher expectations of themselves along with increased opportunities in life. The continuing move towards deinstitutionalization and enhanced community living for adults with developmental disabilities brings issues concerning integration to the forefront. Literacy programs can play a large role in enhancing community integration.[18]

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18 Literacy Ontario 1998.

> "Literacy can have a significant effect and impact across life domains for individuals with disabilities"

Those of us who work in the adult literacy field realize, almost immediately, that there is a very direct connection between improved literacy skills and improved self-esteem. Tutors also regularly report that their students are more confident and willing to try new things when their literacy improves.

Lack of Information About Best Practices

There is little written about what strategies and resources work best when helping adults with disabilities to improve their reading and writing skills. As Literacy Ontario says, "there appears to be little, if any, valid and reliable research published pertaining to literacy and adults with developmental disabilities."[19] According to Erickson, Koppenhaver, and Yoder in their work on *Literacy and Adults with Developmental Disabilities*, "investigations into literacy learning in persons with disabilities, particularly developmental or severe disabilities, have a remarkably short history—remarkable in that the difficulties in teaching or assessing such individuals are substantial, widely known, well documented, and, most important, poorly

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19 Literacy Ontario 1998, 5.

understood." They go on to say "the number of researchers who have developed a line of study within literacy and developmental disabilities worldwide can be counted on your own fingers and toes, with some digits to spare." They conclude that "in overviewing the existing body of research, we are struck by how little attention is directed toward best practices in literacy." [20]

While these researchers are talking about the USA, Canadian scholars find that the situation isn't very different here. For example, Maureen Sanders argues that "despite the increased visibility of the problem of illiteracy in Canada, there is one group of Canadians that is rarely even included in the statistics. This group of people [is] labeled developmentally disabled."[21] Unfortunately this lack of research has contributed to the perception that adult literacy programs are not well prepared to serve adults with developmental disabilities and low literacy skills.

The limited literature that exists on literacy skills upgrading for adults with disabilities often talks about the value of assistive technology and computer-based learning. For example, in Literacy and Persons with Developmental Disabilities, Karen Erickson documents the successful use of talking software in aiding adults with cerebral palsy to improve their literacy skills.

> The use of the talking word processor provided speech feedback that increased the accuracy of student spelling and the likelihood that the students would engage in editing their errors. The computer also appeared to promote literacy learning for individuals [with] cerebral palsy who used symbols to generate text that was then transmitted to a communication partner on the other end of a telephone line (Gandell 1991).[22]

Unfortunately, most assistive technology for people with disabilities is designed for those who already have good reading and writing skills.

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20 Erikson et al. 1994, 1, 31.
21 Sanders 1991, 1.
22 Erickson 2005, 8.

Participants

Seventeen learners and fourteen tutors in the Speech-Assisted Reading and Writing (SARAW) program at Bow Valley College took part in the "Answers May Vary Research Report" project. Students who participated in this project are adults with developmental disabilities, including cognitive disabilities and Down syndrome.

SARAW Learners

SARAW learners are adults who want to improve their reading, writing and math skills. Their goals usually involve improving their literacy skills so that they can participate more fully in the world around them. For example, one learner wanted to be able to spell clients' names at the place he volunteered. Another learner wanted to write her life story; yet another to be able to read a menu in a restaurant. They all have a diagnosed physical and/or developmental disability and are all working at below grade 6 reading level.

Just over half the SARAW learners who took part in this project (9/17 or 53%) were reading at *Read Forward* level 1B. Six (35%) were reading at *Read Forward* level 1C. Two (12%) were reading below level 1B. All seventeen fall into the IALS level 1 category.[23] Most learners have problems with both reading and writing. Nine of the fifteen tutors (60%) report that their learners have problems with both reading and writing; four of the fifteen (26.5%) report that their learners have more problems with writing; two of the tutors (13.5%) report that their learners have more problems reading.[24]
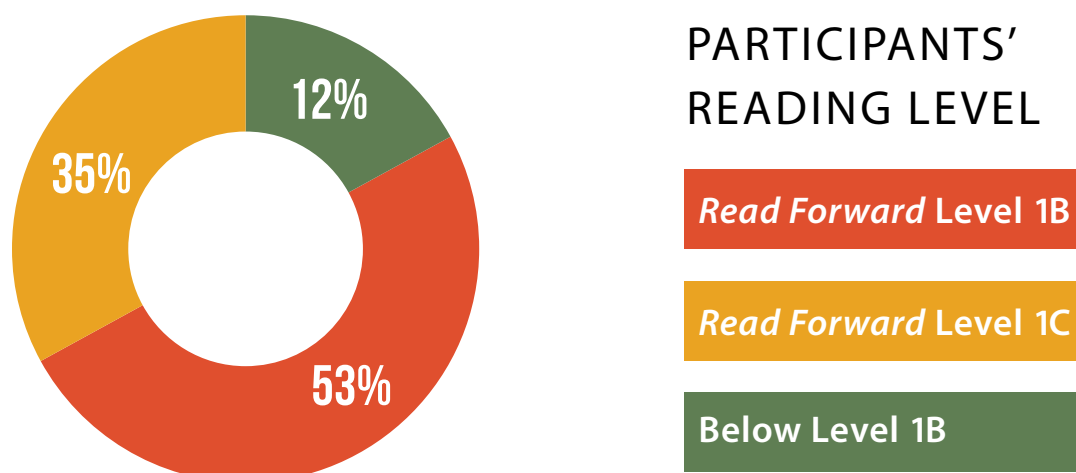

Figure 1. Reading level of SARAW learners in the "Answers May Vary Research Report" project.

