

One is Fun

## Guidelines for Better Braille Literacy

By  
Marjorie Troughton

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## Reconnaissance

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# Introduction

## Terms Of Reference

Grade One Braille uses raised dot patterns to represent the letters of the alphabet, punctuation marks, numbers and some composition signs which are unique to braille. Grade Two Braille adds many contractions and short form words.

The official terms used by the International Council on English Braille are Grade One Braille and Grade Two Braille. However, for variety and for ease of reading and understanding the following terms will also be used to refer to Grade One -- alphabetic or uncontracted and Grade Two may be referred to as contracted.

Thus,

Grade One Braille = Alphabetic Braille = Uncontracted Braille

Grade Two Braille = Contracted Braille

# Chapter 1: Research And Experience

## Introduction

The first chapter contains excerpts from speeches given by the author. Some portions have been updated.

I Grade One Braille - An Alternative for Some Blind People: presented in 1988 in London, England

II Braille Literacy: presented in 1990 in Edmonton, Alberta

III Bits and Bites: short excerpts from other presentations



## Section 1

### Grade One Braille: An Alternative For Some Blind People

For some blind people, Grade Two Braille has opened doors to better education, literature and employment. For others, Grade Two Braille has closed those doors. However, Grade One Braille can keep the doors open for many more people.

It is evident to insightful teachers of braille that the complexities of Grade Two constitute an additional educational handicap for some of their students.

Only a few of the people who should use braille do in fact use it. The latest estimate is less than 10%. Fewer people use it well. The main reason is the Grade Two Braille code itself. It is too complex and too complicated for some people.

Only a few of the blind students in school who should use braille do in fact use it. According to the last survey in America, less than 20%. Fewer use it well. The main reason is the Grade Two Braille code itself. For many students, there is neither the time nor the resources needed for them to learn such a complex and complicated code. Students with learning disabilities, do not possess the skills necessary for mastering all the shapes and rules. Because it can solve these problems, Grade One Braille is better for some students.

Then why do many people insist that everyone should use Grade Two Braille and that all books should be published in Grade Two Braille?

Why not teach Grade One Braille when appropriate? Why not give the people who want to use Grade One Braille the right to use it? Why not publish and distribute Grade One Braille books and materials? The first part of this chapter addresses these questions and offers a practical solution.

The first part of this chapter is divided into six parts.

The first section is a summary of some of the literature and research on braille problems.

The second section briefly describes a research project comparing the results of reading and writing Grade One Braille with the results of reading and writing Grade Two Braille.

The third section attempts to explain learning disabilities and how they affect a person's ability to use braille.

The fourth section is a comparison of achievement scores when using Grade Two Braille with achievement scores after switching to Grade One Braille.

The fifth section briefly describes another research project on the teaching of reading to beginning primary students. It compares a group of intelligent children who learned to read and write using Grade Two Braille from the start with a matched group who learned to read and write using Grade One Braille at the beginning and then later learned the contractions for Grade Two Braille and from then on used Grade Two for all their reading and writing.

The last section contains a summary and conclusions.

## Part 1: Braille History, Research and Literature

Let us look at the history of the development of braille codes. The acceptance of the use of only contracted braille was the result of a battle of personalities, politics, and administrators - it was not the result of discussions emanating from research and practical use. Robert Irwin in a booklet called "The War of the Dots" describes the struggle of people attempting to get a consensus on a uniform English language braille code. After many years and several different codes, the decision was a compromise and perhaps the best that could be reached under the circumstances at that time.

From 1917 to 1932 books published in the United States were practically all in Grade 1 ½. In 1932 for the sake of uniformity the Library of Congress adopted Grade 2 for High School books. By 1950, all books except for first grade were published in Grade 2 Braille. Now all books are published in Grade 2 Braille.

When these decisions were made, it was not possible physically or financially to publish books in two different codes. However, with today's technology, computers, scanners and printers, it is no longer impractical. The reasons for only one code are no longer valid. The reasons for two codes are very evident. It is time that a larger percentage of possible braille users be given the opportunity to have a code that is useful to them.

Let us review the literature and research on braille. Researchers have shown not only that very little space is actually saved by many of the contractions, but also that the multiplicity of contractions retards reading development and slows reading speed. It has been shown that because decoding Grade 2 Braille requires extended intellectual effort, less cognitive resources are available for interpreting information.

At the International Conference on English Braille Grade Two, held in Washington in 1982, I presented a paper stating the need for a simplified braille. Several other papers, which were presented at that conference, also stated that there was a definite need for a simplified braille.

Martin Milligan of Britain said that we need a two tier system of braille, one simpler and one more complex. He went on to say that it seems extremely doubtful whether the braille authorities have the right to require the braille-using public to go on using a grade of braille which for many of them rewards the effort

of learning so unnecessarily poorly, and makes both reading and writing braille unnecessarily laborious and slow. He felt that major changes in code simplification are appropriate now.

Connie Aucamp of Africa stated that fewer contractions would make braille easier for those for whom English is their second language.

Marjorie Bolton discussed the results of the research project of The Universities of Warwick and Birmingham. She showed that we now have statistical evidence that there is a need for change. She wondered why it is so difficult to persuade people to change.

Carlton Eldridge claimed that we are settling today for less educational standards for blind students than for sighted students. He stated that a braille reader should have a choice of grade levels of braille.

Bertil Nilsson showed that with less attention to individual characters the reader is able to use clues from context and from redundancy of language. He felt that Grade 1 Braille would prove most useful and was essential for multilingual persons.

However, both before and since that International Conference many other people have voiced their concerns about the tremendous complexity of Grade 2 Braille.

Barry Hampshire showed that Grade 2 Braille interferes with language patterns. It causes problems because of discrimination difficulties of the symbols. When the perception of characters requires extended intellectual effort, the reader cannot use other clues from context or from expectations or from stored information. The complexity of braille means only a small group of the educated elite can use it. However, in research projects, the less able are not receiving their share. He also stated that the rules of braille are too complicated to allow for the best benefits of the computer.

Nolan and Kederis noted that the speed of character recognition is directly related to mental ability, that contractions increased recognition time of unfamiliar words, and that Grade 2 Braille is an additional educational handicap. Slow readers become even slower when contractions are present. The omission of many characters would result in increased speed, but only a little more space.

J. Gill stated that the integrated student has comparatively poor performance in braille, but if braille was easier its use would increase.

S. C. Ashcroft discovered that in written work, spelling errors are often braille errors. He said that if people aren't motivated they won't learn and if the task is too difficult they won't be motivated. The code needs to be simplified because it has gone past the point of diminishing returns. The space saved is not worth the effort of learning all those contractions. Because braille is more difficult a child must spend more of his time reading.

B. Heckle showed that the complexity of the code delays educational use because the young print-using child is able to record his own knowledge and thought long before the braille-using child who is still learning the code and basic writing skills.

John Lorimer pointed out that 14 signs saved as much as all the other signs. The 45 least used signs save less than 1% of space in a book. There are about 180 rules and meanings for Grade 1, but over 450 rules and meanings for Grade 2. Because of this added complexity, training in braille reading needs to continue much longer, to a more advanced level and more systematically. His research showed that the number of braille forms needs to be reduced. We need to ease the learning load of braille by eliminating confusers and multiple meanings, and by pruning out the dead wood.

Bill Poole said that a simple basic code should not contain contractions of the type known to cause perceptual or cognitive difficulty.

Emerson Foulke remarked that because of the complexity of the code, the hiring and training of transcribers is long and difficult.

P. Bagley and D. Brown both emphasized that the main cost of computer-assisted braille is editing and proofreading caused by the complexities of the Grade 2 Braille code. If costs are to be lessened, the code must be simplified and have straightforward rules.

H. Ziegel and M. Ostendorff cited many advantages of eliminating contractions. There are always spaces between words. There are not so many fine differentiations. Because initial sounds and other helpful clues are more often present, a child can use phonetic skills more, and thus read independently sooner. Because it is easier to write, children can write their own compositions sooner when they are most imaginative. Slow learners can cope better.

Helene Koehler notes that because most educators ignore Grade 1 and Grade 1½ Braille, many people have been deprived of the privilege of reading and using braille. There are many people who are discouraged from learning braille and from finishing their studies of braille because of the complexity of Grade 2 and because of the many signs which must be memorized.

Tom Maley noted that if braille had been easier some people would not have dropped it, that no publications are geared to the newly blinded, that contracted braille differentiates the blind, that history and familiarity are the only reasons for Grade 2 Braille, that there is a growing interest in braille literacy to allow more people to read, but we must have an easier code for the ordinary person.

Kerstin Fellenius points out that the contracted braille code confuses, masks and contradicts the cues which a beginner needs in order to encode the language patterns. It is important that contractions not be used in the beginning.

Louise Johnson noted that every time a child reads a story using Grade One Braille, the understanding of how words are put together is reinforced. However, when using Grade Two most contractions do not reinforce basic phonics skills and a vital education step for spelling and reading is skipped. The integrated blind child should learn to sound out words and spell them at the same time as his classmates. He should not be given symbols which do not fit it at the time. The list goes on and on. Many other people have voiced their concerns about the complexity of Grade 2 Braille. Many research projects have shown advantages of fewer contractions, but already we can see many people are saying the same thing. For some people, Braille Grade Two is too difficult.

## Part 2: A Research Project Comparing Reading And Writing Braille Grade Two With Reading And Writing Braille Grade One

Participants in this study were tested in three different areas. In one test they read lists of words - two lists in Grade One Braille and one list in Grade Two Braille. Data was collected for time and for errors.

Another part was reading stories - two stories in Grade One Braille and one story in Grade Two Braille. Data was collected for time, errors and comprehension.

The third part was writing sentences. A group of sentences in Grade One Braille and another group in Grade Two Braille. Data was collected for time, errors and comprehension.

In all areas tests were matched for length and difficulty.

All braille using students in various types of programs and settings in the Province of Ontario were invited to participate and over 90% did. Several adults also were tested. One hundred and fifty people offered but only 125 were used because 25 were already using Grade One Braille.

Of the 125 Grade Two Braille users, 67 were male, 58 female. The age range was from 6.6 years to 70.9 years and the average age was 17.7. Forty-one were totally blind, 55 had light perception and 29 had more than light perception. Ninety-three were blind from birth and 32 were blinded later in life. Seventeen had additional physical handicaps. Fourteen had learning disabilities. One hundred and four used a brailler and 21 used a slate and stylus. I.Q's ranged from 56 to 155 with an average of 97. Braille was the primary reading mode for 101, tape for 17 and print for 7.

Average listening comprehension was grade 9 level and ranged from grade 3 to university graduate level. Years of using braille ranged from 1 year to 50 years with an average of 9.6 years.

Previous studies comparing Grade One Braille with Grade Two Braille had always used contracted words and passages and then had written them out letter by letter. The data could not determine how much of the difference was due to reading something in a different form than the form the reader was used to seeing, and thus the data was not valid.

In this study a third dimension was included - reading and writing words which are always written letter by letter, the form the reader was used to seeing. Thus each participant read (a) regular Grade Two Braille (b) Grade One Braille which included words which ordinarily would have been contracted but were

written out letter by letter (c) Grade One Braille which included only words which would always be written out letter by letter.

Because the comparisons between (a) and (b) produced similar results to previous studies only the comparisons between (a) and (c) will be shown. This is a true comparison between uncontracted braille and contracted braille.

Table One indicates that Grade One Braille made a positive significant difference in all areas in each part of the test.

For those not familiar with research terms, the following is a very brief explanation of the terms used in the tables. M is the mean or average score. SD is standard deviation which is a measure of the spread of a distribution of scores. F indicates the significance between the two means and zero.  $P < .01$  shows that the significance has less than one chance in a hundred of happening by chance. This is the best rating that these research statistics can give. All timing was in seconds. All tests were matched for number of words, number of syllables in words, number of letters within words, total number of letters and difficulty of words. To make sure they were equal in all respects, print copies of tests were used in a pilot study with print-using readers of various abilities and ages. Four excellent readers, 4 average readers, and 4 poor readers from each of the following grade levels were used - Grade 3, Grade 6, Grade 9, and Grade 12. Thus a total of 48 sighted students participated. There was no significant difference in time, comprehension or errors among the tests. There was a small difference in one area. The Grade One paragraph did take a little longer to read in print probably because of its lack of natural flow of language. However, this small disadvantage for the Grade One paragraph could not be avoided because so many common words could not be used in it.

When comparing the numbers of embossed cells, there is, of course, a difference between the Grade One tests and the Grade Two tests. The story in Grade Two Braille had 229 embossed cells. The story in Grade One Braille had 308 embossed cells or 34% more and it took 23% more space. The list in Grade Two Braille had 104 embossed cells. The list in Grade One Braille had 166 embossed cells or 59% more and it took 39% more space. The sentences for writing in Grade Two Braille had 172 embossed cells. The sentences for Grade One Braille had 219 embossed cells or 27% more and they took 20% more space.



All the participants in the braille testing had completed learning Grade Two Braille. None had ever used Grade One Braille. The only criteria used in selecting the participants was their frequent use of Grade Two Braille.

The testing was done by school teachers and rehabilitation teachers who were given specific instructions for the administration of the tests. All tests were conducted individually. In the writing test a sentence was dictated. As soon as each sentence was completed the next sentence was dictated immediately.

When reading the list in Grade One Braille, 102 people (81.6%) had no errors while only 25 people (20%) had no errors when reading the list in Grade Two Braille. When writing in Grade One Braille 46 people (36.8%) had no errors while only 4 people had no errors when writing Grade Two Braille.

When all 8 items were scored, 113 subjects performed better with Grade One Braille while only 11 performed better with Grade Two Braille.

The following were not differentiating factors between the two groups: age, sex, amount of sight, age of onset of blindness, additional handicap, intelligence, years of using braille, writing apparatus, or primary reading mode. The only item which differentiated the groups was learning disabilities. Blind people with learning disabilities read better and wrote better when using Grade One Braille. Ninety-eight per cent of those with learning disabilities and 93% of those with probable learning disabilities performed better with Grade One Braille while 65% of those without learning disabilities also performed better with Grade One.

Table One: Reading And Writing Braille Grade Two And Braille Grade One

	GRADE ONE	GRADE ONE	GRADE TWO	GRADE TWO	GRADE TWO	GRADE TWO	
Reading Words	M	SD	M	SD	M	SD	F
Time	101.38	69.59	157.32	131.07			35.70*
Time	103.60	89.88			144.77	133.40	22.06*
Errors	0.66	1.68	6.51	5.27			93.02*
Errors	0.65	1.94			4.70	6.98	28.93*
	GRADE ONE	GRADE ONE	GRADE TWO	GRADE TWO	GRADE TWO	GRADE TWO	
Reading Story	M	SD	M	SD	M	SD	F
Time	154.73	114.09	205.76	190.20			15.25*
Time	172.31	158.41			234.37	255.35	19.47*
Comprehension	6.06	1.80	4.97	1.72			21.95*
Comprehension	6.35	1.44			4.79	1.93	38.37*
Errors	1.44	3.74	3.36	5.16			19.88*
Errors	1.35	3.78			4.76	7.85	23.24*
	GRADE ONE	GRADE ONE	GRADE TWO	GRADE TWO			
Writing Sentences	M	SD	M	SD			F
Time	246.89	214.86	276.35	245.35			19.20*
Comprehension	6.86	1.38	5.29	2.09			106.78*
Errors	2.69	3.74	12.15	10.88			155.79*

\* $P < .01$

The statistical data was compiled by Dr. Alan Slemon, Senior Researcher, Althouse College, The University of Western Ontario.

## Part 3: Learning Disabilities And How They Affect A Person's Ability To Learn Contracted Braille

A learning disability by definition implies a discrepancy between capacity for learning and actual achievement. There is poor achievement in one or more of the subjects of reading, writing, spelling and mathematics. It is not a result of mental retardation, sensory deprivation or cultural or instructional factors-although, these may compound the learning problems.

For the participants in the previous study who did not have learning disabilities, the data available indicated that listening comprehension was tenth grade level, reading was tenth grade level and spelling was tenth grade level.

For normal learners all three areas tested to the same level. But for participants who did have learning disabilities, listening comprehension was tenth grade level, reading was seventh grade level and spelling was only fifth grade level. Reading tested lower than listening comprehension and spelling tested much lower when learning disabilities were present.

The Ontario Ministry of Education states that students with learning disabilities now constitute the largest single category of exceptional pupils in Ontario schools. The main learning difficulties for these students are lack of ability to sustain selective attention, inability to remember rules and exceptions to rules, inability to perceive shapes correctly and confused orientation in space and time.

It is no wonder that these people cannot become proficient in Grade Two Braille. They lack the essential skills necessary for success.

For the learning disabled student, Grade One Braille eases the problems. Less selective attention is required, there are fewer rules and exceptions to rules, and there are fewer shapes to be confused with other shapes that differ only in orientation in space.

The estimates of the percentage of visually handicapped people with this additional handicap ranges from 20% to 60%. Of the 150 people approached for the above study 45% had learning disabilities and another 20% had probable learning disabilities. This is an astounding percentage which cannot be ignored! Yet, up to now, research has ignored braille users with learning disabilities.

Unless you have taught braille reading and writing to many different types of students, it is difficult to understand why the characters of braille should cause such problems for so many people, especially those with learning disabilities. Why is it that decoding braille requires such extended intellectual effort, and thus makes some cognitive resources unavailable for interpreting information?

In your home you have several electrical circuits. If you overload a circuit by plugging too many things into it, you will blow a fuse and nothing will work. Similarly, your brain has several circuits. If you overload a circuit by plugging too many things into it, you will blow a fuse and nothing will work. The complexities of the contracted braille code overload the brain circuits for many people and prevent them from reading and writing as well as they could.

For example, in print the letter combination “ou” has 5 basic sounds: ō as in soul, ōō as in soup, oo as in should, ou as in out and u as in touch. Already the circuit is loaded just about to capacity. So what does braille do? It adds complications - “ou” is a character (the reverse image of the letter t) - alone it says out - but not in outside - :”ou” character is always used whenever those letters appear in print - unless they overlap part of a prefix or part of a suffix - or part of a compound word - except when “ou” is followed by “nd” and then you must use dots 4-6-d - and except when “ou” is followed by “nt” and then you must use dots 4-6-t - except for the exceptions. For some people the fuse has already blown but we shall continue. Sometimes “ou” is followed by “gh”. There are at least 6 different pronunciation possibilities for “ough”: ō as in though, o as in bought, ōō as in through, ou as in bough, off as in cough, uf as in tough. For some more people their fuses have blown. So what does Grade 2 Braille do? Well, first you have two characters “ou” and “gh” (easily confused by similar images “ar”, “wh”, “s”) - except for through which is dot 5-th, and except for enough which is “en” except when it is not, and except for ought which is dot 5 -ou - if it keeps its own original sound - except for the exceptions - Poof - some more fuses have blown. The only people left are those with extra heavy wiring in their circuits.

This phenomenon is repeated over and over and over again in Grade Two Braille. It is no wonder that so many people just give up and don’t use braille at all. It is no wonder that a person with learning disabilities cannot cope.

## Part 4: Using Braille Grade One After Switching From Braille Grade Two

One study involved 20 students who were having problems with Grade Two Braille and after several years of using it decided to switch to Grade One Braille. The comparison is made between achievement scores when using Grade Two Braille and achievement scores after switching to Grade One. A second comparison is then made with amount of progress per year when using Grade Two and amount of progress per year when using Grade One.

Table Two shows that much more progress was made in all three reading areas by all participants when using alphabetic braille.

When these students were using contracted braille they averaged only 2 months reading progress per year. When these students were using alphabetic braille they averaged over 17 months reading progress per year. Wow!

Older students in integrated programs who are not proficient at using contracted braille are isolated from their classmates. When some of the students switched to using alphabetic braille they were then able to become part of the group because their classmates easily learned alphabetic braille. They were now able to complete work more quickly and accurately. Self-esteem and social interaction improved.