23 See definitions on page 5 for a description of the different reading levels.
24 One tutor responded about two learners.

Learners' reading levels were assessed using *Read Forward*. Samples of the different kinds of questions (word recognition and comprehension) are included in Figure 8 on page 37. Learners were assessed between September 2011 and March 2012.

SARAW Tutors

Tutors who took part in this project had tutored at SARAW for an average of nineteen months (the actual time ranged from six months to five years). Half were paid support workers and half were volunteer tutors. Tutors were also evenly divided between those who'd had previous experience tutoring/teaching and those who did not. (Seven had previous experience tutoring or teaching while seven had no formal previous experience—though three of these said they had informal experience such as helping at their children's school.) Most tutors (12/14) worked one-on-one with a learner; one tutor worked with two learners; one tutor worked with three learners Tutors were interviewed between September 2011 and March 2012.

All participants (or legal guardians) signed consent forms.

Methodology - Data Collection and Analysis

After learner reading levels were assessed, tutors were interviewed about the literacy resources, strategies, and effective practices they use when helping learners with developmental disabilities to improve their reading and writing skills. They were also asked which work best, which they like best, and which they thought their learner liked best.

Tutor interviews were face-to-face. They were half-hour interviews with both open- and closed-ended questions. The interview included quantitative questions requiring a simple yes/no answer or responses to check off, as well as open-ended questions inviting unguided responses. Respondents were allowed to choose more than one answer and more than one key term could be identified from each respondent. Quantitative data were collated using simple percentages. For the qualitative data, key words and phrases were identified—looking at frequency of response—and coded using MaxQDA. MaxQDA is a qualitative data-analysis software program.

One of the fourteen tutors participated in the final pilot version of the tutor interview—data from this pilot were considered reliable because there was very little deviation between this pilot version of the interview and the final tutor interview. Differences are noted in the project results.

I initially looked for correlations between resources used and learner literacy level (*Read Forward* 1B, 1C, or below 1B). I wanted to see if different resources worked for

learners working at different *Read Forward* levels; however, there were no significant differences. As well, the six learners working at *Read Forward* level 1C and the two learners working at below level 1B were not considered a large enough sample size to be detailed separately. In comparing and correlating the data according to whether the tutor was a support worker or volunteer, the differences also proved to be insignificant and there were more similarities than differences so these features are not separated out here. It is difficult to be conclusive as there were no obvious differences.

Findings

Summary of Key Findings

Most student/tutor pairs (10/13) attend SARAW for one and a half hours per week. Most tutors (13/14) use the SARAW portfolio—both to file their learners' work and as a teaching and assessment tool. Most pairs (10/14) have established a routine that they follow at SARAW. Many (8/13) learner-tutor pairs use the SARAW computer software program every time they attend.[25]

10/13
attend SARAW for 1.5 hours/week

13/14
use the SARAW portfolio

10/14
have established a routine

8/13
use SARAW software program every time they attend

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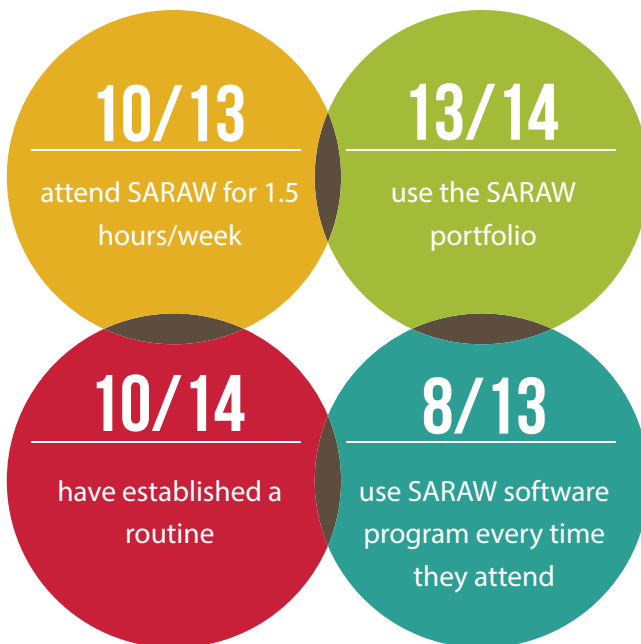
25 Only thirteen tutors were asked these questions—the pilot interview did not include these two questions.

Tutors who work with adults with developmental disabilities attending the Speech-Assisted Reading and Writing (SARAW) program and working at International Adult Literacy Survey (IALS) level 1 find a variety of literacy resources and strategies effective in helping their learners improve their reading and writing skills. Tutors report that the following resources work best and/or are their favourites and/or their learner's favourites:

- SARAW software—the talking computer program
- materials from the learner's everyday life (e.g., bus schedule, menus, forms)
- printed worksheets—these are learner worksheets that focus either on everyday life activities (e.g., menu math) or literacy-based fun activities (such as easy crossword puzzles).

Tutors like these resources because they help promote learning, are relevant to daily life, and are fun. Other literacy programs and projects have found that similar resources work well. It only makes sense to use written materials that are of interest to a learner—for example, a book on hockey for a learner who loves hockey.