Table Two: Reading Progress Per Year

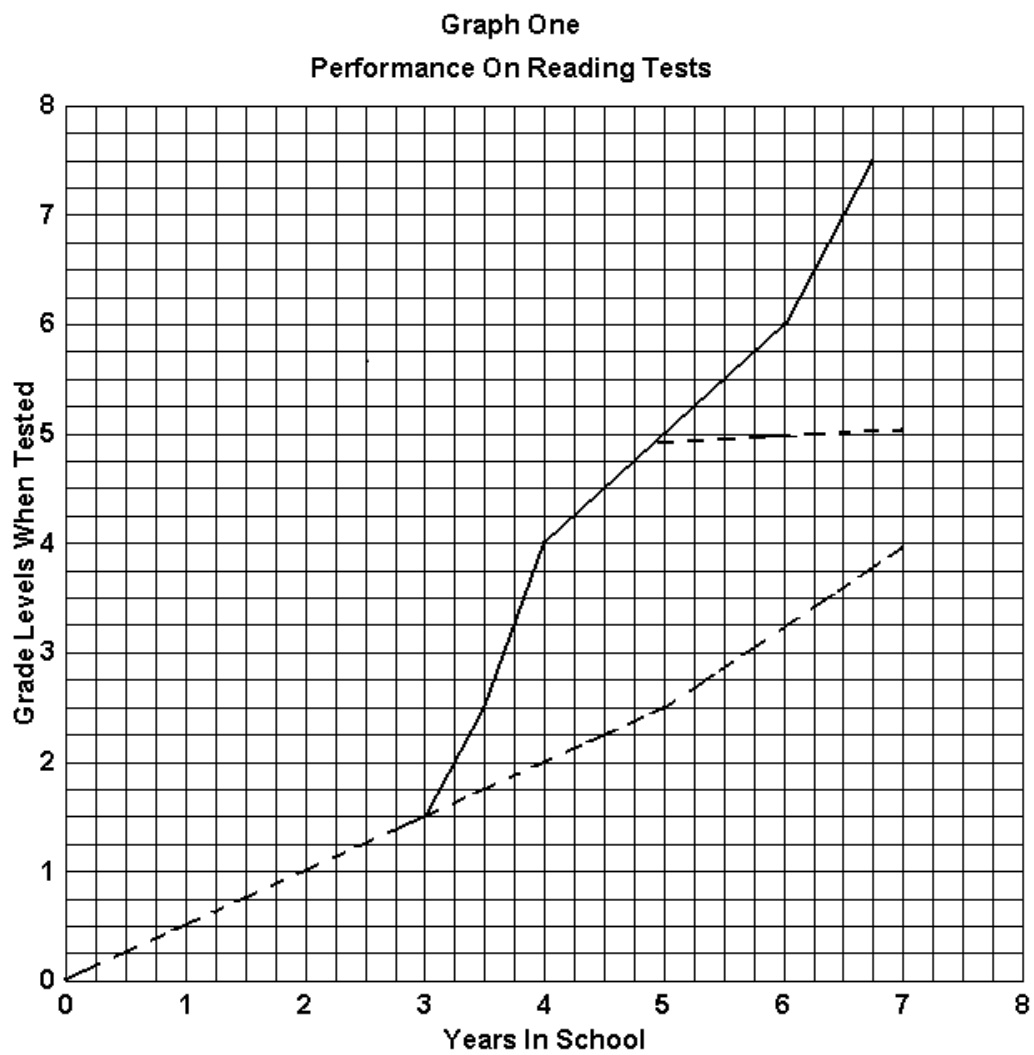
	VOCAB		PHONICS		STORY	
	Before using one	After using one	Before using one	After using one	Before using one	After using one
1	0.35	0.73	0.25	0.87	0.18	1.10
2	0.03	0.60	0.03	0.70	0.01	0.57
3	0.56	1.30	--	--	0.55	1.30
4	0.11	1.40	0.09	1.90	0.11	1.30
5	0.00	1.30	0.05	1.40	0.00	0.60
6	0.73	1.50	--	--	0.65	2.80
7	0.21	0.45	0.06	0.55	0.19	0.55
8	0.31	2.20	0.42	--	0.40	1.55
9	0.05	1.70	0.05	1.50	0.00	0.90
10	0.30	1.10	0.17	2.70	0.00	4.10
11	0.00	0.70	0.40	0.90	0.00	0.90
12	0.08	0.85	0.08	0.35	0.00	0.45
13	0.35	2.40	--	--	--	--
14	0.51	2.90	--	--	0.44	3.70
15	0.28	0.83	0.28	0.33	0.21	0.60
16	0.26	1.15	0.26	--	0.34	0.60
17	0.40	2.10	0.42	2.00	0.02	2.00
18	0.03	2.55	0.13	2.45	0.04	2.45
19	0.40	3.35	--	--	--	--
20	0.00	2.70	0.03	3.10	0.00	3.10
Total	4.96	31.81	2.69	15.50	3.14	28.57
Average	0.25	1.59	0.18	1.29	0.17	1.58

Another study involved 16 younger students with learning disabilities who were having problems with contracted braille.

Data from the reading tests of these 16 students were used in Graph One below. All students had used Grade Two Braille from the beginning. After 3 years some of the students switched to Grade One Braille and some continued using Grade Two. After 2 more years some of the Grade One users switched back to Grade Two.

The graph clearly indicates that students with learning disabilities obtained far better results not only when they began using Grade One Braille but also when they continued to use it.

Graph One: Performance On Reading Tests



Grade One Braille: \_\_\_\_\_ Grade Two Braille: \_\_\_\_\_

## Part 5: A Research Project For Beginning Primary Students

The purpose of this study was to determine if teaching primary children to learn to read and write using Grade One Braille would be detrimental to anyone. Since it had already been shown that those with difficulties did better with Grade One this study included children of average and above average intelligence. The groups were matched for age, intelligence and school setting.

Fourteen children participated in this study. They were tested in listening comprehension, spelling, reading vocabulary, phonics and paragraph reading. After 3 years reading speed was also recorded.

The following table shows positive significance in all areas of spelling and reading for the children who learned to read using Grade One Braille. Listening comprehension, I.Q. and age had no significant differences. In fact, children who began with alphabetic braille did as well after 2 years as children who began with contracted braille did after 3 years.

Table Three: Comparison Of Braille 2 With Braille 1 After One Year

	Braille 2 (n=7)	Braille 2 (n=7)	Braille 1 (n=7)	Braille 2 (n=7)	F
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Vocabulary	1.19	.09	2.13	.25	88.30*
Phonics	1.33	.28	2.70	.61	29.32*
Paragraph	1.07	.10	1.99	.57	17.71*
Spelling	1.47	.18	2.49	.26	71.67*
Comprehension	2.61	.50	2.20	.36	3.15
Age (in months)	77.29	6.18	74.57	3.31	1.05
I.Q.	122.57	16.34	122.57	10.55	0.00

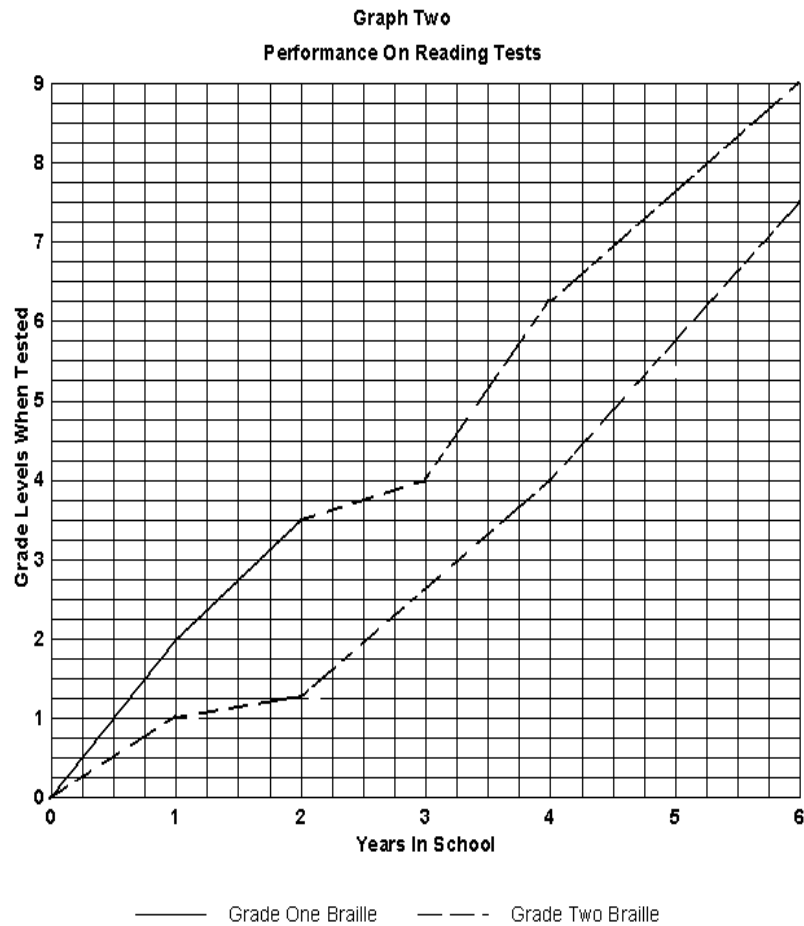
\* $P < .01$

Data from the reading tests of 14 bright students were used in Graph Two below. One group learned to read and write using Grade One Braille and then after 2 years switched to Grade Two Braille. Another group learned to read and write using Grade Two from the beginning.

The graph clearly indicates that when they learned to read and write using Grade One Braille the bright students obtained better results and continued to show higher scores over several years even after they learned and used Grade Two.



## Graph Two: Performance On Reading Tests



The teachers who used the Grade One Braille in the primary classes were all pleased with the results. They felt that many of the best things could not be measured. There was a good indication of individual learning styles. Each child could use his own individual strong points. There was a lack of reversal problems. The children could write with more independence. The print and braille students could do the same things together much sooner. The children could read to themselves or to a friend. Word games could be played. It encouraged thinking rather than memorization and it was great fun.

Primary children in integrated programs could spend more time with their classmates when using Grade One Braille. The classroom teachers were able to help because they could learn the braille quickly. The children were able to help their sighted classmates.

## Part 6: Summary And Conclusions

This chapter has dealt with the topic of Grade One Braille from many angles. In previous literature and research many people have pointed out the problems of Grade Two Braille and have advocated the use of Grade One Braille for some people.

The research cited in this chapter has been ongoing for many years. Every aspect covered showed positive results for the use of Grade One Braille.

The research comparing Grade One with Grade Two showed for most participants positive results for time, accuracy and comprehension when reading and writing using Grade One Braille. Even greater positive results were shown for those with learning disabilities. Thus students with learning disabilities should use Grade One Braille.

Great improvement was shown for those people who switched from Grade Two to Grade One. Every person scored higher in reading and spelling. Thus anyone who is having problems with Grade Two should switch to Grade One.

The intelligent primary students who learned to read and write using Grade One Braille scored much higher in reading and spelling. They even maintained their superior performance after they changed to Grade Two and kept their higher scores for the duration of this study. Thus after 6 years they were still scoring higher than their counterparts who used Grade Two from the start. Thus every child should learn to read and write using Grade One Braille, and only some should later learn Grade Two.

Thus teachers of children with learning disabilities and teachers of beginning primary students should consider using Grade One Braille for their reading and writing programs.

Many people would find Grade One Braille beneficial. The following is a partial list:

- 1) those with learning disabilities
- 2) those with limited intellectual ability
- 3) those with limited tactual sensitivity
- 4) those for whom English is a second language
- 5) many school children in integrated programs
- 6) newly blinded youth and adults

- 7) those with limited vision who can do some work with large print, but need braille as well
- 8) the deaf-blind
- 9) teachers, including regular classroom teachers
- 10) classmates of blind students
- 11) parents of blind children and children of blind parents
- 12) some people with brain tumours
- 13) young children learning to read
- 14) preschool children
- 15) participants in adult literacy programs

We must not only teach Grade One Braille, but also we must allow many people to use it and we must supply materials for them in Grade One Braille.

Let us open the doors to better education, literature and employment by encouraging the use of Grade One Braille for those who need it.

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## Section 2:

### Braille Literacy

1990 is International Literacy Year. It is a time for action to improve literacy for all people - for the present and for the future. It is a time for action to improve literacy for blind and visually impaired Canadians - for the present and for the future.

Let's look ahead and talk about the future of braille in the age of technology. Looking ahead reminds me of something Wayne Gretzky has said. I believe most of you here know about Wayne Gretzky, that marvellous hockey player from Brantford, who came to Edmonton and then defected to the states.

No matter what you think of his relocating, he does return to each of our great cities from time to time. He comes to Brantford each June for the Gretzky Baseball Classic to raise money for the CNIB library so that more braille and talking books can be produced.

He may be the greatest hockey player ever. When asked for his secret, Gretzky says, "I skate to where the puck is going to be, not to where it has been."

This is how we must look to literacy and braille, to look ahead to where the puck is going to be and to be prepared to meet the challenges we will encounter on the way.

In March of this year, CNIB produced a report, "Literacy - An Issue for Blind and Visually Impaired Canadians". I was pleased to be a member of the advisory committee for this report. We received submissions from across all the country and had presentations in Vancouver, Saskatoon, Toronto and Halifax. This report made 30 recommendations so that funding could be obtained to help us move forward to where the puck is going to be. I shall mention several of these recommendations later.

First let's get a definition for literacy. Literacy is the ability to read and write at a level that would enable an individual to meet daily living needs. Literacy is a continuum from basic reading and writing skills all the way up to various technical literacies. It is different for different persons, in distinct times and various places.

For blind and visually impaired people, access to material is an integral part of both developing and maintaining literacy skills for present and future needs.



What role should braille have in literacy? Is it as important as it used to be? Should it be ignored as it is in many places?

I shall list some of the reasons given by others for NOT using braille and then I shall expand on each one in greater detail.

- 1) negative attitudes towards blindness in general and braille in particular
- 2) increased emphasis on use of residual vision
- 3) improved technological systems of communication and increased use of audio-tape and voice output devices
- 4) lack of choices in educational service delivery systems
- 5) inadequate teacher training programs
- 6) increase in percentage of slower learners
- 7) large number of blind and visually impaired persons with learning disabilities
- 8) large percentage of blind persons who are elderly
- 9) complexities of the contracted braille code

The second reason, increased emphasis on the use of residual vision is tied to the first reason, negative attitudes. Fred Schroeder, who has personally experienced both of these, has expressed it this way. I quote him,

“Both my family and I assumed that the tasks around the house routinely involving sight necessarily required sight and therefore none of us sought alternative methods for me to do those jobs. This practice led me to the conclusion that I could function competitively only by means of my little remaining vision. The belief persisted that to see was to be competent and to not see was to be incompetent. My fear of being less capable prevented me from learning braille, the very skill which would have enabled me to function on a par with my sighted peers. Many children today are pressed to read print long past the point where reason would govern that it is no longer functional. I believe there exists a prejudice against braille and as with most prejudice it is not deliberately intended or for that matter even recognized by those who feel it most deeply.” End of quote.

The attitudes of teachers are also important. If a teacher says that John can still read print but Bill has to use braille, what negative feelings that conveys. If a teacher does not know braille or only has braille code information without knowledge of the various ways to teach reading and writing in braille, or is without a firm belief that braille is the best tool for some school work, then how can her student develop positive attitudes?

Part of the problem is the dichotomy. Print and braille don't have to be mutually exclusive. It does not always have to be either, or. It is not necessarily print or braille (or tape or voice).

In Brantford we have several students who use all media. For example, some use braille for notes, voice for computer, tape or scanner for fiction reading, print for math, or whatever suits individual needs. Here is another point to consider. Floyd Cargill tells of a survey that was conducted in his state. Fifteen years after their graduation, one half of the students who had a little useful vision in school, were now totally blind. Those who had been allowed to use both print and braille in school were much better prepared for their future.

The third reason for not using braille implies another dichotomy. Improved technological systems of communication and increased use of audio tape and voice output devices are marvellous additions to our technological age. They help close the information gap which exists between availability of information for the blind and sighted. They can do many things better than braille. They do not totally replace braille, they enhance it. However, they do cause us to shift our emphasis on the way we use braille. Braille is no longer the best way to do all school work, but it is still the best way for some.

Reasons 4 and 5 also intertwine. I cannot comment on these in Alberta but would suggest if lack of choice in educational service delivery systems is present and if some teachers are inadequately trained then steps should be taken to improve those situations. Here again we meet another dichotomy. Why should there be only two courses in all of Canada for teachers of the blind and visually impaired? Why should teachers have to leave families to attend these courses? Couldn't correspondence courses, audio tapes and video tapes be used for at least part of the training?

If you are a parent, do you have a choice where your child is educated? Is the program adjusted to fit the individual needs of your child or does your child have to fit the program?

We'll move on now to reason 9 for not using braille - complexities of the contracted braille code. Immersed in this problem are the slow learners, the elderly and the learning disabled from reasons 6, 7, and 8.

Susan Spungin from the American Foundation of the Blind has prepared a paper "Braille Literacy - Issues for Consumers and Providers" I quote her.

"A recent rash of articles has attributed the illiteracy of blind persons to the complexity of the braille code. Let's not revert to the belief that the braille code is archaic or too complex. No research has supported the notion that the braille code, in and of itself, causes illiteracy among blind students." End of quote.

On the one hand Susan is right. For some blind people contracted braille has opened doors to education, literature and employment. On the other hand she is wrong. There IS research which does support the notion that contracted braille does cause literacy problems among some blind students and for them contractions close the doors to education, literature and employment.

Again another dichotomy. It should not be contracted Grade Two Braille OR alphabetic Grade One Braille. We should have both available for use. People must be allowed to use whichever is best for the individual. How do we know what is best?

Over the past 15 years I have conducted research comparing writing and reading in contracted braille with writing and reading in alphabetic braille.

Since some of you may not understand the difference between these codes I shall explain. Grade One Braille, which is also called alphabetic braille, closely follows print using letter-for-letter correspondence. One print letter represented by one braille letter. Grade Two Braille or contracted braille uses many abbreviations and short forms.

I cannot cover all the 15 years of research, but I will mention the highlights and tell you the results. If you have questions, keep them in mind and I'll be glad to answer them at the end of the talk.

Years ago I was astonished to find that no one had ever done research to see if it was better for beginning primary children to start with alphabetic or contracted braille. It was just assumed contracted was better.

We wanted to find out if teaching beginning primary students to read in alphabetic braille would be detrimental to anyone. Since we had already determined that those with difficulties did better in alphabetic braille, this study included 14 children of above average ability. They were divided into 2 groups matched for age, intelligence and school setting. At the end of each year their progress was tested in spelling, phonics, reading vocabulary, reading stories and reading speed. After 2 years of using alphabetic braille the one group then switched to contracted braille. The other group always used contracted braille. The students who learned to read and write using alphabetic braille scored significantly higher in all areas and they have maintained their superiority even after changing over to contracted braille. We now begin all students with alphabetic braille and only some learn contracted.

The teachers who used the alphabetic braille were all pleased with the results. They felt that many of the best things could not be measured by tests. There was good indication of individual learning styles. Each child could use his individual strong points. There was lack of reversal problems. The children could write with more independence. The print and braille students could do the same things. The children could read to themselves or to a friend. Word games could be played. It encouraged thinking rather than memorization and it was great fun.

Some teachers have now tried it with Primary children in integrated programs. They found the children could spend more time with their classmates when using alphabetic braille. The classroom teacher was able to help because she could learn it quickly. Parents were able to help because they could learn it quickly. The child was able to help his sighted classmates.

Another study involved 20 older students who were having problems with contracted braille and after several years of using it decided to switch to alphabetic braille. Much more progress was made in all areas by all participants when using alphabetic braille.

When some of these students returned to contracted braille their progress again slowed but the ones who continued to use alphabetic braille showed greater progress.

Another study involved 125 people who had always used contracted braille. Reading and writing contracted braille was compared to reading and writing alphabetic braille. Time, errors and comprehension were compared. Overall 113 participants performed better with alphabetic braille, 11 performed better with

contracted braille. The greatest gaps between performance in contracted and alphabetic braille were obtained by those with learning disabilities.

I mentioned earlier students using both print and braille. This works better if alphabetic braille is used. The same information enters the brain from two different but similar media. The two media reinforce each other. After learning alphabetic braille 9 out of 10 students will then choose to do the majority of their work in braille. This is NOT true for contracted braille. It is difficult for most students to use both print and contracted braille because different information enters the brain from each medium and they do not reinforce each other.

What a great solution for a multitude of literacy problems alphabetic braille can be.

At the beginning of my talk I mentioned the publication "Literacy - An Issue for Blind and Visually Impaired Canadians". The recommendations concerning braille came from submissions and presentations. Some of these recommendations emphasize the things we have just discussed. If you want a copy of the full report, Edmonton CNIB has one and can get more from National Office.

#### Some Recommendations of the Advisory Committee

Funding and resources should be secured to adapt literacy materials in Grade One Braille and large print.

Federal Government Policy should ensure full and equal access to all government materials intended for the general public in the appropriate medium (Grade One Braille, Grade Two Braille, audio tape, large print).

Specific findings and recommendations regarding braille literacy should be forwarded to the Canadian Braille Authority to encourage them to advocate and promote the use of Grade One Braille and Grade Two Braille.

A greater number of Grade One Braille and Grade Two Braille books and materials, with appropriate catalogues, should be transcribed and acquired by the CNIB National Library.

Programs to address conceptual development and other special needs of pre-school blind and visually impaired children should be implemented across the country.