Tutors' common themes were repeated throughout the interview results regarding the strategies and effective practices they feel work best and are their favourites and/or their learners' favourites:

- make learning fun
- use daily life materials and/or learner's experiences
- use positive encouragement
- work from learner goals—be learner centred.

These themes connect directly to adult learning principles (usually without the tutor realizing it) and stress the need to be learner-centred and competency-based. SARAW tutors repeatedly talk about using daily life materials and learner experiences, and using learner-driven goals and learner interests in their sessions. This is evident, as well, when tutors talk about how they choose what to work on—most tasks (89%) revolved around learners' goals and interests.

The relationship between a tutor and learner was also considered to be very important. As Audrey Gardner's *Literacy and Disability Study* says so clearly, "the relationship between learner and instructor and tutor is the nucleus for learning.

Relationships where respect, dignity, and independence are valued contribute to effective learning experiences."[26]

Other strategies involve establishing a routine and using the learner's portfolio as an assessment (and sometimes a teaching) tool. Each learner has a portfolio divided into different learning sections (such as goals, reading, and writing). In addition to being able to keep copies of their work in the portfolio, each section has check-off sheets where learners can identify and track what they have learned.

Other than the specialty SARAW software, all the strategies and resources that SARAW tutors use and like are similar to what other literacy programs and projects use with adults with developmental disabilities. For example, in her book *Meeting Challenges: A Literacy Project for Adults with Developmental Disabilities*, Maureen Sanders recommends many of the same resources, strategies, and effectives practices including: language experience writing, assisted writing, reading material relevant to the student's life, recording words known by the student, and assisted or paired reading using the student's own stories. She also suggests that these are the same literacy resources and strategies used in mainstream literacy programs: "volunteer tutors can work well with students who have more difficulty learning … Many of the techniques used will be familiar to literacy workers."[27]

As in all literacy learning, tutors report that their learners have improved self-confidence and/or willingness to try new things after attending the literacy program. Despite the fact that this was not a question on the interview, 15 percent of tutors

26 Gardner 2006, 27.
27 Sanders 1991, 2.

talked about their learners having improved self-confidence or willingness to try new things in an open-ended question about what learner success looks like.

Learner success

The greatest improvements tutors saw in their learners after attending the SARAW literacy program were in reading and recognizing words, and improved writing and grammar. These account for half (10/20) of the responses about what learner success looks like. Four responses (20%) identified spelling and/or punctuation; three responses said their learners had improved self-confidence and/or willingness to try new things. Other responses included speech, memory, and texting.

Tutors said the following when describing their learners' successes:

- When we first met he never wrote anything. Now he sends out emails and forms
- She now can tell the first and second (and sometimes more) letters in the word.
- She read to her dad and he was impressed.
- Sends and reads e-mails (with support) and fills out forms.
- He knows how to stop and take his time instead of guessing
- She looks confident—less "ticks"/habits—has really improved.

The following resources are tutor and learner favourites, and those that tutors identify as working best.

Table 1. Tutor and Learner Favourite Resources

Resource	Tutor Favourite	Learner Favourite	Works Best	Total	Percent*
SARAW	7	6	8	21	27%
Materials from learner's life, and their own writing	6	7	7	20	26%
Printed supplementary materials	5	8	6	19	25%
Lumosity[28]	4	5		9	12%
Flash cards	4			4	5%
Books from SARAW library	4			4	5%
				77	

*Note. Tutors were allowed up to three choices in each of the three categories (tutor favourite resources, their learner's favourite resources, and what resources they thought worked best). The fourteen tutors interviewed made 105 choices in the three categories. The above six resources are the top choices, representing 77 of 105 (73%) of the choices.
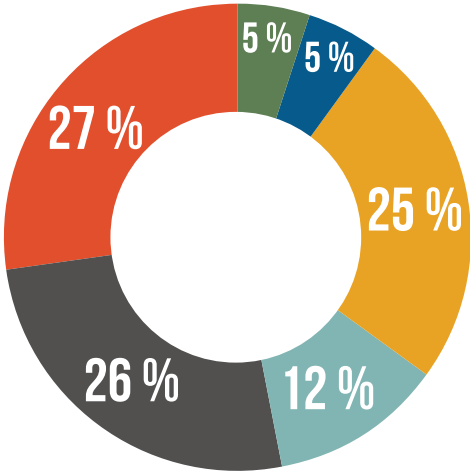
RESOURCES CHOSEN

SARAW

Learner everyday life materials

Printed worksheets

Lumosity

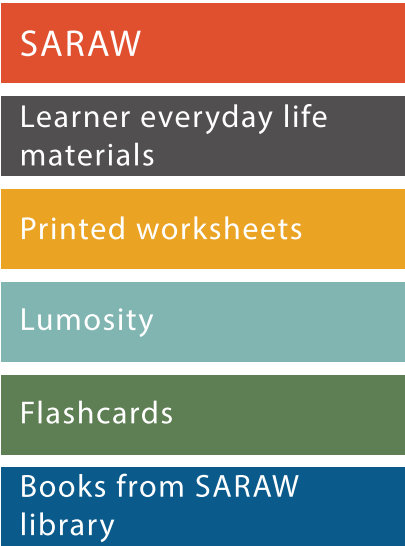Flashcards

Books from SARAW library

Figure 2. Resources chosen by tutors that work best, and are their favourite and/or their learners' favourite.

28 Lumosity is an online program of brain training and brain games.

Why These Resources Are Tutor and Learner Favourites

When talking to tutors about why these were favourite resources to use, tutors identified that they promoted learning; were relevant to daily life; were fun, easy, and creative; helped promote self confidence; and that the learner liked working on a computer. The fact that these resources promoted learning was chosen most often (17 times) in open-ended responses. This makes sense because learners are in programs to learn. In adult literacy we focus on being learner-focused and competency-based, so tutors are encouraged to make learning relevant to daily life and to build from learner strengths (i.e., where they would find the work fun and easy, especially to begin with). Relevance to daily life and fun were identified thirteen times each. Canadian adult literacy experts who were consulted in Reading the Future stressed the importance of learning materials being relevant to learners.

It is also well-known in the adult literacy field that self-confidence is closely tied to literacy skills. When someone improves their reading and writing skills, they feel better about themselves. Other reasons that the identified resources were favourites included the fact that they could see and track goals, that it was visual, and that the activity was structured. Each of these points was identified only once and they are therefore not included in Figure 3 statistics.
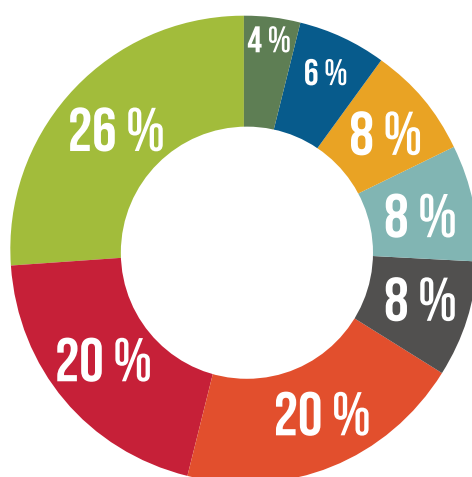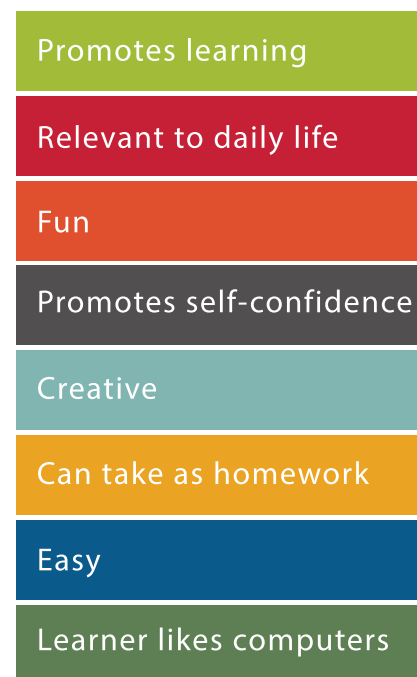

WHY?

Promotes learning
Relevant to daily life
Fun
Promotes self-confidence
Creative
Can take as homework
Easy
Learner likes computers

Figure 3. Reasons why the resources from table 1 are tutor and learner favourites.

After initial data analysis of the questions that asked why particular resources and parts of the SARAW software program were learner and tutor favourites, I decided not to break down the responses per favourite resource/part of the software. The response size of each resource/part of the software was not large enough to be significant. As well, many of the responses about one resource as a favourite were similar to each other.

Use of and Favourite Aspects of the SARAW Software

The SARAW program at Bow Valley College is built around the specialty SARAW software designed by the Neil Squire Society specifically for adults with disabilities. However, the SARAW adult literacy program is first and foremost a literacy program and a literacy classroom with a wealth of literacy resources plus the specialty software. I wanted to know how often tutors and learners used the SARAW software. Eight out of thirteen tutor-learner pairs (61.5%) use the SARAW computer every time they attend the program. One learner-tutor pair does not use the SARAW software at all.

Within the SARAW software, the games section was people's favourite—it was chosen thirteen times. SARAW's games section includes several word-pattern and spelling games. Writing with the SARAW software was chosen as tutor and student favourites twelve times, and reading the learner's own writing was identified five times. The writing section provides auditory feedback as learners are typing. Five respondents chose the "Sounding Board" as their favourite: the Sounding Board could be considered the phonetics portion of the program where each letter or combination of letters is related to the sound of the letter and sample words. Three respondents liked reading "Other People's Writing" on the SARAW computer—usually because the stories are "authentic writing" written by other adults with disabilities that they can identify with. The tutors said that it made them feel like they were part of a group and less alone.