More story books for pre-school children should be transcribed in Grade One Braille.

Braille instruction for children should begin with Grade One Braille.

In conclusion, Let's build positive attitudes.

Let's support our teachers.

Let's use modern technology.

Let's encourage the use of alphabetic braille where it is appropriate.

Let's go to where the puck is going to be and the literacy issues for blind and visually impaired. Canadians will be well met.

## Section 3

### Bits And Bites

#### Preschool

- 1) Some interesting books for preschool and beginning readers include cloth, zippers, buttons, magnets, Velcro action figures, pockets, etc. as well as books of different shapes.
- 2) Good early experience with alphabetic braille will give the child a more positive healthy attitude toward braille and he will begin to understand that names of objects can be written and read as well as said and heard.
- 3) Preschool programs should encourage awareness and concentration while fostering experience and language.
- 4) Babies need alphabetic braille books just as much as they need songs, daughter, toys, games and affection. These activities encourage and stimulate their development.
- 5) A child must be allowed to keep his delight, his wonder, his ability for make believe and his absorption in the world while learning skills and self-discipline.
- 6) The more things we can give children to do, to handle, to explore and to work with, the greater the chance that they will get ideas. Then we may be able to help them turn ideas into symbols and words.
- 7) Repetitive songs like Old Macdonald get the child to listen to sequences and strengthen language process.
- 8) A blind child must be part of the action of moving objects from place to place in order to understand that an object is the same object no matter where it is.
- 9) To help promote literacy among families, the importance of early literacy development needs to be explained and parents with low literacy skills need information on literacy resources and programs.
- 10) When you describe objects child is examining, use words that have meaning because of touch, smell, taste or sound.
- 11) Read to your children because when you hold them and give them this attention, they know you love them.

- 12) Read to your children because children's books today are so good that they are fun for adults too.
- 13) Read to your children because until they learn to read themselves, they will think you are magic.
- 14) Read to your children because reading to them will encourage them to become readers.
- 15) Many times you will need to use a hands-on method for supporting your baby's movements and physically showing him how to investigate. This develops trust, alleviates fear, builds confidence and encourages more exploration.
- 16) The blind child needs purposeful lessons in cause and effect because of his inability to observe the results of most actions.
- 17) Parents of blind children may borrow print books with many helpful ideas from the Sherman Swift Reference Library at the CNIB Library for the Blind in Toronto.

## Primary Grades

- 1) It is important to develop a strong favourable attitude early because this will determine the child's future interest in school oriented activities.
- 2) It is important to read aloud to children and to talk to them about meaningful experiences because children must recognize and understand words by ear before they recognize then by touch.
- 3) It is important that young children understand that anything one says can be written down using our alphabet and that a person who knows how to read can tell what others have said without hearing them.
- 4) Children in primary grades need to do a lot of oral reading so that patterns are reinforced in the brain through hearing, speaking, movement and touch.
- 5) Ask questions before reading rather than after reading e.g. Let's find out how old the captain is. Where does Susan go?
- 6) There is variety of preferred stage for phonics introduction. Some prefer to wait until child has a vocab of 50 or more words. Some prefer to begin with phonics. Some prefer exposure to literature and then deal with problems as they arrive. All work if handled well.



- 7) Small shape discrimination and orientation are more important readiness skills than size and texture
- 8) When using phonics, blend first consonant in word to vowel sound. Emphasize words that begin the same.
- 9) To ensure that reading of first books is successful, many teachers prefer to read letters, words, phrases and short stories on paper before introducing books.
- 10) Young children are not taught braille or print. They are taught to write and read by means of braille or print.
- 11) In nearly all cases regular sized alphabetic braille is better than jumbo braille.
- 12) Most early braille reading words should be open without too many letters with 4 or more dots. use words with a, b, c, k, l, and i as well as l, m, o, s, and u. Avoid early words with too many r, t, n, z, q and w.
- 13) The learning value of primary workbooks in braille is extremely low. Far better to spend time in more valuable and meaningful activities than struggling with seat-work pages.
- 14) The use of music can assist the acquiring of reading skills with the use of rhythm, patterns, listening, songs and singing games.
- 15) Oral reading contributes more to reading growth than all the exercises ever conceived.
- 16) Some may concentrate so hard on teaching children how to read using braille that they forget to teach them to want to read.
- 17) Learning to read braille involves tremendous physical and mental strain. Physical activity breaks as well as quiet times are needed often to avoid pressure on the neuro-muscular system and disorganization of mental processes.
- 18) If in early exposure to braille there is fatigue, discomfort, discouragement and/or lack of meaning, this may produce prejudice against braille for life.
- 19) Predicting the whole from its parts is often a problem. Braille users, who must do that to read, need direct training in integrating elements into a total pattern.
- 20) Forget squares, circles and triangles and spend time learning letters.

- 21) Learning to read should be a thinking and not just a memorizing process. Help the child to clarify and express ideas he has formulated himself to promote intellectual growth.
- 22) If we believe that enjoying childhood is important, then there is never any homework in primary grades.
- 23) Writing is more fun if someone makes a fuss over it. It is important to put down the creative efforts of young children before they can write it themselves.
- 24) There are some advantages to books without pictures. Pictures often distract attention away from words and can cause confusion because they elicit too many meanings.
- 25) Using alphabetic braille limits the number of shapes and reduces the opportunities for confusion. It increases the frequency of exposure and lessens the recognition task so that details making up the letters and words become familiar.
- 26) Children need a calm and positive environment.
- 27) The child must learn that meaningful spoken words are made up of non-meaningful sounds which are connected in a specific sequence.
- 28) When a child is writing on a braille, the table should be low enough so that the child will press down rather than pull down keys. Some children prefer to stand.
- 29) When using a braille, keep fingers on keys, push all keys needed for letter simultaneously, use thumb for spacing and always use correct fingering.
- 30) Remember children need both creative writing and braille letter drill. Drill exercises should be done in rhythm to clapping or tapping while children say out loud what they are writing.
- 31) Learn the habit of pushing line spacer key before returning carriage level to avoid writing over lines or rubbing tops off dots.
- 32) When first learning to put paper in braille, move carriage to right and practice with a smaller stiffer paper.
- 33) Learn five steps for putting paper into braille. First check knobs on side to make sure they are rolled as far as possible away from person writing so that bottom of paper will be clamped in properly. Then lift the side levers. Thirdly, put paper tight across under metal roller with left side

under edge. Next lower side levers and roll side knobs toward person until paper stops. Always press line spacer button once before starting to ensure first line is in proper groove. Make sure carriage lever is at left and you're ready to go.

- 34) All children learn best from manipulating and exploring objects. Blind children need learning environments where this is uppermost.
- 35) It is useful in primary years for students to keep some of their work in binders. This helps prepare for organization which is needed in later years.
- 36) If items in classroom have braille labels, use similar labels on map of classroom.
- 37) When introducing spelling, some teachers have found success in this approach. "Our word is crash. A sentence using crash is 'I heard a crash'. Crash is spelled c-r-a-s-h. This is how I write crash, c-r-a-s-h. Now you look at what I have written, crash, c-r-a-s-h. Now you look at the word and spell it aloud. Let's spell it together. Now you write crash."
- 38) The majority of students require the support of knowledgeable teacher who will help them see patterns, generalizations and exceptions in spelling words.
- 39) After the child has basic language competency then phonological awareness develops. Alphabetic principles and sound-symbol correspondence are the same whether a visual code or a tactual code is used. Next comes word recognition and the use of context which leads to competent reading.

## Elementary Grades

- 1) Written comprehension questions should be avoided until at least fifth or sixth grade level.
- 2) There should still be much oral reading at this level.
- 3) Technical skills for braille reading continue to develop into teen years.
- 4) When teaching writing using a slate and stylus, it is best to teach letters which use only corner dots first a, c, k, m, u, x. The last ones to teach would be those with an isolated single dot in the centre e, i, o, j, r, w and h.
- 5) Tactile discrimination continues to improve in elementary years and then usually levels off.

- 6) Children should experience at least three books at the same time including the one the teacher is reading to the class, the one the child is reading in class and a free choice book which means choice of book and choice of medium.
- 7) Non-growth periods are a time for children to master what their brain development permits them to do rather than fail at things they can't do yet.
- 8) Children with similar problems are remarkably successful in learning from one another and in aiding each other in their learning.
- 9) In storytelling for blind children the voice is instrumental to convey mood and tone.

## Secondary School

- 1) For teens and adults learning braille, their first books could be children's literature which is enjoyed by older people because of its humour, human interest and interesting story line. The repetition and simpler vocabulary make them easier to read.
- 2) When introducing a certain punctuation mark or composition sign, read a short passage without it and then reread same passage with new item added.
- 3) When ready for a first novel a good choice is a children's classic which is also enjoyed by adults.
- 4) Some people prefer a list of problem words before they read a passage while others don't. Let student choose.
- 5) Make sure table is high enough for knees to fit under but low enough for comfortable reading. Experiment with different heights and with different angles of slant for books and papers.
- 6) As they progress through school, all braille readers, especially poorer readers, should have less emphasis on braille and more emphasis on listening.
- 7) There is a great variety of techniques among skilled readers and the same variety of techniques among poorer readers.
- 8) When filing cards in braille they should be arranged upside-down starting alphabetically from the back of the drawer. This makes it easier to locate item.
- 9) Every student is responsible for teaching as well as learning and for exercising self-discipline.

- 10) Some students who wanted to learn braille and were told they didn't need it, resent how they were treated now they are adults who no longer can read print.
- 11) Parenting courses given in high school should include discussion of literacy issues including how language develops in young children.
- 12) Schools should offer courses in the study of children's literature and acknowledge the value of teenagers reading to young children.
- 13) Acceptance of the benefits of learning braille is much easier if you are among peers who use braille.
- 14) You do not need fancy equipment to teach braille reading and writing. You need patience, flexibility, sense of humour and usually hard work.
- 15) It is essential for a blind student to learn to make efficient notes from an oral presentation. In higher education most information is received from lectures, readers, tapes and computer voice.
- 16) Sighted children have at their disposal unlimited resources in print and picture on any topic they choose. When blind students are doing research or a project, they need assistance because very little is available in braille and concrete materials.

## Adult

- 1) Acceptance in a warm supportive understanding atmosphere, success from easy and short steps, structure, interest and practice are all essential elements in a program for adult literacy.
- 2) Some congenitally blind adults who come to literacy centres do not understand how words are put together or how to split words into syllables or how to determine the sound of a group of letters.
- 3) For a failure oriented child or adult, reading a silly story with outrageous characters can cause them to enjoy being smarter than someone so clueless.
- 4) When a slow reader has finished reading a sentence, it is wise for a teacher to repeat the sentence so that the student can get the meaning.
- 5) Repeated readings of the same passage may help.
- 6) The expectation of failure is part of a vicious circle. We cannot totally eliminate failure because it is part of life but we can eliminate defeat, hopelessness and despair by building confidence and self-respect. You do that by developing students as well as skills.

- 7) If teacher reads first part of page or book while student follows, then completing it on their own is easier.
- 8) Where opportunities for failure and bewilderment are limited, there is less need for incentives because the work of itself can be rewarding and success in it a major satisfaction.
- 9) For some older folk learning braille is similar to learning Morse code. First you must learn letters, then word patterns and then phrases.
- 10) People blinded later in life need to have assistive gadgets and practice to keep their script writing legible.
- 11) A person who has recently lost their sight may have a double strain on nerves when reading. Strain from using fingers for a new task and strain from eyes because the neural and muscular habits of reading with the eyes are so well formed that they continue to function.

### Learning Disabilities

- 1) One of the greatest obstacles is getting administrators, teachers and parents to understand that many blind children also have learning disabilities.
- 2) It is difficult to compensate if more than one area has problems.
- 3) The learning disabled not only do not outgrow their problems but they fail to keep up the normal rate of growth in many processes relevant to writing and reading.
- 4) Usually nerve pathways, through use, become insulated from interference of other pathways but sometimes they do not.
- 5) If students with learning disabilities are presented with a task that presents too many problems simultaneously, they must rely on rote memory because they don't know what to do to clear all the difficulties. When too great a strain is put on the memory, they have no other means of solving similar problems.
- 6) For variety in reading techniques for the learning disabled include imitative reading, repeated readings, radio reading, chunking in phrases and clauses and paired reading with teacher or another student.

- 7) In blindness we are dealing with the deprivation of some information. In learning disabilities we are dealing with the inability to utilize the limited information that is still available.
- 8) When there is a multiple involvement of both a sensory impairment and a learning disability, we must try to ascertain the contribution of each.
- 9) Students with learning disabilities need to manipulate materials. They need to rotate items and to physically move parts.
- 10) Being told what to look for before stimulus is presented will help speed and accuracy of focus. One way of enhancing selective attention is to make it easier for the child to attend to critical features.
- 11) For the child with learning disabilities, homework and independent work must be reduced to a minimum, because the teacher must have control over presentation and child's response to it.
- 12) When it is explained to a person that he has a learning problem which may be helped by special ways, a great weight is lifted from his shoulders.

### General

- 1) Some teach reading first, some teach writing first, some teach both simultaneously. Choose what is best for the individual child in his setting.
- 2) Try to achieve good movement across words remembering to allow for individuals who cannot achieve this.
- 3) When students of any age are beginning braille double space between words, space between lines, use no punctuation marks or composition signs, start each sentence on a new line and use simple and repetitive vocabulary. Use alphabetic braille.
- 4) Very few braille readers can process information from other fingers. In most cases it is best to use just index finger.
- 5) Many braille readers can process information from only one hand. Encourage use to two hands but if student prefers just one, then allow that.
- 6) To familiarize student who is just learning braille with context, it is often helpful if teacher reads while student follows. The teacher reads again while student follows and finally the student tries to read the paragraph independently.

- 7) Another way to help beginner is to read familiar material such as a poem or song just a phrase at a time.
- 8) Tape loose papers to table so that they do not slide around.
- 9) All ages like to read about themselves.
- 10) Finger dexterity and light touch are helpful when reading braille.
- 11) Braille reading is a process of the brain. It involves memory data, verbal code and tactile symbols.
- 12) Braille reading uses all three stages of memory. The sensory register has infinite capacity but information is gone in a second or two. The short term memory manipulates, compares, discards and records. The long term memory provides constant feedback.
- 13) Most fingers are sensitive to movement which is why some people scrub over letters when learning to read. For some people using the finger sideways produces clearer images and those people should be encouraged to read moving finger that way.
- 14) Reading with two hands is faster for an individual only if there is instantaneous coordination of information and if there is relaxed ability to use hands independently.
- 15) Every teacher of a braille using student should learn to read braille with her fingers.
- 16) It is essential to learn to suspend judgement until all the necessary information is available. A word cannot be read accurately when only the first two letters are read. Because braille readers can touch only one letter at a time, they cannot tell if ba is bâ as in bat, bā as in bake or bô as in ball until they have checked all the letters. The reader may or may not be able to use context clues to help determine word.
- 17) Supplement slower braille reading by tapes and by oral reading of good literature by teachers and parents.
- 18) Make only very limited use of books which are spin-offs of T.V. If the school doesn't use good literature, many students will never meet it.
- 19) Go slowly with only a little new material at a time. Learn each step thoroughly before proceeding to the next.



- 20) Braille reading involves far more than tactile discrimination. It involves nearly all brain functions sensory, motor, memory, cognition, attention, expectation as well as motivation.
- 21) In braille, the time required to recognize a whole word is greater than the sum of time needed to recognize the parts. In print it takes less time.
- 22) Multiple choice questions penalize the braille user because it is much more difficult to scan and compare.
- 23) Braille reading needs movement. Print reading needs pauses.
- 24) In the alphabet letters, dot one appears 21 times, dot six appears six times and all the others appear between thirteen and fifteen times.
- 25) If poorer readers are required to use braille as their predominant educational method, it will be an additional educational handicap. Information gathering capacity should be supplemented by a variety of auditory materials.
- 26) To meet the individual needs of a blind child both specially created materials and appropriately adapted materials are needed.
- 27) We learn to write by writing and to read by reading.
- 28) Braille reading is a digestive process of the mind done with the aid of fingers not by them.
- 29) Creative writing is an area where the blind can compete with anyone.
- 30) Results of experiments show that in right handed people the left hand showed superior tactile skill, the left hand showed better skill in recognizing shapes and fewer errors are made by the left hand in typing.
- 31) In English there is not a single one of the 35 phonemes (sounds) of the language which is represented by just one spelling. Some sounds have 13 different spellings. As well, letters or combinations of letters are used to spell as many as 7 distinct phonemes.
- 32) The more dots a letter contains, the longer a person examines it, the less likely he responds correctly and the less likely he'll remember the name.

- 33) In contracted braille the greatest problem is accurate recognition of the individual cell because of all the complexities and meanings in it. However, braille by nature must depend on recognition of the individual cell rather than the surrounding information in words, phrases and sentences.
- 34) With alphabetic braille the learner is active in the learning process. Thinking skills are developed because he determines words himself.
- 35) With alphabetic braille, a recognition error in a symbol changes only one letter in a word and the learner can usually self-correct. With contracted braille a recognition error in a symbol may change a whole word or part of a word and the learner usually needs assistance to correct.
- 36) It is sometimes necessary to encourage and allow a delayed graduation from any step in schooling. An extra year in primary, elementary and/or high school may be beneficial for the braille user.
- 37) Before you can read to learn you must learn to read.
- 38) Perhaps some children have problems with reading because adults have failed to let their excitement and wonder show. Children need to hear adults laugh and cry when they are reading. Sometimes finishing a good book is more important than getting a good sleep.
- 39) Learning to tell others about a wonderful story you have read is a communication skill that will come in handy right into old age.
- 40) You do not make a dog happy by wagging its tail.
- 41) Instead of bemoaning the passing of young readers let us celebrate their continuing vital presence among us.
- 42) 8 dot braille is based on alphabetic
- 43) A foot control for a tape recorder leaves hands free for other tasks.
- 44) If the use of visual aids is pushed to the extreme, the results can be disastrous. If visual aids are seen in the proper context and used within reason, they can be positive.
- 45) With current advancements in computer technology, the simultaneous publication of print and braille materials is a reasonable goal. Incentives should be given to publishers to provide braille materials at the same time that print versions are made available for print using school age students.

- 46) In tactual development stages, awareness of tactual qualities of familiar objects is usually followed by shape recognition. Real objects are followed by smaller models and 3-D then 2-D tactiles. The final stage is symbol use.
- 47) Just as there are visual illusions, there are tactile illusions. Letters which are close together feel smaller than the same letters surrounded by space.
- 48) To help students understand an outline shape, place object or raised shape inside dotted shape.
- 49) When a person is reading silently, only the fingers are supplying information and stimulation to the brain. When a person is reading orally, the lips, the tongue, the vocal chords and the ears, as well as the fingers, are supplying information to the brain. Oral reading is better for learning.
- 50) When a person is writing braille, if they say aloud what they are writing as they write it, the lips, the tongue, the vocal chords and the ears, as well as the fingers, are supplying information and stimulation to the brain. Until writing becomes automatic this is good for learning.
- 51) When students are tested in braille reading, writing and spelling, five factors emerge which differentiate the primary programs of those with high achievement from the primary programs of those with lower results. These five items produce better braille literacy:
- 1) language program based on meaningful experiences and activities
  - 2) lots of oral reading
  - 3) a sequential phonics program beyond basics
  - 4) no workbook, seat work or written comprehension questions
  - 5) begin with alphabetic braille

## Chapter 2: Literacy Activities For The Preschool Years

### Preschool Years

Most sighted children have had exposure to books before their first birthday. By the time they enter school many literacy concepts are familiar to them.

- 1) enjoying stories and books read by others
- 2) using pictures to add to enjoyment
- 3) pretending to read from books
- 4) becoming familiar with letters and symbols
- 5) playing with paper and pencil and writing name
- 6) some understanding that letters make sounds and sounds make words
- 7) grasping the idea that those black squiggly lines are words that can be read
- 8) reciting alphabet and recognizing that each letter name has a symbol

However, the blind child misses many of these preschool concepts. The underlying reason is contracted braille. The person usually responsible for providing the opportunity for the blind child to have these experiences is the busy mother. Let's not deal with unrealistic fantasies. Most young mothers of blind children cannot learn contracted braille when the child is young. However, they can get a basic understanding of the braille alphabet - which is all they need for several years. Books for young children can be easily produced in alphabetic braille. They can provide the child with all the enjoyment and most of the concepts that preschool sighted children receive.

Alphabetic braille is also the answer for fathers, grandparents, siblings, friends, day care workers and others. The child receives positive encouragement about braille instead of overhearing adults talking about a difficult and frustrating code that makes even the older folk feel inadequate.

Many of the following suggestions for preschool books may seem radical. Keep in mind the purpose of reading to preschool children and remember who will be doing the reading.