FAVOURITE PART OF SARAW SOFTWARE

Games

Writing

Reading learner's work

Sounding Board

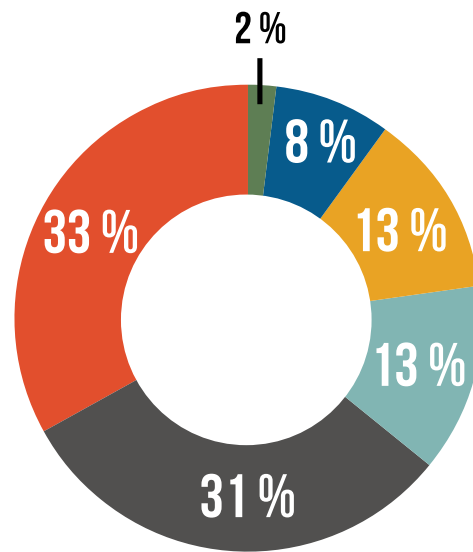**Other people's writing**

Do not use SARAW software

Figure 4. Participants' favourite part of the SARAW software

Participants in the study agreed that the SARAW talking computer software is one of the best resources to help adults with developmental disabilities improve their literacy skills. The reasons tutors gave for liking SARAW include the fact that the software helped improve their learners' writing, that it was fun, that learners learned about other people with disabilities (made them feel less alone and a part of a group), and helped with the learners' speech (for those learners who had trouble speaking). Learners also liked to write about their own experiences, and tutors liked to read their learners' writing to learn more about them. Other reasons included helping with reading and spelling, making learners think, and helping with memory. I personally believe that another reason the SARAW software is so popular is that the 'curriculum' is built into the software, making it easy for tutors. Also, although the program focuses on making learning fun, it is very much an adult-based program.
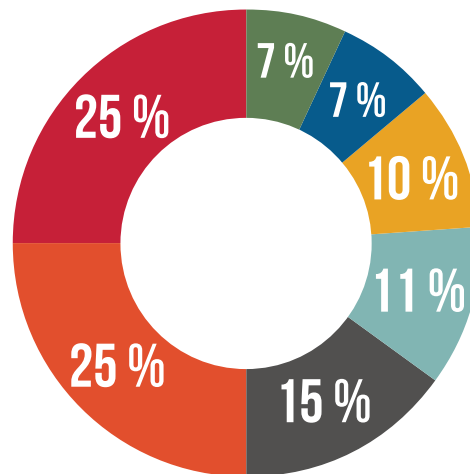
WHY?

■	Improves writing
■	Fun
■	Learns about others with disabilities
■	Helps with speech
■	Learner likes to write
■	Tutors like to read learner's writing
■	Other

Figure 5. Why the various parts of the SARAW software are learner and tutor favourites

Portfolio

As previously mentioned, each learner has a portfolio where they can keep their work. The portfolio is broken down into different sections, each with an area in which they can record their progress. Use of the portfolio is optional; however, thirteen tutors (93%) use the portfolio to store their learners' work and ten use it with their learners to review progress.

Strategies and Effective Practices

Learner-centred Learning

Tutors focus primarily on learners' needs. Most of the responses (31/35) about effective strategies listed learner interests, learner goals, things learner likes best, and learner brings materials. (The fourteen tutors were allowed to choose more than one response from the check-off sheet).

Routine

Most tutors (10/14 or 71.5%) had established a routine for their SARAW sessions. Three tutors start a SARAW tutoring session by talking about the learner's week and the goals for this week. Two tutors like to end the tutoring session on the computer

with fun things like You Tube, Google, SARAW, or Lumosity. This is one tutor's detailed description of the routine she and her learner follow:

> At the start, ask if there's anything this week from daily life she
> needs help with; then do a puzzle as a warm up. Then get her
> to read tougher materials. I write the words down that she has
> trouble with and get her to read them by breaking them down into
> syllables and we compare them to words she knows. We review
> the words she got wrong, then read a short story or do a game.

Motivating Learners

Thirty six percent of the tutors (5/14) said there was no need to motivate their learner—that the learner was already motivated. Some tutors gave advice about motivating learners, which included using positive encouragement, relating activities and learning to the learners' daily lives, making learning activities fun, and letting learners choose activities.
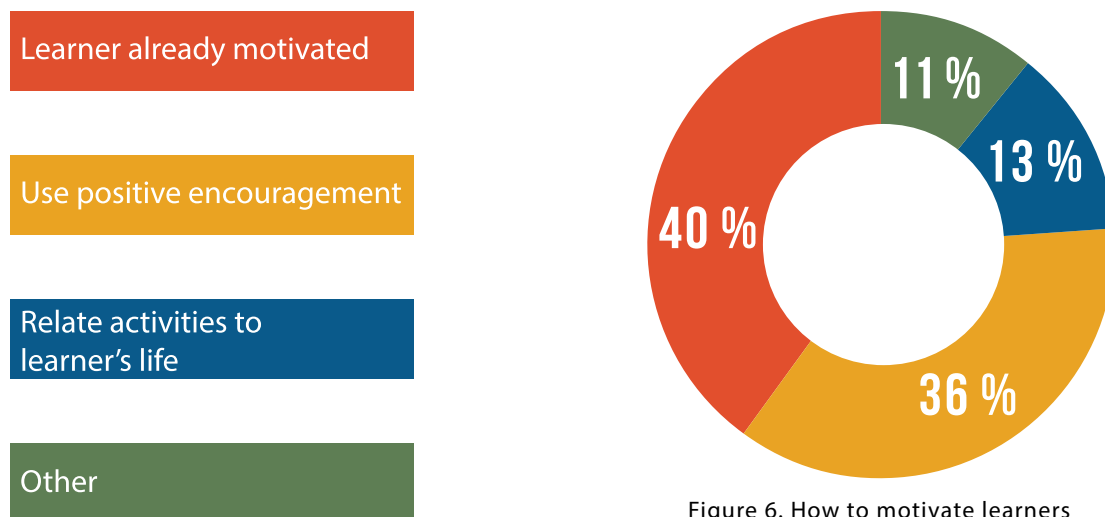
MOTIVATING LEARNERS

Learner already motivated

Use positive encouragement

Relate activities to learner's life

Other

Figure 6. How to motivate learners

Choosing What to Work on

Tutors practise learner-centred learning. Thirty-one out of thirty-five choices (89%) revolved around the learners' likes, goals, and materials. This included learner

interests (31.5%), learner goals (28.5%), "we do things my learner likes best" (23%), and "learner brings materials/ideas/books." (Note that these numbers came from 35 responses from 13 tutors—the pilot tutor interview was not included).

LEARNING GOALS

Learner driven (learner goals, interests etc.)

Tutor driven

11 %

89 %

Figure 7. How tutors choose what to work on

Using Multiple Formats/Teaching Methods

I asked tutors whether they tried to connect things they taught in one way to another activity that taught the same skill. For example, playing a word-patterns game on the SARAW computer, then doing the same word-families activity with pen and paper on a worksheet, then doing the same activity using alphabet flashcards. Although only six of thirteen (46%) tutors responded that they did this, it is still a valuable strategy to include in tutoring reading and writing. Teaching the same skill in different ways, including addressing the different learning styles (kinaesthetic, visual, auditory) is recommended in teaching principles.

Tutor Learner Relationship

Because the *Literacy and Disability Study* (LaDS) identified that the tutor-learner relationship was one of the most important pieces in literacy instruction, three questions were asked about the tutor/learner relationship: first, how the tutor would describe the relationship, second whether the relationship affected their learner's work and progress, and finally, if so, how? As Audrey Gardner said in LaDS, "What

bat

cat

hat

sat
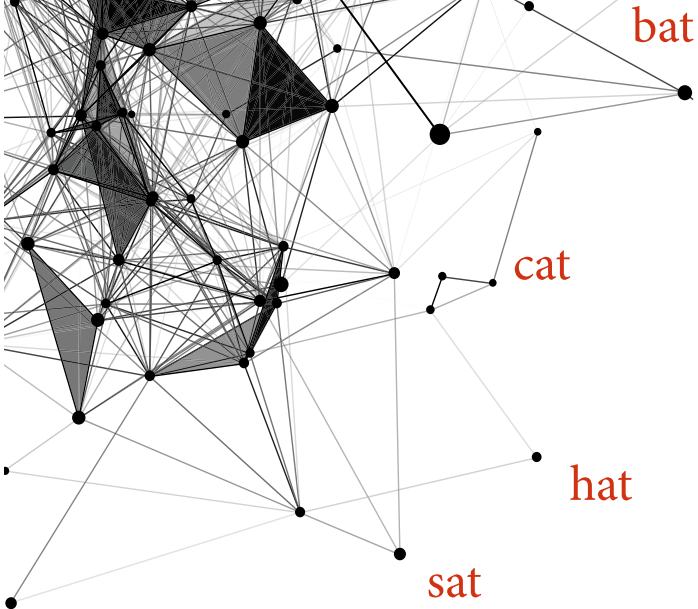
we learned from the SARAW Survey is that the relationship between learner and instructor and tutor is the nucleus for learning.." Key qualities for effective relationships are:

- Positive attitude
- Respect for others
- Enjoy learning
- Desire to help others
- Patience
- Listening
- Encouraging
- Role modelling
- Team building and cooperation.[29]

Tutors in the "Answers May Vary Research Report" study agree that the relationship with their learner is an important aspect of learning. Thirteen tutors (92.9%) described the relationship as good (including terms like good, great, get along well, work really well together, positive, friendly, excellent, and awesome). One tutor described the relationship as professional. This tutor went on to clarify: "Professional. Not only a friendly relationship with him—you have to show some authority and establish rules otherwise he won't work. Balance between the two. Teacher and friendly and respectful."

In response to whether the relationship affected their learners' work and progress, twelve tutors (85.5%) said yes, one tutor said no (this tutor said the tutor-learner relationship was "good"), and one tutor was unsure. This "unsure" tutor said,

29 Gardner 2006, 19.

"Sometimes—he doesn't take me seriously." This tutor had said their relationship was "Very good—he's my friend—talks to me about his family and his problems."

Tutors talked about the fact that, because of the good relationship, learners were more comfortable, less embarrassed, and took suggestions better (7/11 or 63.5% of tutors reported this in open-ended questions). Two others said their learners were more motivated because of their relationship. Other benefits included being able to work as a team and being able to understand their learner better. The one tutor who described the tutor-learner relationship as professional had this to say: "He is taking his activities here more formally as part of his academic experience. Not coming here to play."

Other Advice

In the open-ended questions regarding other helpful advice from existing SARAW tutors, the tips identified most often include:

- use daily life materials and experiences (mentioned 8 times)
- use positive encouragement (mentioned 8 times)
- work from learner goals (identified 5 times)
- scribe for your learner—that is, write out what the learner wants to say (mentioned 5 times)
- make it fun (suggested 3 times).