#### Preschool Braille Books

1. Use alphabetic braille

2. Use only letters and numbers with number sign
  - no punctuation
  - no italics
  - no letter sign
  - no capitals
  - no explanation of pictures
3. Use regular sized braille - not jumbo
4. Use real objects and textures and only limited use of tactiles. Use taped sounds, sound effects buttons and real sounds where appropriate. Books can be kept in book baskets. In the basket is the book plus objects, textures, sound tapes etc., that enhance the story. Sometimes a small object or texture can be placed on the cover of the book and/or the outside of the basket for identification by the child.
5. There are different types of preschool braille books.
  - 5.1. A braille book with a blank line left between each braille line. This is a braille book first (giving braille added importance). The print letters can be placed exactly above the corresponding braille letter. These books are very popular with blind children.
  - 5.2. A print book with braille added. Clear plastic sheets with braille written on them can be inserted between print pages or brailleable (clear adhesive plastic) with braille embossed on it can be stuck to print pages. These books are popular with sighted adults and children but not as popular with blind children.
6. Choosing books to be brailled. There are several things to consider when choosing a braille book for a preschool blind child.
  - 6.1. Is the story a good one for story telling? Would the story be a good one if it was told without the book and without pictures? Could the story be understood without extra verbal explanation? Fairy tales and nursery rhymes were told for generations before they were written down. Robert Munsch tells his stories many times before he writes them down. That is one reason why blind children love his stories.

6.2. Does the story have words which describe sounds, touch, taste and smell? Do not choose books where visual descriptions are important to the story. Avoid stories where colour is important or where visual concepts of clouds, landscapes or other large spacial items are essential to the understanding of the story. For the young blind children to enjoy stories they need to be meaningful to them. It is important to make sure that early language is connected with experience. There is lots of time in later years to use language to learn about the world. At the preschool level we are concerned with using real objects and experiences to make language meaningful. Combining 6.1 and 6.2 means that fairy tales, nursery rhymes and Robert Munsch stories which have descriptions of sound, smell, taste and/or touch are doubly great.

6.3. Is the book a good book for all preschool children? Does it deal with the child's world - sleeping, eating, playing, etc.? Is it funny? Kids love and need humour. Is it predictable with some repetition? Along with longer story books include some books with only one word or just a few words on a page with a meaningful object, texture, tactile or scratch and sniff sticker. Combining 6.1 and 6.2 and 6.3 means that fairy tales, nursery rhymes and Robert Munsch stories which have descriptions of sound, smell, taste and/or touch and contain humour, predictability and meaningful childhood experiences are marvellous books for blind children.

Since many people want to know what picture books have the above qualities, a list has been prepared. This list is not a complete list. Everyone will have books which meet the above criteria and which are favourites and are not on the list. The problem was not in finding books for the list but in choosing which books to keep on it. A list of books for blind children begins on page 79. Books were included if they were easily available and if publishers indicated that if they received a request they would be willing to give copyright permission for the book to be transcribed into braille.

One of the reasons for publishing this book in a binder format was to allow the opportunity and room for each person to insert pages and add other favourites to the list.

There are many other books written for parents of preschool children with good suggestions of activities in many other areas of development. These activities are important for the child. In this book we are just adding some new ideas on how literature and language can be made more meaningful. Ideas which

will lead the child to better braille literacy and the enjoyment and knowledge that come with it. If you have a preschool blind child be sure to get assistance in other areas of development for your child. Other areas of development also affect literacy.

A very important area for meaningful language development is perceptual-motor activities. The best outline I have seen for this was written by a colleague Mrs. Jan Nemeth. She has granted permission for it to be included here.

### Perceptual-Motor Activities For Visually Handicapped Children Including Those Who Are Multihandicapped

This program of perceptual-motor activities for the young visually impaired and multihandicapped includes an outline of suggested general performance areas, various objectives, examples of teaching the objectives, uses of equipment, simple games of low organization and ideas to motivate general locomotion.

The major goal of the program is to develop and improve perceptual-motor skills through a variety of locomotor, movement, and simple game experiences. An increase in basic skills of movement, and simple game experiences. An increase in basic skills of movement, organic fitness and an improvement in social and emotional development will be evident.

Additional goals of such a program are as follows:

- 1) to increase the enjoyment of moving
- 2) to develop skills already gained and introduce new ones
- 3) to increase mobility skills
- 4) to improve body awareness
- 5) to learn basic spatial concepts
- 6) to improve the child's own feelings about self through hard work and success (increase confidence)
- 7) to improve coordination and ease of movement
- 8) to involve all children in physical activity
- 9) to coordinate movement and auditory clues
- 10) to give personal meaning to language

Traditional physical education programs have usually provided children with a few isolated skills which have been useful only in recreational and game situations. The need for the young visually impaired and multi-handicapped to experience daily perceptual-motor activities generates the necessity to devise artificial means to provide a variety of movement experiences that are absent in their lifestyle. Movement education should play an important part in their physical education program.

The curriculum must be well rounded and include 3 major areas of perceptual-motor development.

- 1) Fundamental locomotor movements
- 2) Movement exploration
- 3) Games of low organization

These areas stress the use of perceptual information in the performance of the motor acts involved and in certain cases overlap. These areas will be discussed briefly and additional supplementary teaching suggestions and ideas will be included.

Fundamental locomotor movements help the child develop the ability to move efficiently in space. Speed, agility, control of balance, endurance, muscle strength and total body coordination are all practised. These skills include running, walking, skipping, hopping, jumping, etc., and such exercises can include variations in force, time and space. Combinations of these skills are also beneficial. There are numerous locomotor activities and experiences which young visually impaired and multihandicapped children can experience. Through creative programming these movements can be a part of every lesson as a daily warm up activity. Once the child can attend and perform to the instructor's voice, single instrumental sounds can be introduced for motivation and later rhythm records can be used. Various locomotor combinations can be practised and made fun. In order to build endurance, short periods of stability and body awareness exercises can be interspaced between periods of continuous locomotor movement. The activities that follow are useful for total body movement and can be part of a daily warm up routine. Note that they are NOT listed in increasing order of difficulty.

### Introductory Warm Up Activities Involving Locomotor Skills

- 1) walk - with/without beat
- 2) walk - forward, backward, sideways, tip-toe, big steps, toes in/out heel walk



- 3) walk - up/down an incline board
- 4) walk - to fast/slow beat
- 5) run - straight path
- 6) run - forward, backward, sideways
- 7) run on toes
- 8) run - toward, away
- 9) run - taking large steps
- 10) run - fast/slow
- 11) jump - off floor using 2 feet (vertical)
- 12) jump - jump - horizontally
- 13) jump - forward, backward, sideways
- 14) jump - for various heights
- 15) jump - over obstacles (ropes, beanbags)
- 16) jump - for height and/or distance
- 17) jump - inside/outside hoop
- 18) hop-on one foot - dominant/non-dominant
- 19) hop - to left/right, forward/backward/sideways
- 20) hop - over/around object
- 21) leap - with right/left foot take off
- 22) leap - for distance/height
- 23) leap - over obstacles
- 24) run and jump/leap
- 25) slide to left/right
- 26) slide forward (gallop)
- 27) alternate leading foot while galloping
- 28) skip (step and hop) for distance/direction
- 29) walk - alternate with run on cue

- 30) walk - and on cue lift one leg up (balance)
- 31) twirl (turn body around)
- 32) interpret sounds of a drum, triangle or tambourine through movement
- 33) demonstrate the actions of objects or animals
- 34) march
- 35) demonstrate various combinations of locomotor skills on cue
- 36) run and on cue sit down
- 37) walk or run to music, when it stops sit down
- 38) do locomotor skills to beat and on cue stop and touch specified body parts
- 39) locomotor skills to beat and on cue stop and touch specified body parts
- 40) musical hoops - walk around, when music stops find a hoop and sit inside (gradually reduce number of hoops available)
- 41) musical chairs
- 42) swing only arms/move only legs to rhythm
- 43) do locomotor skills to simple beat and on cue hide specified body part with hands
- 44) slap body parts to music (instructor calls out specific body parts)
- 45) run and on cue get whole body in air
- 46) crawl like a puppy dog
- 47) run and on cue touch floor/wall with/without specific body part
- 48) run anywhere - what part if touching the floor, now use another part
- 49) explore different ways of travelling with hands and feet on the floor
- 50) tails - attach with tape a kleenex on back, run and don't let anyone catch your tail
- 51) run and on cue freeze, perhaps make a statue (happy, sad, scary, etc.)
- 52) pretend to skate on the floor (do twirls, and leaps)
- 53) ticker tape - hold in one/two hands and move with it, let it fly in the air

The following records are useful:

- Bowmar Rhythm Records - Rhythm Time #1 - Rhythm Time #2

- Movin' - Hap Palmer
- Mod Marches - Hap Palmer
- Bert Kemphert Music - That Happy Feeling

By nature, movement experiences found in regular physical educational programs are perceptual-motor activities but the emphasis is generally on the gross motor development and not the perceptual development through the medium of movement.

Movement is the foundation upon which all educational experiences are built. (Piaget, Delacato, Frostig, Kephart, Getman) Through movement a young visually impaired and multihandicapped child can improve health, gain an understanding and control of the body, develop a better understanding of self and others and respond to challenges at his own level. Activities should be selected on the basis of how well the student can develop concepts and movement principles described under the following headings: body awareness; awareness of environment; awareness of body postures; and body control.

With the visually impaired and multihandicapped, the teacher occasionally must provide solutions to movement problems or provide physical assistance to move correctly. Within time, these movements and solutions to the movement problems may become more natural to the child. Activities can be initiated without equipment and later explored and reinforced by use of equipment. (As an example, a child can be told to walk and on cue touch a specified body part with his hand. Once this has been accomplished, to reinforce or motivate the same activity, the child can be encouraged to use a bean bag and make it touch various specified body parts.) Learning body surfaces can be done first by using the floor and later moving along a bench using the front or back of the body.

A wide variety of equipment should be used whenever possible. The following list suggests some basic equipment.

playground balls (large/small)	parachute
spongeballs	ropes
hoops	scooters
scoops	benches
beach balls	mats

chairs	large push ball
tires	roll mat
yard sticks	push doughnut
adapted walking board	balloons
bells	rockers (various sizes)
drums	kleenex
tambourine	crepe paper
triangle	Javex bottles (for bowling pins, scoops, etc.)
bats	cardboard boxes
inner tubes	broomsticks or hockey sticks
barrels	skates (roller/ice)
wooden climbing boxes	trampoline
horizontal ladder	climber
large gymnastic mat	

Some useful teaching units in movement exploration which can help a child discover how his body moves in space and in time are as follows:

(Unit headings and many more are available from Vanier (1))

### Body Parts

head	back	heels
neck	elbow	ankles
shoulders	wrist	shins
chest	fingers	knees
waist	thumb	thighs
stomach	hands	arms
hips	toes	feet
legs		seat or "bum"

- 1) pretend to take a bath, child or teacher suggest a body part to be rubbed
- 2) hoops, place certain body part inside on request
- 3) explore different action that certain body parts can do, then suggest which body parts must move when dancing to music
- 4) slap body part to music - teacher calls out specific part to be slapped or tapped (can be done using body actions)
- 5) roll ball with different body parts
- 6) lift certain body part on request and shake (e.g. shake shoe off foot)

## Body Surfaces

front

back

sides

- 1) slide along the wall using different surfaces, also floor
- 2) do a log roll on floor verbalizing surfaces
- 3) use equipment such as bench or scooter and experience moving
- 4) partner work - feel partner's surfaces, roll partner along floor

## Body Shapes

curved

straight and narrow

straight and wide

twisted

feel a hoop and make body curl inside it

put bean bag behind body and "glue" feet on floor, turn and pick it up

hold a flag, ticker tape etc. and practice swaying it from side to side, twisting body

## Body Relationships: Body Part To Body Part

near to each other

far from each other

rotate with one part fixed

- 1) bending and unbending various body parts
- 2) practice curling, stretching and twisting body in air/floor, on mat

### Relationship of Body Parts to Objects: On, Off, Over, Around, Across, Under, Near To, Far From

- 1) bench work, go under feet first, etc. and various combinations
- 2) hide legs under parachute, etc. (use walls, floors, boxes, etc. as objects)

### Controlling Body: Total Body Rotations: Static Balances; Dynamic Balances

- 1) various log, forward and backward rolls
- 2) exercises outlined in exercise section
- 3) trampoline work
- 4) climber work

### Manipulating

Refer to section "Suggested Uses for Equipment"

### Relationship of One Person to Another or Others

near to     side by side

far from     shadowing

meeting     mirroring

parting     leading

facing     following

- 1) with partner touch specified body parts together e.g. head to head, back to back, hands to hands, etc.

### The Transfer of Weight

step-like actions

rocking

rolling

sliding

flight

- 1) running and leaping
- 2) put a bean bag between feet and rock overhead and drop
- 3) practice sliding by using a bean bag on the floor and pushing it with a foot
- 4) grasp knees and rock on mat

## Divisions of Space

self space

general space

- 1) standing still swing arms in circle, do with head, legs, fingers etc.
- 2) move around room to experience general space, can do with specific body parts
- 3) use a ball and let it touch all the space that your body takes up, now take the ball and explore the room

## Dimensions of Space

directions: forward, backward, to one side; to the other side; up, down

levels: high; low

planes: flat; round

pathways: straight; curved; zig zag

speed: slow; medium; fast

rhythm

- 1) use the tambourine and tell child how and where to move
- 2) lying on floor raise certain body part high, standing make part go low
- 3) knock 2 blocks together and instruct child to move varying speed
- 4) cover a mat with your body to experience a flat plane, a ball for a round plane

## Miscellaneous Movement Experiences

- 1) sit face to face and push each other at the shoulders, do the same back to back, take partner for a ride and push with back
- 2) pulling or pushing partner by arms or legs around room
- 3) various exercises, demonstrate and physically assist, later do to music with vocal cue
- 4) head, should, knees and toes OR head, shoulders, (substitute child's name) 1,2,3 (do action 3 times)
- 5) push against objects such as the wall, boxes, large balls, etc. or pull at tug of war
- 6) pretend to be popcorn popping on beat of a drum, twist arms outstretched and be a washing machine
- 7) make a bridge with body - back toward floor/stomach toward floor
- 8) make a bridge and partner crawls under
- 9) ankle and crab walks
- 10) animal walks - available in most basic physical education books
- 11) crawl - like a puppy dog/like their baby brother or sister
- 12) pretend something is pulling/pushing you to the wall or whatever
- 13) put masking tape around child's hand and experience what it's like getting stuck to other things and people, pretend whole body is stuck to something
- 14) deep breathing - feel with hands how body relaxes
- 15) stretch to the sky then go limp like a rag doll
- 16) shake specified body parts and later shake whole body (then shake out)
- 17) be small like a balloon after feeling it, then feel a real one expand and make body big and fat like a balloon
- 18) wiggle on your back and feel the floor
- 19) ride on an adult's back
- 20) lift objects with feet
- 21) 2 adults enclose child in their joined arms and sway child from side to side



- 22) do a back to back push up - **very hard**
- 23) adult should support small child in many ways - carry, lift, rock, piggyback twirl around, sit child on knee and bounce up and down
- 24) let child experience the feeling of being contained e.g. arms around child swing or sway
- 25) free falling on a soft mat
- 26) on hands and feet move across floor, lift 1 arm up, lift 1 leg up, kick 2 legs up
- 27) two children in a crawling position, cover with a blanket and pretend to be a turtle
- 28) lie down, fold arms and bend knees, then sit up
- 29) sitting on floor, turn body around in a circle using hands and feet
- 30) take shoes off and experience walking outside on grass, sidewalk, in sand, on cement floor, on carpet
- 31) take a partner, one sits on floor, other feels partner's body parts and surfaces moving it passively, experiencing joint movements e.g. at elbow
- 32) creative movement: (from Vanier, Teaching Physical Education in Elementary Schools)

#### Play in the leaves

- put on your coat, it is chilly
- run up the big hill and back down again
- walk through the leaves and kick them with your feet
- stoop down and fill your arms with leaves and take them over to the big pile
- rake the leaves into a pile
- run and jump into the leaves
- lie in the pile of leaves and cover yourself with them starting at your feet
- let's pretend we are a leaf and fall gently to the ground
- walk across the stream balancing on the stepping stones
- jump back across to the other side
- run up and back down the big hill and back to the house

## Western Scouts

- on horses gallop
- make high jumps over fallen trees
- dodge in and out of tall trees
- dismount
- creep slowly
- crawl and go out of sight
- hide behind a tree
- peer around the tree
- take big steps down a big hill
- jump from rock to rock
- remount horses and gallop home

## Halloween

- pretend to make self scary and be a witch, goblin, or ghost, listen to record and do actions on cue (Hap Palmer's Movin')
- 33) dance to lively music e.g. Bert Kemphert Music, Hal Palmer Music, student can bring in favourite record
- 34) body awareness games and activities on the record "Getting to Know Myself" by Hap Palmer (the whole record is excellent)
- 35) various other Hap Palmer records have specific songs that involve body movement (Easy Does It, Feelin' Free, Learning Basic Skills Through Music #1 and #2, and Learning Basic Skills Through Vocabulary)

With the young visually impaired and multihandicapped it is also important to develop a movement vocabulary. Sometimes words are excellent motivators for movement. (e.g. pop like a popcorn). If used daily they can become very familiar and later be used in combinations or in different orders. Rhythm can be explored. (e.g. run, run, run, jump....., or walk, twirl, walk, twirl) Word associations can be experienced.

(e.g. can you be scary like a monster). The teacher can also use sounds for encouragement. (e.g. “boom” when falling on a mat or “swish” when swaying arms like a tree) More ideas are as follows:

## Word Associations

<b>Can you be:</b>	<b>Sounds for Encouragement</b>	
• as roly as a roly poly:	Boy-ong	Bong, bong, bong
• as small as a mouse:	Boom	Tu-tu-tu
• as round as a ball:	OooOOow	Choo Choo
• as wiggly as a worm:	ooooOOOO	Tick Tock
• as tall as a house:	Va-room	Swish swish
• as pointy as a pencil:	Pow	Aaa
• as floppy as a rag doll:	Ka-boom	Oooooo
• as silly as a clown:	Shhhhh	TTTTT
• as fat as a balloon:	Buzzzz	Fissss
• as scary as a monster:	SSSS	Clink, Clink
• as scratchy as sandpaper:	Ta-ump, Ta-ump	Rah
• as knotty as a knot:	Wooo	
• as stretchy as an elastic		

## Single Action Words

Travelling Actions: run; skip; creep; rush; flee; slither; hop; gallop; dart

Jumping Actions: leap; toss; prance; soar; hurl; bound; bounce; fly

Stopping Actions: freeze; perch; anchor; settle; hold grip; pause

Contacting Actions: shrink; close; shrivel; narrow

Sinking Actions: collapse; lower; fall; sink; drop

Vibratory Actions: shiver; quiver; wobble; patter; shake; tremble; vibrate; shudder

Turning Actions: spin; whip; whirl; twirl; swivel

Percussive Actions: sharp; explode; patter; punch; pound

Expanding Actions: grow; spread; open; release; reach

Rising Actions: lift; rise

It is highly recommended that a wide variety of equipment be used when exploring movement. The following section includes activities that have been successful with young visually impaired and multihandicapped children. These are only a few suggestions. Many more can be invented and included.

## Hoops

- 1) hoops on floor - move around/over
- 2) on the spot, put one body part in the hoop and move
- 3) as above using combinations of body parts
- 4) roll the hoop, try to keep up with it
- 5) roll it to a partner
- 6) on the floor run and jump in it, pretend it is a puddle and stamp feet and splash
- 7) twirl the hoop
- 8) twirl on different body parts
- 9) move around while twirling it
- 10) on floor, jump in it and wiggle out from under it, can do with a partner
- 11) balance hoop on different body parts (e.g. on head and pretend to be a bubble)
- 12) use hoop as a jump rope
- 13) spin hoop
- 14) spin hoop and run around it until it stops spinning
- 15) pretend it is a steering wheel
- 16) musical hoop game
- 17) Hap Palmer song "Walking around a circle" from Getting to Know Myself

## Bean Bags (b.b.)

- 1) b.b. in scatter formation, walk around all of them
- 2) as above only jump over them when you find them
- 3) work with one on the spot, put on the floor and get over it different ways

- 4) can your hands help your feet get over the b.b.
- 5) make a bridge over the b.b.
- 6) make a bridge over it and get different body parts high
- 7) make a low bridge over it
- 8) throw and catch with b.b.
- 9) throw with 1/2 hands
- 10) throw to left/right/behind/in front of/in garbage can
- 11) can you throw with another body part besides your hands (e.g. use teeth, head)
- 12) throw b.b. to the wall using overhand/underhand/sidearm
- 13) on floor push b.b. with a different body part
- 14) b.b. on body part take it for a ride (e.g. on back, on stomach)
- 15) use b.b. and hoops to play a game of fill the basket
- 16) use b.b. and scoops to practice throwing up and catching
- 17) make b.b. touch body parts and take it for a ride
- 18) relays and races - moving b.b. special way to goal
- 19) how many ways can you pick up the b.b. (e.g. knees, feet, teeth, hands, elbows)
- 20) positional concepts - put b.b. behind, in front of, to the side of (beside)
- 21) be a shaggy dog (on hands and knees, crawl with b.b. on back, shake it off)
- 22) hold b.b. between feet and rock it over your head and drop it on the floor
- 23) balance b.b. on different body parts
- 24) hold b.b. between knees and jump
- 25) practice underhand throw with b.b.
- 26) use a chair, bench etc. place b.b. over, under, to left, to right, in front of, behind

## Ropes

- 1) ropes scattered around room, child walks and jumps over rope
- 2) rope in a straight line - can you stretch from one end to the other
- 3) hold rope and turn around and let it fly in the air

- 4) with partner play at pulling each other along floor
- 5) with partner pull rope
- 6) jump over rope - go back and forth several times
- 7) rope on the floor - walk sideways along it  
walk heel to toe along it  
do a scissor walk along it  
do a straddle walk along it
- 8) children in single file, use 2 ropes on both sides and children hold on 1 side with left hand and on other with right hand - practice walking in line to a simple rhyme
- 9) with rope drooped under partner's arms pretend to have a pony
- 10) shake the rope like a snake
- 11) partner sitting on a scooter, holding a rope, pull and take for a ride
- 12) balance on rope with 1/2 feet
- 13) walk forward/backward along rope
- 14) leap over the rope

## Balls

- 1) sit and roll to wall
- 2) sit and roll to partner, (soles of feet touching) receive rolling ball
- 3) stand and bounce (using 1 or 2 hands)
- 4) stand, bounce and catch
- 5) perform a continuous bounce
- 6) can you bounce and catch it 10 times on the spot and then sit
- 7) bounce it against the wall
- 8) bounce it around the room
- 9) bounce it to a partner
- 10) throw it up

- 11) throw it far
- 12) throw to partner
- 13) throw up and catch
- 14) throw to the wall
- 15) roll ball on floor with a body part
- 16) in circle with other children roll or bounce
- 17) kick
- 18) kick to wall and trap it
- 19) relay games - pass over and under
- 20) suspend ball (with bell attached) and hit with hand or bat
- 21) pass ball around circle -      play poison ball

play cat and mouse

call ball

## Benches

- 1) get on the bench
- 2) lead with body part requested
- 3) can your hands help your feet on the bench
- 4) get on the bench without facing it
- 5) walk along bench
- 6) straddle 2 legs on either side of bench and move along it
- 7) let hands pull body along bench on stomach/back
- 8) on back let feet push you along bench
- 9) balance on the bench a different way
- 10) get off the bench a different way
- 11) jump off and stretch in the air
- 12) how far away from the bench can you land when you get off
- 13) go under the bench - let one body part lead (e.g. feet first, head, etc.)

- ## “Martha” Mat

- ## Climber and Apparatus

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- 5) skip 1 rung as you climb
- 6) go up fast, come down slowly
- 7) race your partner going up
- 8) hang on the rope
- 9) can you climb the rope
- 10) swing on the rope
- 11) transfer from the rope to the ladder
- 12) on the bar swing
- 13) get over the bar
- 14) move from the bar to another part of the climber

### Roller/Ice Skates

- 1) stand with/without assistance
- 2) stand from kneeling with/without assistance
- 3) stand from sitting with/without assistance
- 4) stand and touch toes
- 5) walk 5 feet with/without assistance
- 6) cross width of gym/rink with/without assistance
- 7) glide on 2 feet with/without assistance
- 8) lift glide (other foot off floor/ice)
- 9) alternate 1 foot glide and push off
- 10) stop (snowplow on ice, with roller skates with rubber stopper)
- 11) skate forward/backward and stop

Upside down plastic garbage cans are excellent and safe for support, chairs with protruding legs or tube connected legs are dangerous.

### Beach Balls

- 1) many skills outlined under the ball section can be played with the beach ball
- 2) circle kick ball - children in circle kick beach ball to keep it in the circle

- 3) circle bat ball - as above, sitting use hand/bat to keep it in the circle
- 4) use on a parachute - make waves and try to knock it off
- 5) adapted volleyball - divide room with bench, child picks ball and throws it over to the other side of the bench

Beach balls are light and safer than regular balls. Attach a bell to them.

## Scooter Boards

(never allow standing)

- 1) sit on it and move forward, backward, to a goal
- 2) use stomach/back move it
- 3) move about with one part of the body on the board
- 4) spin or turn
- 5) keep yourself as low as possible (also high)
- 6) partners - one on scooter, other push back and take for a ride
- 7) sit on scooter and use only hands to move (only legs, both hands and legs)
- 8) on stomach or back do above
- 9) on both knees move
- 10) on 1 knee and 2 hands move (change knees)
- 11) individual relays and races (e.g. go across room, pick up a bean bag and return)
- 12) obstacle course - around boxes, through a tunnel etc.
- 13) sitting on a scooter, bat a beach ball along the floor

## Parachute Activities

- 1) hold chute with 2 hands, step back to tighten it
- 2) holding, walk to right/left - all make a wheel
- 3) flutter and shake chute to make big/little waves
- 4) put several light balls on the chute (perhaps add bells to them) students make waves and try to knock the balls off (creating a popcorn effect)

- 5) lie chute on floor and take turns crawling under the chute to a voice across on the other side

## Trampoline

(Always use bare feet for safety)

- 1) getting on the tramp safely (sit down, pretend sitting on the edge of your bed, hold on with hands, swings legs over and on, pull self on with hands and slide to the centre)
- 2) sit at centre and use hands to push (also legs)
- 3) on hands and knees - maintain balance  
push and receive movement  
get part or whole body in air
- 4) get to a standing position feet apart  
turn 90°, follow voice, remaining at centre
- 5) stand and bend knees to push and receive motion
- 6) learn to stop by bending knees and receiving motion - do many times
- 7) bend knees and bounce with control
- 8) jump getting body in air
- 9) jump continuously
- 10) jump continuously and follow voice by turning at 90° and remaining at centre
- 11) practice stopping on command
- 12) look for feet landing back at centre, head straight, arm lift and drop, knees extend and return to jump positions
- 13) knee drop - stiffen body, head up, drop on knees and return to jump position
- 14) other stunts - jump and touch knees  
jump and tuck knees  
do hands and knee drop
- 15) hands and knees bounce and return to jump position
- 16) seat drop to knee drop

- 17) seat drop to seat drop and stand
- 18) seat drop 2 turn to stand
- 19) hands and knee drop to knee drop and vice versa
- 20) knee drop to seat drop
- 21) sing various rhymes to motivate child to jump

### Miscellaneous Activities with Equipment

- 1) broomstick/hockey stick - straddle and pretend to ride a horse, play music
- 2) cardboard packing boxes - climb in and close, roll around and play Jack-in-the-box
- 3) bowling - make pins from Javex bottles, child sits on chair and rolls ball
- 4) scoops - cut from Javex bottles and use with b.b. to throw up and catch, throw to wall, to partner
- 5) ticker tape – cut from crepe paper -

swing from side to side-

walk with it trailing high/low

swing up/down

twirl around body

make different shapes

make waves

move to music

use 2, 1 in each hand

- 6) kleenex - staple to rubber band and wear on 1 hand to help discriminate left/right, use with tape and tape to back to make a tail - play at running away and saving tail from being caught
- 7) rocker - if large lie on it, or sit with partner and rock  
  
if regular size, sit and rock, then stand using wide/narrow base
- 8) balloons - hold string attached to it and walks experiencing it flying in the air  
  
hold the string and kick, or bat up with hand

suspend with a string and hit with hand

- 9) use outside equipment when the weather is good, perhaps teacher could be leader and play follow-the-leader using sound cues
- 10) take certain equipment outside to use
- 11) padded doughnut - child pushes and receives impact  
child rides inside and is rolled (requires strict supervision)
- 12) mat roll (roly poly) child straddles legs, sits or lies on stomach and experiences different positions, can also roll it along the floor using whole body
- 13) large ball with inner tube - push and receive impact of someone pushing it  
also good for child to roll over and experience different balances
- 14) after thorough investigation with equipment invite child to choose 1 piece of equipment, child should show different ways of how equipment can be used
- 15) while 1 child is working on a trampoline others can be involved in either group games, and obstacle course or rotate around stations where equipment is placed for specific skills
- 16) obstacle course ideas: involving various combinations of the following equipment
- 17) large gymnastic mat and bench - get along bench various ways (forward, backward, sideways) and jump onto the mat (on back, stomach, low, high, stretch, curl)
- 18) horizontal ladder - move along on top of rungs, in between rungs, forward, backward, sideways, using hands and feet, feet only
- 19) climber - use various ways previously listed
- 20) wooden boxes - climb over and on, stand and stretch, jump off various ways
- 21) bench - go along various ways,  
go under (feet/head first, on back/stomach)  
go over then under (around)  
place tire on and child must crawl along and through

- 22) 2 chairs and 1 hoop - set up with hoops on top of chairs, and child crawls under and climbs out or vice versa
- 23) mat on a slant, child crawls up and performs a log roll down "hill"
- 24) tunnel - use a table and drape a blanket over it, and the child crawls through (watching out for the boogie man)
- 25) slant board (storming plank) - attach to a pull out climber and experience going up and down on feet or on tummy
- 26) tires - climb in and get across a series of them in a row using hands and legs if necessary
- 27) yard stick - tape to floor and child must walk along keeping feet on it

## GAMES

Games of low organization help develop motor skills previously learned and may also provide an opportunity for the child to go beyond his skill ability and create new movements. Games can be individual, providing self-testing situations or be in a group, demanding social integrations with peers. The dynamics of group game situations will not be detailed, however, their importance and contributions to the development of the total child is to be noted.

Game skills, included in the curriculum of the visually impaired and multihandicapped depend on the skill level of the individual child, his need for the experience and the adaptability of the game. Older children may be involved in such games as volleyball or bowling, etc. and various lead-up games, while the young visually impaired and multihandicapped require much modification, starting with the basic identification of the equipment and following with practice of basic skills apart from the game. A series of progressively more difficult performance objectives are experienced. In bowling, the young child should practice the underhand roll, then work toward rolling it correctly to the wall, then to a partner, then to one large pin, etc. For young children there are an endless number of simple games which can be broken down into component skills, and easily practised. Basic object control skills such as rolling, throwing, catching, striking, etc. can be motivated and reinforced through practice when playing these simple games.

A variety of equipment has been previously listed. A number of games of low organization that visually impaired and multihandicapped can participate in will be described in this next section. **Give everyone a turn and keep competition to a minimum.**

- 1) **Poison Ball** (hot potato) - sitting in a circle, children pass a ball around, when the music stops the child with the ball must leave (can do also with 2 balls)
- 2) **Twirl Hoop** - children sit in a circle, a hoop with a bell attached is twirled in the centre, teacher calls a name and the child stands and catches the hoop.
- 3) **Circle Kick Ball** - standing in a circle, children try to keep a beach ball (with a bell attached) within the circle by holding partners hands and kicking the ball.
- 4) **Duck, Duck, Goose** - sitting in a circle, one child walks around patting others on the head, saying "duck", when child wants to be chased he calls one a "goose", that child stands and chases 1st child (assistance may be required to assist children around the circle and back to their position where they were sitting).
- 5) **Dodgeball** - sitting in a circle, children roll a large ball with a bell to the centre in order to touch a child who is in the centre, when touched, child changes places with child who rolled ball.
- 6) **Roll Ball** - sitting in circle, legs spread, child chooses another to roll to, asks child if ready and rolls.
- 7) **Circle Bounce** - as above only standing and bouncing to each other.
- 8) **Circle Bat Ball** - sitting in a circle, children use hands or bats to keep ball (beach ball with bell) in circle.
- 9) **Fox and Rabbit** - sitting in the circle, the children pass 2 balls around, 1 large (fox) and 1 small or differently textured or with a bell, (rabbit), when fox catches up to rabbit, rabbit is out of game.
- 10) **Simon Says**
- 11) **Tails** - tape kleenex to back of child, children run and avoid losing their tails, (can also let them find out how many tails they can catch)
- 12) **Musical Hoops** - walk around scattered hoops, when music stops must sit inside hoop (can gradually decrease number of hoops available)

- 13) **I Sent a Letter** - play the traditional way with a bell in a large envelope (provide assistance to those who require it to get around the circle)
- 14) **Luby Loo** - holding hands and walking around the circle, play the usual way
- 15) **Circle Pass** - sitting in a circle, children pass 2 distinctly different balls, when the music stops, the children holding the 2 balls must change places
- 16) **Rock-a-bye-Baby** - quiet activity, sitting in a circle, children pretend to hold a baby and rock it to sleep, at the end of the song (which they help sing) they lie down and pretend to sleep
- 17) **Daddy Long Legs** - 1 child (it) stands at one end of the room while others line up at the opposite end. Children say following rhyme, do actions, and on cue, turn and run back to original position.

Come little girls

Come little boys                      Start walking slowly to other child

Hush little Children

Don't make a noise                      Tiptoe and continue forward

Climb up the stairs                      Pretend to climb up stairs

Just as I do

Watch out for Daddy Long Legs

So he won't catch you                      Turn and run back to original position

- 18) **Punchinello** - holding hands and walking around a child in the middle of the circle, children say rhyme and to actions suggested by "it"

What can you do Punchinello, little fellow

What can you do Punchinello little man

(child initiates body action)

We can do it to Punchinello, little fellow

We can do it to Punchinello, little man

(other child has a turn in the middle)



- 19) **Fill the Basket** - scattered b.b. children pick them up and put them in a hoop placed in the centre of the floor (teacher can pick them out and throw them away again as long as you want game to continue.
- 20) **What Time is it Mr. Fox** - one child at one end of the room (fox) others line up at other end (holding hands) they ask the question and fox tells time (e.g. 3 o'clock) and takes 3 big steps counting out loud this continues until the fox says "suppertime" and then children turn and run back.
- 21) **Farmer in the Dell** - play the usual way, holding hands in a circle and saying the rhyme, child chooses an action for others to copy (e.g. jump) and children say 2nd rhyme (The farmer can jump etc.) and copy action.
- 22) **Ring Around a Rosey** - play the traditional way and practice standing up and sitting down
- 23) **Mulberry Bush** - to the same song children sing:  
 This is the way (child's name) (action)  
 This is the way (child's name) (action)  
 This is the way (child's name) (action) on a Friday morning (change accordingly)
- 24) **Arm Dance** - Discuss various movements children can do with their body parts then do dance to the rhyme  
 I know a new dance and it's called the arm, if you've got lots of charm you can do the arm  
 On your mark get ready 1,2,3  
 Come on everybody do the arm with me  
 Following verses can be carried on substituting:  
 leg - eat an egg  
 head - make your bed  
 body - don't look shoddy
- 25) **Jack in the Box** - 1 child hides in a large box (or large push doughnut with a box over his head) others stand around and say rhyme, and on cue child pushes box away and climbs out  
 Jack (substitute child's name) in the box

Sitting so still

Won't you come out

Yes you will

- 26) **Hands on** - teacher says "hands on (body part)" and repeats naming another body part and continues and speeds up pace
- 27) **Clean Up the Backyard** - place bench across the middle of the room, scatter b.b. around room on both sides, children take turns cleaning up 1 side of the room by picking up b.b. and throwing them over the bench, and then go to the other side and do the same
- 28) **Musical Chairs**
- 29) **Guess Who** - 1 child is allowed to feel the face of another and guess who it is
- 30) **One Finger, One Thumb** - sing song and do action, following by adding more body parts to the song
- 1 finger, 1 thumb keep moving
- 1 finger, 1 thumb keep moving
- 1 finger, 1 thumb keep moving, to chase the blues away
- Add - 1 head, 1 arm, 2 arms, 1 leg, 2 legs
- 31) **Knock the Pin Down** - can play in a circle formation using a Javex bottle with a bell attached and children roll the ball and try to hit the bells OR 2 number of children on 1 side of the room and the other 2 at the other end, pins in centre of the floor, children keep rolling the balls back and forth.
- 32) **Call Ball** - teacher calls child's name and throws a bell ball, child goes after ball and returns it to the teacher
- 33) **Join in the Game** - children in a circle formation, take turns being in middle -
- Let everyone (action) like (child's name)
- Let everyone (action) like (child's name)
- Come and join the game
- You'll find that it's always the same

- 34) **Cat and Mice** - 1 child wears a bell (cat) others are mice and avoid being caught by the cat
- 35) **Seven Jumps** - from "Primary Folk Dances" by Herman, children practice actions first and learn to do them by verbal prompting, sitting in a circle, then listen to music and do same actions on cue with help from teacher

Through creativity one can enrich the life of young visually impaired and multihandicapped children by providing experiences that help them understand how their body works in space.

Movement experiences, if practised with a comprehensive program of fundamental locomotor skills and simple games, will provide the visually impaired with the best possible variety of perceptual-motor experiences.

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3 Pigs

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## Chapter Three: Learning To Read And Write In Primary Grades

In the introduction, we discussed the results of research that showed that blind children who learned to read and write using Grade One Braille had higher test scores than children who learned to read and write using Grade Two Braille. There were no exceptions. It continued over time. For those who later switched to Grade Two Braille, their better test scores still continued after several years.

Many children have become excellent braille writers and readers using Grade Two Braille from the beginning. No one can deny that. However, they could have been better braille writers and readers sooner and benefited from all the positives that emerge from early success, if they had started with alphabetic braille.

Other children have NOT become excellent braille readers and writers using Grade Two Braille from the beginning. No one can deny that either. Some of them never achieved good skills. However, they could have become better braille writers and readers and benefited from all the positives that emerge from early success if they had started with alphabetic braille and continued to use it.

Everyone benefits when children learn Grade One first. The brighter benefit, the slower benefit, the learning disabled benefit. Those who learn Grade Two later on benefit. Those who remain with Grade One benefit. Those in integrated settings benefit. Those in special settings benefit. Those in whole language programs benefit. Those in phonics programs benefit. Good spellers benefit. Poor spellers benefit. Those with low self-esteem benefit. Parents benefit. Everyone benefits.

With Grade One Braille the blind child can follow the same program as primary classmates. If the class emphasizes whole language the child can fit in much sooner. If the class emphasizes phonics, the child can fit in much sooner. If the class uses basal readers, the child can fit in much sooner. The ideal program uses some of all the above.

Because of the nature of braille, phonics becomes much more important for the braille user. Remember - the braille reader can see only one character at a time - not whole words and phrases. The letters must be perceived one at a time and then put together. The knowledge of letter sounds and group letter sounds is essential.



Because of this importance of phonics, the following section will give some practical suggestions for adaptations for helping braille using children develop automatic phonics skills.

## Auditory Perceptual Skills

Auditory perceptual skills are important for all children. They are essential for blind children.

There is a difference between auditory discrimination skills and auditory perceptual skills. In auditory discrimination all that is required is an ability to recognize that two words are the same or different. Auditory perception goes farther because it requires the ability to separate the word into its parts or individual sounds, and it also requires a recognition of the sequence of how these parts fit together.

Tactual perception for reading braille requires the same skills as auditory perception - not the same skills as visual perception. Visual information is usually available for longer times. Tactual and auditory information are available and then they are gone. The ability to organize information quickly is essential. Good short term memory and good long term memory are important.

If the blind child has poor auditory perceptual skills, he cannot learn to attach specific spoken sounds to specific braille letters or combinations of braille letters.

How do you determine what level of auditory perception skills that a child has?

Give the Test of Auditory Analysis Skills (TAAS) on page 78 in the book Helping Children Overcome Learning Difficulties by Jerome Rosner, published by Fitzhenry & Whiteside Limited, Toronto.

Then determine the child's TAAS score from the chart on page 79 in the same book. Then follow the program outlined in the same book. I highly recommend that you read and reread this book. The activities suggested have helped many children. The understanding you will gain will contribute to the student's success.

When using alphabetic braille, the auditory perception skills mesh so well with the tactual perception skills that real progress in word analysis will appear.