Other tips included:

- help learners sound words out
- use word lists
- write postcards
- attend the literacy conference
- read others' stories
- use large-print materials
- use a journal
- prompt the learner
- take breaks
- work on grammar
- use the whiteboard
- read books out loud together.

```
an swe rsm ayv a ry ans

we rsm ayv ar y answ e

rs m ayv a ry
```
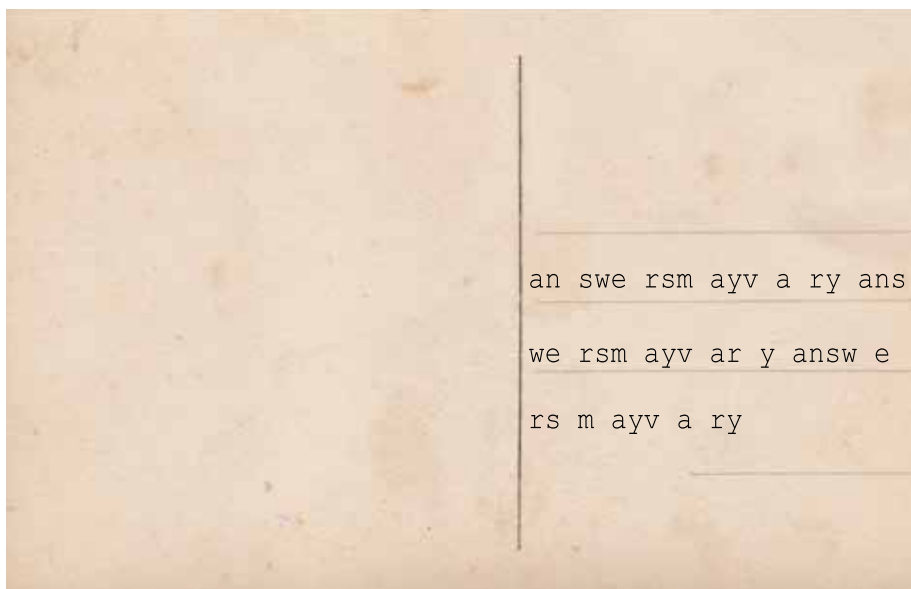
Conclusion

   Although answers may vary for each individual learner, there are a number of resources and practices that work well to help adults with developmental disabilities to improve their reading and writing skills. These are consistent with existing adult learning principles—in the words of SARAW tutors: use daily life materials and/ or learner's experiences, work from learner goals, and use positive encouragement. The resources and strategies that work best are the same or very similar to those used in any adult literacy program, most of which focus on learner goals, learner competencies, and learner life experiences. Perhaps the other main strategy/effective practice that should be added is to focus on making learning fun.

   Most of the effective resources focus on the learner's daily life and interests. It would therefore seem that there is an opportunity to incorporate literacy skills by building activities into a learner's daily life. A group of Canadian adult literacy experts in Reading the Future suggest that "program materials should be relevant to the general interests and career goals of each student—for example, authentic workplace materials or other items such as restaurant menus, notices from schools, television guides and newspapers."[30]

   Because the concept of person-centred planning in the disabilities field is very similar to the principle of learner-centred andragogy, this report suggests that, with

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30 Canadian Council on Learning 2008, 53.

very little training, disability workers will have the skills to incorporate literacy skills upgrading into the daily lives of their clients with developmental disabilities.

Recommendations

For individuals:

1. Every person is an individual—use what works for that person. Listen to their interests and needs. Make learning relevant and of interest to that person, and as much as possible, make learning fun.

2. Do not overlook the literacy resources, strategies, and practices used by mainstream adult literacy programs.

3. Use the everyday materials encountered in a person's daily life to practise reading and writing. A person does not have to be enrolled in a literacy program to work on improving their literacy skills. Literacy learning can happen almost anywhere, using everyday materials.

For future programming and/or projects:

1. Mainstream literacy programs need to recognize that they can serve adults with developmental disabilities, using the same materials and strategies they would for any learner reading at IALS level 1.

2. Disability-serving agencies should realize that literacy skills building can be built into the daily lives of their clients with developmental disabilities.

3. A separate guidebook should be produced that lists the suggested resources, strategies, and effective practices from the results of the "Answers May Vary Research Report" project. The guidebook should include a simple explanation of how to use these.

4. A pilot project could produce a simple literacy-tutor training curriculum aimed at community-support workers from disability-serving agencies. The tutor training should be available either at a central location or offered within each agency.

5. There is an opportunity for research into whether adults with developmental disabilities, reading at IALS level 1, have more problems with word recognition or comprehension skills.

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Appendix

Tutor Survey Questions

SARAW questions for tutors re Applied Research project:

Intro info to tutor
- Go over info about project
- We will not use names or any identifying information in final product
- Explain that we are not including math in this questionnaire

Demographic questions
1. How long have you been tutoring this learner? _____

2. Do you have any other tutoring/teaching experience?_____

   _____

   _____

3. Are you a support worker or community volunteer?
   ☐ Support Worker   ☐ Volunteer

4. <u>Literacy resources</u> used at SARAW

-TF/LF   WB

☐ SARAW program on computer
☐ Lumosity brain games/training
☐ Printed supplementary exercises/worksheets & crosswords
☐ Materials from learner's daily life (eg train schedule, menus)
☐ Student's own writing and/or materials _____
☐ Companion to SARAW: Exercise Workbook
☐ Books from the SARAW resource library
☐ Websites _____
☐ Solitaire program on computer
☐ Mavis Beacon Teaches Typing program
☐ Tape recorder and read-along books
☐ Student portfolio
☐ Flashcards – eg alphabet, spellominos
☐ Other:_____