## Braille Phonics Program

Suggested order of consonants in a braille phonics program

b m p

l f n c k d r v

g h s j t y x

q w z

Items considered for list order

- a) ease of braille tactual legibility
- b) ease of braille writing
- c) number of common words beginning with letter
- d) name of letter indicates sound of letter
- e) ease of pronouncing sound
- f) number of different sounds the letter makes at the beginning of words and/or does letter combine with other letters to produce a different sound

a) Some braille letters are easier to recognize tactually than other braille letters. If you are sighted the only way you can appreciate this is to blindfold yourself and force yourself to read tactually - yes with your finger and no peeking. Do it for half an hour. It will be the best benefit of time you have ever spent to increase your understanding of the learning of braille. Everyone who teaches braille should learn to read braille with the fingers.

b, c, l, g, k, m, p, v, and x are usually easily recognized.

n, t, r, and w are more difficult to accurately identify tactually.

b) Some letters are easier to write than others. It is essential that the correct fingering be used when learning to write. If the young child's hands are too small or the fingers too weak get an alternative to the brailier. Use a braille'n speak - the keys require only a light touch; use extension keys on the brailier - they require less pressure; use an electric brailier, use a computer keyboard adapted for braille. See recommendations in chapter concerning learning disabilities if child has trouble remembering dot numbers for writing letters.

a, b, c, l, g, and p are usually easier to write

h, i, n, o, s, and w are usually more difficult.

c) There are more common words beginning with some letters than with other letters. In braille you see the first letter of a word before you see anything else. The first letter is the most important. If you will use the first letter and its sound a lot, that will reinforce the name, sound, feel and uses of it.

There are not many common words beginning with z, x, v, q, j, or k.

There are lots of common words beginning with s, h, w, b, f, m, and t.

d) Does name of letter indicate sound of letter?

b, d, p, t, v, j, k, and z      yes - through initial sound of letter name

f, l, m, n, s, x, and r      yes - through final sound of letter name

c, and g – partly      only one sound letter makes is in letter name

h, q, w, and y      no

e) Some sounds are easier for a young child to enunciate.

If a child has difficulty saying the sound, accurate phonics skills are hard to establish. This is often an individual problem. Sounds that are easier for the child to say should be used early if possible.

b, m, and p are usually easily enunciated.

l and r are usually more difficult.

f) Some letters always make the same sound and are easily reinforced. The letter b makes only one sound b. Other letters make different sounds depending on what letters follow them in words. The braille reader must delay decisions for these letters until all the information is in. For example the letter c has an s sound if followed by letter e, i or y; a ch, sh or k sound if followed by h; a k sound in most other circumstances.

On the other hand some sounds have only one letter possibility while others have more. For example, the sound b is always made by the letter b or bb whereas the sound k can be made by c, ch, ck, k, q. Many students experience a great deal of difficulty when choosing the correct letter combination for spelling some sounds.

There is not room in this book to give suggestions for phonics activities for all the letters. Just the three letters which were suggested as good ones to begin with will be included here. Keep in mind the following:

1. Have fun
2. Have more fun
3. Connect braille form with sound

Suggestions for letters include:

- 1) introductory activities
- 2) stories, songs, poems
- 3) items suggested for letter table
- 4) items for letter book
- 5) words from common word list
- 6) words for substitution
- 7) letter recognition activities
- 8) letter writing activities
- 9) words to read & write
- 10) phrases to read & write
- 11) stories to read & write

## SUGGESTIONS FOR LETTER “B”

### 1(a). Introductory Activities

blow balloons till they burst, bust, bang, break  
make bee bean bags  
bake buns, biscuits, beans  
bite bologna, bananas, butter, beets, bacon

beat batter  
wear beard, belt, boots, bib  
have backwards day  
build with boxes

### 1(b). Gym Activities

bounce balls  
climb in big box, barrel, boat  
bat balls  
be on back on bench or below bench  
beat bean bags  
ride bike  
stop when bell rings  
fly like birds or butterflies  
roll ball with bell in it  
sit on bottom

go before or behind in line of boys  
ride bus  
balance on balance beam  
be between handles on box horse  
bounce on trampoline  
bend belly on big ball  
build with blocks  
bend back to make bridge with body  
stand back to back with friend  
bowling with ball to hit empty bleach bottles

Refer to Page 62: Bean Bags; Page 64: Balls; Page 65: Benches; Page 67: Beach Balls

## 2. Stories Songs Poems

3 Bears  
Bugs Bunny  
Beauty and the Beast  
Bertha Baked Some Biscuits

Grandmother mixed up a cake  
And put it in the stove to bake.

Daddy left his coat  
In our motor boat.

Mr. Quaker  
Is a baker

A glass of milk and a slice of bread  
And then goodnight, we must go to bed.

James and Paul  
Have a ball.

There is a fox  
In a box.

He would rather hike  
Than ride a bike.

My little doll has silky hair  
But, oh dear me, her feet are bare.

The little sand-man shows his head  
And looks for children who are not in bed.

Come quickly Ned  
Jump out of bed.

Lazy head, lazy head  
Get yourself right out of bed.

Bonnie put the dog right off his track  
He made a door in front and one in back.

Beckie baked some biscuits  
Some biscuits, some biscuits  
Beckie baked some biscuits  
And Bob baked a bun

Barbara baked some brownies  
Some brownies, some brownies  
Barbara baked some brownies  
And Bessie's beans are done

Billy Boy  
Baby Bunting  
Bring Back My Bonnie To Me  
Blowing Bubbles

See the little sleepy head  
Curled up snugly in her bed.

The man had a fox  
In the wooden box.

Raise your hand  
And lead the band.

The boy will run  
To get a bun.

Whenever Dan has a heavy sack  
He carries it safely on his back.

Hark, hark  
The dogs can bark.

How would you like  
A nice new bike?

Little Mike  
Can ride a bike.

In summertime my rope I jump  
But once I fell and got a bump.

How many T's she began to sputter  
Ought a goose to put in butter.

On Christmas day in one of my socks  
I found a tiny music box.

Billy Boy's boots are big  
Billy Boy likes to jump  
So Billy Boy's boots go bumpety  
Bumpety, bumpety, bump.

I blow bubbles  
Round bubbles  
Big bubbles  
Big round bubbles

Bertha only bounced her ball  
Bounced her ball, bounced her ball  
Bertha only bounced her ball  
She simply cannot cook at all

Busy buzzy busy bee  
Buzzing round from tree to tree  
Busy buzzy busy bee  
Don't you dare to buzz near me  
Buzzzz

Bobby gave Billy his big rubber ball

Bobby's brother burst Billy's balloon

Rubber Baby Buggy Bumpers

### 3. B Table

big box  
basketball  
big bell  
belt with buckle  
bag of balloons  
box of baskets  
barrel of bean bags

bank  
bottle  
baby's bed  
beach ball  
bowl of big beads  
barn  
baseball bat

### 4. Book For Children To Make

cover - row of b space b etc.

Put each item listed below on separate page. Write name of item at bottom of page.

Buttons  
Balloons  
Beans  
Beads  
Bags

b--b-bat  
boxes  
bubble gum  
bone  
bell

### 5. Words From Common Words List

big but be by best been back bed better because book boy blue buzz baby bird ball block buy

bell bus burnt bacon building began begin beans before beside between

### 6. Words For Substitution (don't forget children's names) "Upwords" game is helpful.

get→bet  
he→be  
me→be  
my→by  
we→be  
cold→bold  
too→boo  
keepbeep  
look→book  
say→bay  
see→bee

make→bake  
tell→bell  
take→bake  
way→bay  
took→book  
car→bar  
now→bow  
howbow  
went→bent  
read→bead  
mean→bean

day→bay  
had→bad  
long→bong  
like→bike  
will→bill

at→bat  
all→ball  
eat→beat  
ask→bask  
old→bold  
and→band  
it→bit

## 7. Letter Recognition Activities

- a) Move across line of b space line space b space line space b  
On next few lines include other letters mixed in with b's  
b space line space g space line space m space line space b  
On next few lines join b to another letter  
ba space line space br space line space bi space line space bo  
Use only letters which would follow b in words
- b) Read short lines of spaced letters  
b m a b b g l k b c  
Read short lines of joined letters  
ba ib bl ob br be ub
- c) On page of mixed letters put gummed circle around b's or gummed line under b's or cover up letters that are not b's with gummed dot. Keep in mind that completed exercise should still have value for child.

## 8. Letter Writing Activities

Letter drill should be done to a rhythmic beat with teacher clapping or tapping. Everyone should say aloud with the beat what is being written. Dot numbers may be included. Use correct fingering.

- a) Write line of b's with no spaces. Then write line of b space b space b. Keep fingers on keys and space with right thumb.
- b) Write line of pattern of b's with another letter.  
ba ba ba **or** br br br ...and so on.

## 9. Words to Read and Write

Practice reading and writing words beginning with b from common words list plus any other words child needs. Have child write words on pages in b book when it is made. Choose a game or activity from section beginning on page 2.

## 10. Phrases to Read and Write

Practice reading and writing phrases using words from common word list. Use phrases in game or activity.

## 11. Stories to Read and Write

Write about introductory activities and gym activities that child participated in. If child keeps a daily journal, entry for the day could be about a b activity. Story could be dictated by child to be written or child can write own story if able. A cooperative story with each child contributing is usually enjoyed by all. The following is an example of a cooperative story. Each child receives a copy.

We blew up balloons.  
The balloons burst with a big bang.  
We baked buns and buttered them.  
We ate bananas and beans.

We bounced balls.  
We bent backwards over a bench  
We sewed buttons and buckled belts.



## Suggestions For Letter "M"

### 1(a). Introductory Activities

turn mix master on to medium  
light matches  
drop money  
use magnets - build with magnet shapes  
make muffins with margarine and molasses  
menu of other foods  
    maple syrup  
    meat  
    milk  
    mustard  
    miniature marshmallows  
make milk shakes with mixer  
cook macaroni  
make macaroni necklaces & bracelets  
make macaroni pictures (collages)  
wear mittens and mask

### 1(b). Gym Activities

move muscles	move like a mouse
march to music	move like a monster
spin like motor	
one in middle of circle	*Refer to Page 66 "Martha Mat"
climb mountains	
mail man's route	
mop floor	
on mats and under mats	

### 2. Stories Songs Records Poems

Mickey Mouse March  
Old MacDonald  
Mistress Mary

Little Miss Muffet  
Mulberry Bush  
Muffin Man

Billy has two playful kittens,  
Billy also has two mittens.

If the string falls off the balloon,  
It will go up -- up to the moon.

All was quiet all over the house  
The only one up was a little grey mouse.

One, two, three,  
Look at me!

I bought some candy at the store,  
I ate it all and still want more.

My frisky, fuzzy, furry cat,  
Is sound asleep upon the mat.

I'm shiny and black, my number is ten,  
I carry to work women and men.

My little brown shoes were terribly tight,  
They pinched and squeezed with all their might.

Go to church on Sunday,  
Then to school on Monday.

Daddy took me to a carnival ground,  
We had such fun on the merry-go-round.

Our baby has very tiny feet,  
His toes and his shoes do not meet.

If you want to buy some honey,  
You must give the man some money.

Every night our little cat  
Falls asleep on the tiny mat.

Gay Mr. Squirrel high up in the tree,  
How would you like to change places with me?

Robin in the cherry tree,  
Please leave some for me.

Margaret, Mary, Melinda and May  
Four merry maids came out to play;  
"Good morning", said Margaret,  
"Good morning", said May,  
Melinda and Mary just ran away.

### 3. M Table

monkey  
mat  
mop  
mittens  
milk cartons  
muffin tins

mask  
magnets  
mail  
macaroni  
motor  
magazines

### 4. Book For Children To Make

cover - row of m space m etc.  
macaroni  
miniature marshmallows  
matches

money  
mitts  
mistake  
mints

### 5. Common Word List

me, my, mother, make, made, more, must, morning, many  
may, much, mom, man, milk, Miss, Mr., Mrs.

### 6. Words for Substitution

cold→mold  
cat→mat  
day→may  
dad→mad  
find→mind  
food→mood  
fat→mat  
few→mew  
we→me  
way→may  
wet→met  
will→mill

get→met  
he→me  
had→mad  
house→mouse  
hole→mole  
hold→mold  
hiss→miss  
jumps→mumps

just→must  
kind→mind  
let→met  
night→might  
nice→mice  
ran→man  
say→may  
soon→moon  
six→mix  
too→moo  
take→make  
top→mop

at→mat  
all→mall  
an→man  
ask→mask  
eat→meat  
ice→mice

Follow activities for 7,8,9,10 and 11 as suggested under letter “B”  
Substitute “m” and words beginning with “m” where appropriate.

## Suggestions For Letter “P”

### 1(a). Introductory Activities

pop popcorn  
paste popcorn and peanuts and peanut shells to make a picture on paper  
pin p words on potato  
taste peach, pear, potato, plum, pepper, pickle  
paint pictures on paper  
wear perfume  
write poem  
place pegs in pegboard  
put parcel in pocket in pants

### 1(b). Gym Activities

postman game	parachute up	push-ups
pitcher for ball	play with partner	
pick up hot potato	push and pull	
ponies	pop like popcorn	
climb pole	punch, pound and pause	

### 2. Stories Records Songs Poems

Popeye  
Peter Piper  
Ping  
Pockets  
Winnie the Pooh  
Peter Rabbit

Will you tell Dick  
What flowers to pick?

Santa came to Jack  
With a big brown pack.

When the wagon is full  
Then you may pull.

I found a little locket  
So I put it in my pocket.

Jenny Henny  
Lost a penny.

Jane will try  
To bake a pie.

At the store I bought a top  
Billy bought a bottle of pop.

Rap-a-tap came the summer rain,  
Rap-a-tap on the window pane.

Naughty little ducklings once were late for school,  
Teacher found them playing in the swimming pool.

Little cricket in the grass,  
I can hear you as I pass.

At the fair I tried to win  
A great big shiny pin.

Play a game of hide-and-seek,  
Close your eyes and don't you peek.

A little gray mouse that nibbles and gnaws,  
Really belongs in Pussy's paws.

I have an elephant stuffed with wool,  
Who has flappy ears that are fun to pull.

### The Song of the Pop-Corn

Pop, pop, pop  
Says the popcorn in the pan,  
Pop, pop, pop  
You may catch me if you can.

Pop, pop, pop  
How I scamper in the heat,  
Pop, pop, pop  
You will find me good to eat.

Pop, pop, pop  
Says each kernel hard and yellow,  
Pop, pop, pop  
I'm a dancing little fellow.

Pop, pop, pop  
I can whirl and skip and hop,  
Pop, pop, pop;  
Pop, pop, pop, pop, pop.

### The Rain

Pitter, patter, pitter, patter, goes the gentle rain,  
Pitter, patter, pitter, patter, on the window pane.  
Patty can't go out to-day  
Patty must stay in and play,  
While the rain goes pitter, patter, pitter, patter, pit.

### The Pea-Pod

Two plump peas in a pea-pod pressed,  
One grew, and two grew,  
And so did the rest.  
Grew and grew and grew and grew,  
And grew and never stopped,  
Till they grew so plump and portly,  
That the pea-pod popped.

I have pennies in my pocket  
And this is what I'll do,  
I'll buy popcorn and some peanuts,  
Perhaps a lollipop for you.

### 3. P Table

paper  
pencil  
pen  
pipe  
pig

perfume  
pitcher  
pots and pans  
paddle  
pillow

parcel  
pegboard  
purse  
potato  
pail

### 4. Book For Children To Make

paper  
pencil  
pipe cleaner  
paint  
pea

pills  
pins  
pegs  
pine needles  
pine cones

### 5. Common Words

Put people pull play place please pretty

Follow activities for 6,7,8,9,10 and 11 as suggested under letter “B”.  
Substitute “p” and words beginning with “p” where appropriate.

## List Of Common Words

### A

10 all  
and  
are  
at  
9 a  
8 am  
an  
7 about  
any  
ask  
away  
6 after  
again  
always  
3 air

### B

10 big  
9 be  
8 by  
7 been  
best  
6 back  
bed  
better  
because  
5 boy  
book  
blue  
buzz  
baby  
bird  
ball  
block  
buy  
3 bel  
before  
beside  
between  
bus  
burnt  
bacon  
building  
began  
begin  
beans

### C

10 come  
9 cold  
could

7 car  
6 came  
5 call  
clack  
4 cat  
chair  
children  
3 cuts  
clang  
cry  
cool  
cluck

### D

10 do  
9 day  
8 did  
down  
7 door  
don't  
6 dog  
5 dad  
dear  
4 dry  
does  
3 ducks  
doctor  
drum

### E

8 eat  
7 every  
5 ever  
each  
4 egg

### F

10 far  
8 found  
7 first  
from  
6 father  
four  
friend  
5 find  
five  
fun  
4 finger  
fire  
fish  
flowers  
food  
3 fall

feel  
fat  
furry  
fly  
full  
floor  
few  
foot  
funny

### G

10 get  
8 go  
got  
7 good  
6 give  
5 gave  
great  
going  
4 goes  
game  
grass  
green  
3 girl

### H

10 have  
he  
9 her  
8 had  
hand  
here  
home  
7 has  
help  
him  
hot  
house  
5 head  
4 happy  
hard  
hear  
hole  
hoot  
3 hold  
hairy  
hum  
hiss  
horse  
hello  
hair

**I**  
10 in  
it  
9 is  
I  
6 if  
3 ice

**J**  
8 just  
4 jingle  
jump

**K**  
9 know  
8 keep  
4 kind  
knock

**L**  
10 like  
8 look  
6 live  
long  
5 little  
4 leaves  
left  
let  
licorice  
3 letter  
love  
lady  
lot

**M**  
10 me  
my  
8 mother  
7 make  
made  
more  
6 must  
morning  
many  
5 may  
mom  
much  
4 man  
milk  
3 Miss  
Mr  
Mrs

**N**  
10 no

not  
7 new  
next  
night  
6 near  
5 need  
4 name  
noisy  
nice  
3 noise

**O**  
10 of  
one  
out  
9 on  
8 off  
7 our  
over  
6 old  
only  
or  
other  
5 once  
own  
4 open  
3 oil  
oh

**P**  
8 play  
5 put  
people  
place  
pull  
4 pretty  
please  
3 pick  
plop

**Q**  
5 quiet  
3 quack

**R**  
8 right  
round  
6 read  
5 ran  
room  
4 run  
red  
rattle

rain  
ride  
3 raw

**S**  
10 said  
so  
8 say  
see  
some  
stay  
start  
7 saw  
sing  
soon  
6 school  
side  
sleep  
small  
5 shop  
smell  
sweet  
4 sky  
something  
sit  
show  
should  
skunk  
shout  
sheet  
shall  
3 six  
says  
smoke  
sneeze  
swim  
sniff

**T**  
10 that  
the  
they  
to  
9 too  
8 then  
this  
7 take  
tell  
time  
them  
their  
there  
6 took  
two

5	think	5	under		write
	tree	4	upon		when
	tonight	3	until	5	wash
	than				warm
	thing	<b>V</b>			white
4	together	7	very		while
	town				why
	three	<b>W</b>			which
	thank	10	we		
	thought		with	4	week
	those		was		wet
	these	9	will		whistle
3	turn		what	3	wait
	try	8	want		worms
	told		were		
	toy		went	<b>Y</b>	
	top		who	10	you
<b>U</b>		7	way	8	your
11	up		walk	7	yes
6	use		work	4	year
	us		would		yellow
		6	well		

This list was devised by consulting several other common word lists for children. The numbers in front of the words indicate how often these words appeared on the lists. Other lists can be devised from this one for consonant blends, vowel sounds and other sound combinations.

Always keep in mind the importance of connecting each sound to its braille forms and to meaningful activities. Refer to suggested activities for letters in phonics section.

For other information about learning to read and write in primary grades, refer to Bits and Bites and Preschool sections.



## Reading Games And Activities

- 1) **Do What It Says** --- Any number of children may play this at their desks. Use flash cards with action words on them, words found in the children's reading vocabulary. Each child is dealt a card on which is some action word, such as "run, jump, hop, skip, laugh, talk, walk, crawl, meow, bow-wow, snap, whistle." A child reads his card and performs the action.
- 2) **Postman** --- Children sit at desks. Word cards, post box and mailman's sack are needed. Each child picks a word card from his pile and mails it in the box. As he mails his card he tells the teacher what his "letter" says. One child is chosen to be postman. He collects the letters from the mail box into his bag and delivers a letter to each child. As a child receives a letter, he tells what it says.  
Variations: Use this game to drill numbers, phrases, etc.
- 3) **Rhyming Words Game** --- Two players sit at a table or on a rug. Have prepared 24 flash cards (each card contains 2 words from list). Most of the cards should have rhyming words. The cards are shuffled and placed face down in a small flat box. The first child selects a card and reads the two words aloud. If they rhyme he may keep the cards. If they do not rhyme he places the card in the discard stack in the top of the box. The child having the most cards when all have been used is winner and has the privilege of returning the box to the teacher's desk. This game provides an independent activity when the box of cards is kept with other independent activities materials so it is easily available.
- 4) **Fill the Boxes** --- Any number of children may play this. Provide a tray or box lid with small containers and a basket filled with articles asked for plus a few more. Each child has a tray. The containers are each labelled. For example: "Find 3 cups", "Put 1 dog and 1 ball in here," etc. Start with few containers and few objects and gradually make more complex to hold interest. Good to drill in word use, number concepts, ability to follow instructions. If 3 of one item are asked for, it is more challenging if 4 or 5 are in the basket. Variation: instead of objects, flash cards of words may be used.
- 5) **Bingo** --- Each child is given a sheet of paper, containing words. There should be only a few words on each sheet, and these should be spaced in such a manner that they can be read easily. Select

one child to read the words while the others cover their words. Have the words arranged in different positions on each sheet so that papers may be exchanged and the game repeated. The first child who covers a row of words either vertically or horizontally is the winner.

- 6) **Old Maid** --- Any number of children sit around a table. Teacher provides duplicate word cards with one odd card of some well-known word. Each child is dealt three cards. They take turns drawing from a pile to match cards they hold in their hands. Place books (or tricks) in front of himself. Odd card holder loses. Count cards at end of game. One having the greatest number of words is the winner.
- 7) **Fish Pond** --- Cut flash cards in shape of fish, place paper clip on nose. Put fish in fish bowl or gallon jar, provide a magnet at the end of a line tied to a pole. Each child takes a turn to fish. If he knows the word he "catches" he keeps the fish, otherwise he throws it back.
- 8) **Two-Team Race** --- The children choose two teams. The game proceeds like a spelling match.
- 9) **Passport Game** --- Each child has a passport (flash card). They must show their passport (say the word) before they may go on board the boat. When the captain calls their port (their word) they must get off the boat.
- 10) **Sidewalk** --- Each child finds a card he can read from among a number of cards. If he reads it correctly it is laid on the floor or table as a block in a sidewalk. The children see how long a walk they can lay in a certain period of time. Blocks are counted when the time is up.
- 11) **Fishing** --- A large box of words called a fish bowl is placed in the middle of the table. The children sit around the table, each having a small word box. In turn they fish for a card spell the word and identify it. If correct they have caught a fish and it goes into the word box. If incorrect, the fish goes back into the bowl.
- 12) **Find the Twins** --- Give child box of words he has had in reading. Then give child duplicate of one of these words in the box and ask him to find its twin.
- 13) **Find the Place** --- Child #1 calls on Child #2 to find a certain page in reader and to read a certain line. Find page 11 and read the second line. If child #2 can do it, he calls on Child #3, and so forth.

- 14) **Filling in Blanks** --- Helps bring up speed. Each child called on has to fill in the correct words for one paragraph. Teacher and children have books. The teacher reads each sentence at a slightly faster pace than the pupil, using the words, “blank, blank” for any word or phrase she wishes the child to supply from his book.
- 15) In a box place three large envelopes. One is labelled “People”, one is labelled “Animals”, and the third, “Things to Do”. In the same box put about 30 words cards. The game is to answer “What am I?” about each word card and put it in the right envelope.
- 16) Place in a box or envelope three cards similar to the following: We go to sleep, We get candy, The birds sing, The kitten jumps, at the store, on the chair, in the bed, in the tree. The game is match the halves of the sentences, putting them together so they are sensible.
- 17) In this game, words that belong in pairs are matched. For instance, one card in the game says “Mother and” and the card which matches says “father”. Some other pairs are: door and . . . . window, bird and . . . . nest, dog and . . . . puppy, hen and . . . . chickens. Use any words in vocabulary child has studied.
- 18) Using the vocabulary you wish to practice, make up riddles such as the following: I eat grass. I give milk. What am I? I go up, up, up. I go on and on. I come down, down, down. You can ride in me. What am I? The answer to each riddle is put on a separate card. The cards with the riddles and the cards with the answers are all shuffled in a box. The game is to lay the right answer card on each riddle.
- 19) Divide the inside of a flat box in to six compartments. The compartments are in pairs. In one of the first two compartments are the following word cards: door, window, horse, table, bed, chair, house. The second compartment of that pair is left empty. The game is to find the word that does not belong in the pack and place it in the empty compartment. The other two pair of compartments are fixed in a similar way with other groups of words. Each group has one word which does not belong.
- 20) Call small boxes houses. On each house write name of a family. make word cards belonging to the families written on the boxes. Have child see how many of the words he can place in the right houses.

- 21) **Touch Old Maid** --- Use 2 - 4 players seated around a table. Prepare 2" x 3" cards. Paste swatches of fabric, plastic, sandpaper and various textures on cards. Have two of each kind and 1 extra (Old Maid). Play like standard Old Maid. Deal 5 or 6 cards (the younger the child the fewer he can manage.) Balance of cards go in the pack. Cards are drawn one at a time. Any pairs are placed in a box. Winner is first one to deposit all pairs in the box. Old Maid is the one left with unmatched card. With older children it adds interest to draw from person to his left when stack in centre is exhausted.
- 22) **Setting the Table** --- Have ready a table or desk, table cloth and such items as spoons, cups, plates, knives, forks, glasses. Teacher tells class that she needs them to help her set the table. Each child is given an article. Then teacher says "First I need something that begins like 'spot'". Child with spoon brings it up, puts it on the table and says "spoon begins like 'spot'". Teacher continues to ask for articles until table is set.
- 23) **Guess What Object I'm Thinking of** --- Have ready a number of small objects: cats, dogs, big or small objects in the room. It gives the letter the object begins or ends with. The players guess, taking turns. Example: IT says "I'm thinking of a word or object which begins with w". Players guess until one guesses window. He is IT who guesses correctly. Objects can be labelled with Braille cards. Small objects which can be distinguished are fun such as a very small doll's chair, bed, etc. placed on a table.
- 24) **Guess What Game** --- One child leaves room. Class decide on object or part of room. Child is called back in and one child tells him, "It begins with a 'w'." Child tries to guess object chosen. If he guesses correctly, he sits down and child who told him the letter goes out.
- 25) **Short a Train or the Long o Train** --- Or call it whatever the vowel sound in question may be. The child stands and tells his full name and then we decide whether he can travel on the train. If his name is Jack Johnson, and the train is the "short a" he can ride on one ticket for Jack. If child cannot ride on train, he changes name to one that will qualify for ticket.
- 26) **Who May Go?** --- The leader says, "I am going to Boston, and you may go with me if you can take something beginning with the sound of b". The designated sound is the same as that of the place

chosen. Any child who names an article beginning with that sound may go along. After all have had a chance to find out whether or not they can to, a new leader takes over and the game begins again.

- 27) **Scooter** --- Letters or words or phrases or shapes are glued inside old jar lids. Children sit around table. Leader asks for scooter which has a certain letter or word or phrase or shape. If child has one requested he shoots his scooter across table to leader.
- 28) **Pass the Card** --- Children sit around table. Each child is given 2 word or phrase cards. Everyone passes one card to his right until someone has two cards which are alike.
- 29) **Riddles and Answers** --- Distribute cards with possible answers. One child reads riddle. Child with appropriate answer reads it.
- 30) Make small words from letters in big word.
- 31) Write riddle on page with answer under a flap.
- 32) Put braille on letter pieces of the game "Upwords". By physically changing a letter child can change word. This helps child understand how changing a letter changes the sound of a word.
- 33) Make up a story with numerous blanks. Give children silly words or phrases. Read story and randomly have a child read a word or phrase to fill the blank. Lots of fun if children's names along with teacher, principal and other adult names are included in the story.
- 34) Some children enjoy building phrases using word cards.
- 35) Most children like reading treasure hunt clues, messages and instructions.
- 36) Toy airplane flies across airstrip of words or toy car moves down road of words or fireman climbs ladder of words.
- 37) Make a double wheel. Smaller one in centre has word beginnings while larger wheel on outside has endings. Spin one wheel to make new words.
- 38) Write word endings on long strip of paper. Make two slots in larger paper for strip to be pulled through. Write word beginning on larger paper beside strip. Pull strip through to make different words.
- 39) Use phrase cards as answers to oral questions.

- 40) Short story to practice long vowels. Jane came to the lake. At the side of the lake are trees. The trees have loads of leaves. The leaves shake in the breeze. I like the breeze that shakes the leaves on the trees at the side of the lake.
- 41) Song to practice long vowels. Use Mulberry Bush tune. Here we go to rake the leaves late Friday night. Include verses such as ride the horse, feel the heat, taste the cheese, hear the snores, dream of cake, sleep at Mikes, etc.
- 42) Another song to practice long vowels, use There's a Hole in the Bottom of the Sea tune. There are four goats at your soap, There are nine mice in a line, There are three fleas on a bee, etc.
- 43) Many mathematics activities involve both language, classification and manipulation activities, all of which contribute to braille reading.
- 44) Theatre and songs can be used to develop reading in children. Each child is given a part to read and must use voice effectively to portray character and emotion. Tape the readings and play it back. There is no acting in this activity.
- 45) Create a book using child's own name, as well as familiar people, activities and surroundings.
- 46) Make a two piece puzzle with an object pasted on one half and the matching word on the other half.
- 47) Fasten an object on a piece of cardboard and clip on it a clothespin with matching word.
- 48) Make a booklet with coils down both right and left sides. Put word on page on one side to be matched with page on other side. For variety have object on top part of page to be matched with word chosen from a few bottom pages.
- 49) Make book with coil across the top with three sets of side by side pages. Write phrases on each section so that by turning up one part page the sentence will change. Include some nonsense pages.
- 50) On front of library card pocket braille last part of sentence. At top of library card braille first part of sentence. Child is to fit together card and pocket that belong together.
- 51) Braille words on long strip of paper. Braille first part of sentence at top of page. Move strip through slots near bottom of page until correct word shows.

- 52) Stick a different braille word on each side of several blocks. Use for making phrases, finding opposites, finding categories etc. and placing block so the required words are on top.

**Note:** It is usually helpful to mark the top edge of word cards with a staple, raised line or other distinguishing mark.

## Chapter Four: Learning Braille Later In Life

### Learning Braille as an Adult

Many of the suggestions presented in earlier sections can also be used with adults. However, we shall first consider the areas of difference which must be considered.

Older people often find it very difficult to learn braille. Some of the reasons are listed here and then each is discussed later.

- 1) Language patterns are established in the brain around age 12
- 2) A change from visual mode to tactual mode is difficult
- 3) A shift from a gross perceptual system (words & phrases) to a fine perceptual system (single letters and characters) is confusing
- 4) There may be a negative attitude to blindness and thus to braille
- 5) There may be a lack of self-confidence
- 6) Loss of vision affects other parts of the brain as well as visual parts
- 7) The cause of blindness may affect other functions as well
- 8) The elderly have impairments in other areas too
- 9) The elderly may not see a need for braille
- 10) The braille code itself is too complex

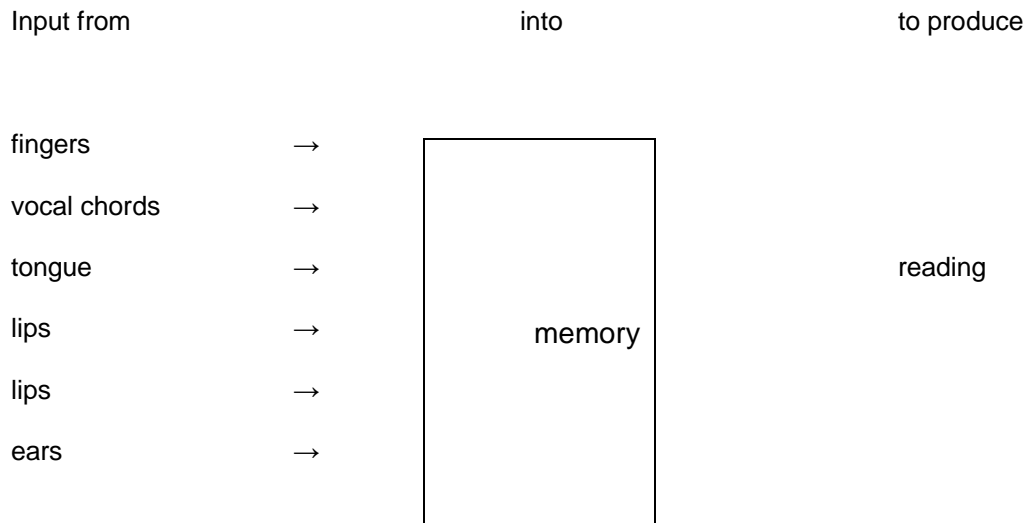
#### 1. Language Patterns Are Established In The Brain

People who study language and the brain tell us that before age 12 the brain is open for new language and it is easy to establish language and code patterns. After age 12 the brain is closed for easily learning new language codes and it is a difficult task to learn a new language or a new code for a language.

Remember the Network of Associations Loop mentioned in the discussion of the importance of oral reading. In adults the loop is now closed. Forcing information inside requires associating new information with the old information already in the loop. Many repetitions and experiences are necessary using ears, lips, tongue, vocal chords and fingers to connect and reinforce the new skills into the memory. Again oral



reading is essential. For a person learning braille later in life, since braille was not part of their original language learning, it will be a long time before the language in the memory can be activated by the finger's tactual input. It may take thousands of repetitions before this becomes automatic.



Braille requires even more oral reading experience than print because braille reading speed is slower and because the fingers cannot get constant feedback from surrounding letters and words as the eyes can.

## 2. A Change From Visual Mode To Tactual Mode

A sighted person learns most of what he encounters through vision and relies on the other senses very little. The nerve endings in the fingers have not been stimulated by use. The pathways of learning by touch have not been well established. It is often very tiring and frustrating to have to use the sense of touch which has not been well developed.

A word here on hand usage for reading braille. Encourage use of both hands but do not insist upon it. Some people can sort out information from 2 hands but others cannot. If person shows a definite preference for reading with right hand alone or reading with left hand alone there is probably a good reason. There are many excellent readers who use just one hand.

The knowledge of print symbols is usually firmly established on the loop of associations in the brain. To remove the print symbol and then replace it with a braille symbol requires much time, patience and practice.

### 3. A Shift From A Gross Perceptual System To A Fine One

Sighted people can see whole words and even phrases at a glance. Most words are recognized as wholes. They can rapidly glance back and forth over a print word or phrase to instantaneously determine letter patterns and word patterns.

When people switch to braille they must read letter by letter because they can feel only one letter at a time. They cannot quickly glance back or forth over a word or phrase. They must read putting together the pieces in the right order to make a whole. This involves a reorganization of thought processes and it is difficult and it is slow.

### 4. Attitude Toward Blindness

Some people reject the study of braille as an escape from the acceptance of blindness. They may not want to admit to themselves or to others that they have this handicap. They may look upon learning braille as an admission of defeat. They may see blindness as another sign of old age. They may have had very little support from ophthalmologists who tend to look upon blindness as a medical failure. Like doctors, they are trained to cure not to help those they cannot cure.

### 5. Lack Of Self-Confidence

Especially for those who have been losing their sight gradually or for those who have always had only a little vision there may be a lack of self-confidence and a feeling of failure. This is most evident in teenagers who have been unable to find acceptance or understanding from their peers in the integrated school system. For them, trying to learn braille may be associated with a fear of appearing different as well as a fear of making mistakes and feeling humiliation.

### 6. Loss Of Vision Affects Other Parts Of The Brain

Because so much of the electrical activity in the brain is stimulated by vision in sighted people, when this visual stimulation is cut off, all the brain processes receive less electrical activity and are affected. In young blind children the brain is able to compensate for this lack of visual stimulation by reorganizing but for older people compensating is more difficult.

## 7. The Cause Of Blindness May Affect Other Functions

In adults, the leading cause of blindness is diabetes which may also affect sense of touch, sense of hearing and level of energy. Some other diseases cause hearing loss as well as vision loss. Accidents may result in other physical injuries. If blindness is caused by a brain tumour, the operation or the tumour itself may affect other processes as well.

## 8. The Elderly May Have Impairments In Other Areas

Elderly people often have poorer touch sensitivity, poorer short term memory, less energy, slower thought processes, poorer hearing, less finger dexterity, and less ability to concentrate. They may find it difficult to have patience, enthusiasm and a sense of humour - all of which are needed to learn braille in later years. The older you are the more difficult it is to learn anything new.

## 9. The Elderly May Not See A Need For Braille

Young children are motivated to learn braille for their school work. Because braille needs much repetition and years of practice children usually have the time to become proficient with it but the elderly usually don't have that time. The elderly can listen to books on tape and usually don't need braille enough to make the effort to learn it.

## 10. The Braille Code Itself Is Too Complex

In Grade Two Braille there are many short forms to memorize and people sometimes become so discouraged trying to learn them that they just give up.

If more books were available in Grade One Braille, which is written out letter by letter with no short forms, more people would be able to use braille. Most elderly people if they learn braille at all learn Grade One Braille.

Perhaps surprisingly, after considering the above ten difficulties, many adults can and do learn braille. There are three categories of adults who may want to learn braille.

- 1) those who used print well and want to learn braille so they can read and write again
- 2) those who had poor print literacy skills and who not only want to learn braille but they also want to learn to read better and write better
- 3) those who always used braille but used it poorly and want to improve their braille literacy skills

Step One is the same for all groups

Learn to read and write only the braille letters.

When this has been accomplished follow separate plans for each group.

**Group 1 - Those who used print well**

After learning to read and write the braille letters follow the program for young adults by reading stories in Grade One Braille aloud and following while others read aloud. Punctuation and composition signs are learned from the context.

After the student is a fluent reader with Grade One administer the tactual discrimination test and only begin teaching contractions if score on test is over 90%. Otherwise continue using Grade One Braille. Remember - the student has the right to the code which is best for her/him. If the score is less than 90%, Grade One is the best code for him/her. If score is over 90% Grade Two is probably the best code for her/him.

**Group 2 - Those who used print poorly**

After learning to read and write the braille letters, give the student the auditory perception skills test and if the test indicates a need give the necessary auditory training skills.

Next follow the written phonics program. When that is completed read simple stories. Then give the tactile discrimination test. If score is under 90% do not teach contractions. Nearly all people in this group will be best served if they always use Grade One.

**Group 3 - Those who used braille poorly**

The most common reason for using braille poorly is Grade Two Braille. If a person wants to use braille better, they need to use Grade One. Once that is established follow steps for Group 2 above.

There is a slight chance that other reasons contributed to poor use. Still follow the above steps. If the student should learn Grade Two it will show up on the tactile discrimination test when it is time. Then and only then, if the score is over 90%, reintroduce Grade Two.

Nearly all people in this group will be best served if they continue to use Grade One.

## Chapter Five: Learning Disabilities

In Chapter One the effect of learning disabilities on learning braille and the large percentage of blind people with learning disabilities were discussed. The better performance achieved when people with learning disabilities used alphabetic braille was shown. We know that blind people with learning disabilities perform better with alphabetic braille. It is wrong to make them use contracted braille.

Also in Chapter One, it was shown that young blind children without any sign of learning disabilities had better performance when they used alphabetic braille first. Therefore everyone has better performance if they use alphabetic braille first and those with learning disabilities should continue to use it.

### Writing

It is often difficult to remember dot numbers when learning to write letters. The following method has worked for some students with learning disabilities when other methods have failed.

#### (a) left hand only

Using correct fingering at all times, learn and practice the following:

dot 1 by itself, dot 2 by itself, dot 3 by itself, dots 1 and 2 together, dots 2 and 3 together, dots 1 and 3 together, dots 1, 2 and 3 together.

Using correct fingering at all times, learn and practice the following:

a, b, k, l, dot 2 by itself, dots 2 and 3 together, the words all, ball

#### (b) right hand only

Using correct fingering at all times learn and practice the following:

dot 4 by itself, dot 5 by itself, dot 6 by itself, dots 4 and 5 together, dots 5 and 6 together, dots 4 and 6 together, dots 4, 5 and 6 together

#### (c) both hands together

Using correct fingering at all times, learn and practice the following:

c is a and 4

d is a and 4, 5

e is a and 5

Write the words: bake, cake, lake, back, bad, lad, bell, dell, deck

Write phrases: bake a cake, a bad back,

Continue on with

f is b and 4

g is b and 4, 5

h is b and 5

Write the words: fall, fell, fake, bag, leg, had, hall, he

Write phrases: had a fall, a bad leg, he fell

Continue on with

i is 2, and 4

j is 2, and 4, 5

w is 2, and 4, 5, 6

This helps student remember that i, j and w are the only letters that use just dot 2 with left hand.