5. Thinking about the resources you just identified, or any other resources you use at SARAW- what 2 or 3 resources are your favourite? (TF on Q#4 page 1 list – have tutor mark on p. 1)

_____

_____

_____

6. Why?

_____

_____

_____

7. What 2 or 3 resources are your learner's favourite? (LF on page 1 list – have tutor mark on page 1)

_____

_____

_____

8. Why?

_____

_____

_____

9. What part of the SARAW program is your favourite?

☐ Reading other people's writing   ☐ Reading your learner's writing

☐ Writing   ☐ Sounding Board

☐ Games   ☐ n/a – don't use SARAW

☐ Other_____

10. Why?

_____

_____

_____

11. What part of the SARAW program is your learner's favourite?
☐ Reading other people's writing ☐ Reading your learner's writing

☐ Writing ☐ Sounding Board

☐ Games ☐ n/a – don't use SARAW

☐ Other_____

12. Why?
_____
_____
_____

13. What 2 or 3 resources or strategies work best (WB on page 1 list) with your learner? Ie have helped your learner the most, to improve her/his reading and writing skills (see list page 1 &/or answer for question #5 – have tutor mark on Q#4)
_____
_____
_____

14. Do you have a routine or pattern that an average tutoring session follows?
☐Yes ☐ No

15. If so, can you describe the routine – what do you do first, then, how do you finish? How do you use your favourite resources (listed above) in an average tutoring session?
_____
_____
_____
_____
_____

16. How do you decide what to work on at a SARAW session?
☐ Learner goals ☐ Learner interests/likes
☐ Learner brings material/ideas ☐ I bring materials/ideas
☐ We do the things my learner likes best ☐ Other_____
_____
_____

17. Do you and your student use language experience story/approach in writing? – explain LEA

☐ Yes   ☐ No

_____

_____

18. What other ways/strategies do you help your learner to improve literacy skills? (Strategies are specific practices to build a particular skill and give examples of what we mean by strategies -ie methods such as Language Experience Approach, scribing etc.)

_____

_____

_____

_____

19. How many hours/wk does your learner attend SARAW
   ☐ 1 hour/wk or less   ☐ 1 ½ hours /wk
   ☐ 2 hours/wk   ☐ Other _____

20. How much do you use the SARAW computer – over a month (4 sessions)?
   ☐ Every session   ☐ Every two or three sessions
   ☐ Once a month   ☐ Once every two or three months
   ☐ We do not use the SARAW computer program

21. Does your student write a journal on a regular basis at SARAW? (either on the computer, or in writing)   ☐ Yes   ☐ No

_____

_____

22. Does your student use her/his portfolio to keep work in?   ☐ Yes   ☐ No

_____

_____

23. If so, do you and your learner go through the portfolio occasionally to see the work and progress? ☐ Yes   ☐ No

24. Do you connect things you do in one way (eg word patterns on computer) to doing the same activity in a different way (eg. word families on paper or using cards)?
□ Yes   □ No

_____

_____

_____

25. Where is your learner experiencing the most success? What does success look like?

_____

_____

_____

_____

26. Which does your learner have more problems with
□ Reading   □ Writing   □ Both

_____

_____

27. How do you help motivate your learner?

_____

_____

_____

28. How would you describe the tutor-learner relationship you have?

_____

_____

_____

29. Does this relationship affect your learner's work and progress? □ Yes   □ No
How?

_____

Notes - Any additional information about strategies/best practices

_____

_____

_____

Read Forward Sample

▸ *Circle the word that matches the picture.*
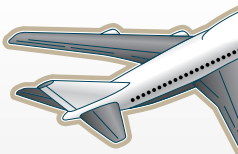
1
pear   wear   pet   banana

2
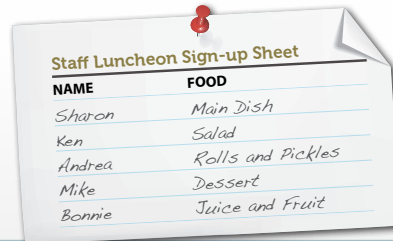sifting   ending   sleeping   eating

▸ *Follow the directions.*

10 Who signed up for salad? _____

Staff Luncheon Sign-up Sheet

NAME	FOOD
Sharon	Main Dish
Ken	Salad
Andrea	Rolls and Pickles
Mike	Dessert
Bonnie	Juice and Fruit

3
plate   plane   ship

11 Which number do you call for details? _____

GALAXY CINEMA
MOVIES SHOWING

Toy Story	The Last Airbender

Call: 416-776-9055 for Details

12 What does the note say? _____

Photo courtesy
Crystal Sujata.

Figure 8. Sample pages from *Read Forward* section A—word recognition and comprehension (p. 2 and 5).

Belle Auld, SARAW Coordinator, Bow Valley College

Belle Auld has worked in the field of adult literacy since 1993, and at Bow Valley College since 1999. Her work has been recognized with several awards. She coordinates the Speech-Assisted Reading and Writing (SARAW) literacy program for adults with physical and/or developmental disabilities, and the Adult Basic Literacy Education (ABLE) programs at Bow Valley College.

ABLE is an inclusive adult literacy classroom where adults with disabilities work alongside their nondisabled peers. ABLE grew out of a survey Belle did with Calgary agencies serving adults with disabilities, about what they want to see in inclusive adult literacy programming.

Her friends say that she tends to recruit volunteer tutors wherever she goes.