Write the words: bike, lid, like, we, wed, few, jack, jab, will, if

Write phrases: we like cake, he will fall

Continue on with

m is k and 4

n is k and 4,5

o is k and 5

Write the words: make, mad, came, ham, neck, cane, lane, doll, log, hog, fog, him, in, no

Write phrases: a long cane, he came home, come in

Continue on with

u is k and 6

x is k and 4, 6

y is k and 4, 5, 6

z is k and 5, 6

Write the words: yes, zoo, box, yell, duck, you, mix, away, any, boy, buzz, baby, buy, day, jelly  
my, may

Write phrases: you and me, mix a cake, a baby boy, a big box, go away

Continue on with

p is 1 and 4

q is 1 and 4, 5

r is 1 and 5

v is 1 and 6

Write the words: paper, queen, quick, happy, very, up, run, ride, read, quack, play, pull, live, love,  
have, five, gave

Write phrases: play ball, have a ride, a happy puppy, jump up, a good queen

Continue on with

s is 2, 3 and 4

t is 2, 3 and 4, 5

Write the words said, so, stay, start, some, say, skunk, sit, sneeze, to, take, tell, those, these, the,  
time, took, tree, turn

Write phrases: read braille, swim in the pool, say hello, sit down

Now for extra practice write list of common words plus individually important words. Use words in  
phrases.

Now the student should be ready to write sentences - no punctuation yet - and still requiring help  
with the spelling of each word. Introduce capital sign, e.g. I went shopping yesterday. I like you. It is raining.

capital i (wait while student writes if help is needed still give dot numbers)

say "went" "w" (wait) "e" (wait) "n" (wait) "t" (wait) "space"

Often it still involves too many thinking processes for student to remember word, spelling and  
writing all at once.

Next try 2 letters at a time "we" (wait) "nt" (wait) "space"

If student can handle then move ahead to 3 letter "wen" (wait) "t" space.

If student can handle then move ahead to 4 letters but instructor is still spelling “went” (wait) “space”.

If student can handle then move ahead to 5 “went” “space” (wait). If this is too much for the student to remember, go back to 4 or 3 letters at a time.

The next step is for student to write short words without assistance for spelling “write went”. Watch for signs of frustration. If student finds this too difficult gently go back to spelling words.

## Auditory Perception

Refer to auditory perception in chapter for primary grades.

Follow testing and intervention suggested there.

## Reading

The first step is tactual letter discrimination.

Read each writing lesson.

If more practice is required follow suggestions in primary section especially following across

line

b ---- m ---- s ---- t ---- k

l ---- a ---- g ---- h ---- p

and rows of letters emphasizing problem letters

n a n n g k n l n n c

short words spaced and then close

b a l l                      ball

g i r l                      girl

If student still cannot distinguish difficult letters such as n r t then help them develop other strategies.

If student still cannot distinguish reversals d-f-h-j e-i etc. help them develop compensating strategies.

When student is reading words, phrases, sentences or stories spell each word orally.



## Spelling

Keep in mind that often spelling is the most confusing puzzle of all for learning disabled students. Remember one of the reasons in writing and in reading that we spelled each word orally was to engrave patterns of touch and sound, letters and words onto the brain.

Give student a spelling test either written or oral or one test each way. Write down exactly what student says for each word and analyze mistakes to see what kind of problem is causing errors.

An excellent program to follow for reading, writing and spelling for the learning disabled is "The Natural Way To Reading", by Nancy Stevenson, published by Little, Brown and Company. They are willing to give permission to transcribe the book into braille, if you ask.

I have used this program successfully with students from ages 10 to 25. Except for adapting some of the writing suggestions, eliminating punctuation and starting each new sentence on a new line, the program is excellent and easy to follow. Purchasing this book, getting copyright permission, transcribing it in alphabetic braille and using it daily are the best things you can do.

To Give You A Better Understanding Of Learning Disabilities I Recommend "The Waysiders" By R. M. N. Crosby, Published By Delacorte Press, And "Helping Children Overcome Learning Difficulties" By Jerome Rosner, Published By Walker And Company.

## CHAPTER SIX: BRAILLE FOR LOW VISION STUDENTS

Many low vision students have been denied the opportunity to learn braille. There are several excuses for this. I shall list some of these excuses given for not teaching braille to low vision students and then I will discuss why it is important to allow low vision students to learn alphabetic braille.

Excuse one: "They won't ever use it."

Excuse two: "They should use residual vision."

Excuse three: "There is more available in print."

Excuse four: "Braille is too difficult."

Excuse five: "It makes them different."

### Fact One

Braille vs print is not an either/or for low vision folks. You don't have to stop using print to use braille. If you have some vision you can use both print and braille. If your only access to reading and writing is print which you can use only poorly, you cannot function at your highest potential. If you also have access to braille which you can use well, you can function at a higher level. It has been shown that when both braille and print are taught to low vision students, most will choose to do the majority of their writing and a great deal of their reading in braille. The point at issue here is choice - but if you are not taught braille you don't have a choice.

Also at issue here is attitudes - subtle and unintended prejudices towards blindness and braille. Think about the messages conveyed when you say things such as "good, you were able to see that print word" "you don't have to do as much as the rest because you get headaches when you read" "Fred can read print but Lorna has to use braille". The messages conveyed are - it is good to see print which is better than braille, it is better to suffer from headaches and do less than use braille.

Another point for school teachers to consider is the future. Some low vision students will lose the useful vision they have after graduation. It is much easier if they already have braille skills established.

## Fact Two

Again, if you learn braille it doesn't mean you have to stop using print. When a person must hold a book right up to the face to see the print or when a person's writing is so poor it can't be read by self and/or others or when a person's eyes get sore when reading for a few minutes or when a person gets headaches when reading or when a person can only read in a certain light then they deserve a break. If they have braille skills they can choose for what and when to use braille. Many low vision people are so grateful when someone teaches them braille.

## Fact Three

Yes, there is more available in print but if you can't read the print easily and quickly, it doesn't matter. Many people use writing more than they use reading. This is often forgotten when people talk about reading and forget the writing. Again, if you learn to read braille, you don't have to stop reading print.

## Fact Four

Yes, contracted braille is too difficult for many people. Alphabetic braille is much easier. If a print user who has been struggling with print for several years learns alphabetic braille something amazing often happens. The print reading itself improves a little. It seems that if you attempt to help a person by using the same way that caused failure for so long, very little progress can be made. But if you enter by a new doorway which is not oriented to failure, success is much more likely. Students, who for years have had problems with reading and writing skills in print, are able to unlock many new strategies when they learn to read and write using a new medium, braille. The vision problems added to the reading and writing problems.

When vision was not used for the new learning not only was success achieved but an increased self-image and a positive attitude were evident.

## Fact Five

Reading print poorly and slowly does not make you the same as people who read print well and quickly. It only points out to them your incompetence. Writing large print letters poorly does not make you the same as people who write small print letters well. It only points out to them your incompetence. So in this case print makes you appear incompetent. Incompetent is worse than different, if the difference is good. Using braille efficiently for reading and writing is good. It shows competence and demands respect.

If the low vision child is preschool, encourage them to touch and listen as well as to look. If the low vision child is in elementary school follow the suggestions for that area. If there are learning disabilities present, follow that program. If it is an adult who can read, follow the program for adults. If it is an adult who can't read follow the literacy suggestions. In other words, follow the same program as you would for the totally blind - using alphabetic braille.

## Chapter Seven: Adult Literacy Programs

Now we are talking about adults who never learned to read and write well in either print or braille. There are many reasons for this. They didn't go to school. They got lost in the system. They devised clever strategies to avoid detection. The reason is only important for its implications and the shame it has often mistakenly brought onto the person. The wonderful thing is that they had the courage to ask for help. It is hard for literate people in a literate society to understand what suffering these people have borne over the years. This may be the last chance. Don't let them down.

Find out why the person wants to learn to read and write and adjust the program to that goal. If they want to learn to read to their children or grandchildren then use children's literature and write the words that are used most often. Use the common words list from the primary section. Use some of the books from the list. See if they have favourite stories.

If they want to learn to write so they can write stories then adjust the program to that goal and teach writing first. Write and then read words that they use most often and/or phrases and/or sentences and/or stories.

If they want to be able to study factual information about a topic such as space or sound then use the vocabulary they will need for that and move from simple to complex. Remember that motivation is important.

If they want to learn how to read something to keep their job or to get a better job, then use what is needed for that first.

There are advantages and disadvantages to individual lessons vs small group lessons. Sometimes the student will have a choice, sometimes they won't. If possible it usually is best to start with individual lessons and then when appropriate move into group sessions. It is ideal if there can be another braille user in the group.

If however they must be part of a group from the beginning, give as much specific help as possible so they won't become discouraged.

If the person is hesitant about writing let them dictate and someone can braille their story. At first use only letters. Punctuation can be introduced later on.

Always use alphabetic braille. It is easy for instructors to learn and their confidence and positive attitude will be picked up by the student. If you need to know why alphabetic braille should be used, then read Chapter One. In fact you should read the whole book because bits and pieces from all over will apply to your task of teaching braille literacy.

After you have found out why the person wants to learn to read and write, you need to discover what level of skills they have. This may be somewhat difficult because the person has had miserable experiences with testing and your assessment will probably just have to be made on observation. Far better to begin with a simple task that they can do, than a more difficult one that might cause failure. Proceed slowly enough so that the student keeps meeting success.

If your program has computers and your student wishes to learn using the computer, fine. Be sure then to read the chapter on computers and technology. However, in my visits to adult literacy programs across Canada, most did not have access to computers. Any money available went for heat, rent, security and basics. Many adults in literacy programs have limited funds themselves and will not have access to equipment. Again we come back to the necessity of programming for the individual.

If the student needs to be taught to read and write individual braille letters, read the sections on primary and learning disabilities and see if any of the suggestions there are useful.

Unless you have good reasons for using a brailled version of an adult literacy program that is intended for print readers, it is better to take the student from where they are and read or write individual personal items, a journal, a grocery list, whatever. Many print literacy programs are visually oriented with pictures and diagrams essential to the learning.

If the student needs and wants a phonics program to help them with the sounds of letters, especially vowels, the one suggested in the learning disabilities section may help.

Basically, all that can be done here is give suggestions. Each instructor and student need to choose what is best for them. The next student you have may need an entirely different approach.

Once your client has learned to read and use punctuation, they might enjoy some of the adult literacy books that are available from the C.N.I.B. Library for the Blind. These books are in alphabetic braille.

Also, here is a list of publishers and the books for which you could get copyright permission to braille yourself.

- The New Start Reading Series from East End Literacy Press, Toronto.
- Collins English Library, Level I Books, For ESL and Reluctant Readers, William Collins Son & Co. Ltd.

Also, if your client likes stories on tape to accompany the reading, many of these can be purchased in bookstores or from the following companies.

- Audio Language Studies Read-Along Series, Durkin Hayes Publishing
- Scholastic Canada Limited
- Ulverscroft Soundings
- Random House Read-Along

Even better, during lessons, take turns with student reading. They read a sentence or a paragraph or a page, then you read a sentence or a paragraph or a page while they follow along. Pace your reading to their following. If they can handle only a word at a time pause after each word. If they can handle a phrase at a time pause after each phrase.

If appropriate, you could tape the client's own stories, remembering to pause and read slowly so that the tape can match the student's speed - no matter how slow.

What about pictures? Do you describe them? Do you mention them? Do you make a tactile? Sometimes yes, but usually no. Here is another advantage of making your own materials. You don't need to worry about pictures. I have been present at many emotional debates around the issue of tactile graphics for the blind, by experts in the field. They cannot agree about tactiles. So if you are new to braille and literacy, don't feel inadequate because you don't know what to do.

A good guideline is this. If the picture is essential to the story or the information given then describe what is needed to the student. If the picture is just there to add interest or colour for the sighted person don't mention it because that only reminds the person of what they are missing rather than emphasizing what they are able to get from the braille.

Always keep in mind the wide range in levels of literacy in adult programs. Some need to learn the basics of letter recognition and sound symbol correspondence. Some need practice reading easier stories. Some need practice writing sentences. Some need vocabulary and experience building. Others need upgrading to a higher level.

If you are a literacy volunteer and you need to learn braille, contact your local Canadian National Institute for the Blind office and explain why you want to learn braille. They may be able to help you or put you in contact with someone who can. Remember to tell them that you want Grade One Braille.



## English as a Second Language

English as a second language is included in this chapter because people who are just learning English often end up in Literacy Programs. They don't belong there, but often there is no other place for them to go. There is a wide variety of people needing to learn English as a second or third or fourth language. Some were literate in their native tongue, some were not. Some know braille in their native language, some do not. Some have learning disabilities, some do not. Some are adjusting to their new life, some are not.

The most difficult barrier to overcome is the language barrier. It is extremely difficult and sometimes impossible to get information to a blind person if you do not speak their language and they do not speak yours.

I shall cite an example from my own experience. The student had reached the point where we could carry on a conversation about everyday events in English. He had learned to read slowly stories in alphabetic braille. He brought his notes from a geography course to receive help with studying for an exam. The material to be covered was lumbering in Canada. How do you explain the difference between trees to a blind person who has never seen them and who doesn't know what maple, pine, ash or fir mean? You need an interpreter. You need someone who knows the native language and can explain. You need models. You need humour and patience.

This is one time where a picture would be worth a thousand words but a tactile picture is not. The added dimension of blindness makes learning factual information extremely difficult. Real meaning and understanding are hard to achieve without an interpreter. Learning factual material is very difficult if you don't understand what you are trying to learn. It is just like memorizing meaningless non-words.

If the student knows braille in his/her native language, this may pose an additional problem because braille signs and their meanings differ from language to language. When English is not a student's native tongue, alphabetic braille should be used.

## Chapter Eight: Computers And Technology

Technology has helped narrow the communication gap between the blind and sighted. First we shall look at some of the equipment that is available and then discuss the advantages and disadvantages of technology for braille users.

- 1)
  - a. **Braille Note Takers** - These are hand size devices which can easily be carried about. They have 6 keys and a space bar. They have voice which can be used when desired. The information recorded is later fed into a computer for retrieval in any format - print, large print, contracted braille, alphabetic braille, eight-dot braille, voice or storage.
  - b. **Lap Top Keyboard Notetakers**-As above but device is larger and input is via print keyboard.
- 2) **Scanners** - A scanner can scan a print page and feed the information into a computer which can produce material in any format. Material can be indexed for searching for topic, chapter, etc.
- 3) **Braille Printers** - These are attached to computers and can produce material in either contracted or alphabetic braille, quickly and accurately. Some can also produce material in 8-dot braille.
- 4) **Print Printers** These are attached to computers and can produce material in various sizes of print as required.
- 5) **Voice Synthesizers** - These are attached to computer and will read aloud or through earphones what is on the computer screen.
- 6) **Computer and Software Programs** - There are programs which allow braille keyboard input or print keyboard input. There are programs which allow output in different formats using equipment mentioned above.
- 7) **CD-ROM** - This disc technology allows access to vast amounts of information, such as encyclopedias, by command and search, almost instantaneously. The information desired can be retrieved in any format.
- 8) **Talking Calculators** - Give oral as well as visual output for mathematical problems. Some braille note takers have a calculator and a calendar.

## Disadvantages of Computer Technology

1. **Expense** - Many people do not have access to funding for high cost of computer equipment.
2. **Upkeep** - Sometimes it is difficult and/or expensive to remedy problems and pay for repairs. A person needs backup skills to use when computer or equipment is not functioning.
3. **Isolation** - Sometimes people will spend too much time alone with the computers and too little time socializing with other people. Sometimes students are delegated with their equipment to a corner of the room away from other students.

## Advantages of Computer Technology

1. Vast amounts of information available.
2. Ability to access information quickly.
3. Choice of medium - print, large print, voice, alphabetic braille, contracted braille, 8-dot braille.
4. Braille note takers are portable, can be silent (do not disturb rest of class) and are comparatively safe from theft.
5. Using scanners, much print material such as private mail, magazines and books are immediately accessible.
6. Voice can be used alone or as reinforcement to print or braille.
7. A student can braille an assignment and have the printer make a print copy to hand in.

## Chapter Nine: Braille Code Books And Teaching Manuals

ABC's of Braille B.M. Krebs 1979 A.P.H. 62 pages

+ separate teacher's Manual

Beside braille page is a print page (with characters marked) so that person learning braille could get help from sighted person who does not know braille.

Each new lesson has new characters for that lesson written out in braille (e. g. acr across) so that student could go on to next lesson independently instead of waiting until instructor returns.

There are drill words and sentences for each new lesson. Some of the sentences are artificial and some of the stories are quite juvenile.

Punctuation, lines close together and indented paragraphs are all introduced too soon for many students.

Book is useful for some teenagers and other people who need an easier vocabulary.

Braille in Brief B.M. Krebs 1982 A.P.H. 53 pages

+separate teacher's Manual + separate pocket sized booklet listing characters

The layout is the same as for ABC's of braille. Sentences contain more advanced vocabulary.

For most people it probably would be better not to use the first 5 pages which are jumbo braille since this usually hinders rather than helps because it encourages dot by dot discrimination.

This book is useful for adults having an extensive vocabulary.

Modern Methods of Teaching Braille 1970 A.P.H.

Book One - Kansas Braille Reading Readiness Book - 50 pages plus separate teacher's manual.

Some students enjoy this book and benefit from it. Others do not like it because they are ready and are anxious to learn letters.

Book involves exploration and identification of raised shapes. There is also identification and orientation to the Braille cell and spacial shapes including discrimination of likenesses and differences.

Book Two - Braille Reading Simplified - 46 pages

+ separate teacher's Manual

There is much letter drill and word drill. Double spacing is used until page 29. Both are good points. There are numbered sentences rather than stories for earlier lessons which most people prefer.

Because there is no print page beside braille page and no braille explanations, an instructor would need to be present.

Braille Grade Two Drill Book LA, Wash 1952 (revised 1962) A.P.H. 41 pages

There is lots of practice with just letters and words, then with characters and words. Sentences and stories generally show a natural flow of language and mostly contain easier vocabulary.

Touch Reading J. Wise 1960 A.P.H. 2 vol. 180 pages.

+ separate print edition.

This book gives vast amounts of practice using lists of words and sentences. It is an old book, no longer available. However, it is useful for those who need extra practice and prefer to read words and sentences rather than stories.

Smart Fingers E. Dales 1965 A.P.H. 27 pages

This book contains just short lines of the same letter repeated in an attempt to encourage quick movement across lines.

Braille Letter Drill M.S. Hooper 1979 A.P.H. 15 pages

+ separate print edition

There are no characters used. All words are spelled out letter by letter. Good if more practice is needed for learning letters.

The Canadian Braille Text Book 1971 CNIB 4 vol. 140 pages

There is lots of practice for each letter. Grade I Braille is used at the beginning and characters are added only as they are introduced.

Getting in Touch with Reading - Grade 1 and Grade 2

M.M. Smith 1982 S.P.H. 3 vol. about 200 pages

In 3 ring binder so that pages can be removed for reading or more pages can be added or pages can be changed. Same way of introducing characters as in The Canadian Braille Text Book. Useful for teaching Grade One or Grade Two Braille. Readings and stories contain practical suggestions and humour. Students enjoy learning braille with these books.

Braille Series 1960 A.P.H. 3 vol. 166 pages

Volumes 1 and 2 are in enlarged dot braille. This usually encourages dot by dot reading of letters and slows speed. Generally it is more of a hinderance than a help.

The Mangold Developmental Program of Tactile Perception and

Braille Letter Recognition S. Mangold 1977

Exceptional Teaching Aids, 20102 Woodbine Ave., Castro Valley Ca. 94546

2 vol and separate teacher's Manual.

Claims to teach subskills needed for fast accurate recognition of braille letters (no characters are introduced). This is useful only if there can be daily lesson and daily timing of skills and use of precision teaching record charts. Games and rewards are used. Perhaps would be useful for younger students who are having difficulty and who like a rigid programmed approach.

The Braille Code - A Guide to Grade Three 1963 A.P.H. 61 pages

+ separate teacher's Manual

Useful only for those who want to go beyond Grade 2 and have more rules and more contractions in their writing. Many people with superior ability prefer to use their own ideas for writing contractions. Grade 3 braille is used only for personal writing. There are no books printed in Grade 3 braille.

The Braille Code Recognition Kit A.P.H.

This is for sighted people wanting to learn braille. There are taped instructions and sheets to be marked. Students might get caught up in activity rather than learning but a few people like this approach.

Instruction Manual for Braille Transcribing M. Dorf

1984 Library of Congress - both print and braille editions, plus 1987 code changes addendum.

+ supplement: Drills Reproduced in Braille A.P.H. 51 pages.

This manual is an effective teaching aid for both the braille code and the complexity of its rules. It tries to enlarge upon, clarify and illustrate the rules by applying them to typical problems.

Code of Braille Textbook Formats and Techniques 1977 (1982) A.P.H.

This manual is for those who are transcribing textbooks into braille. It contains rules, general principles and appendices for different types of text books.

English Braille American Edition AAWB/AEVH 1956 (revised 1970)

(+1972 addendum) A.P.H. both print and braille editions.

This manual contains a definition of braille, the rules of braille, special formats, foreign languages and a list of typical and problem words. It is often used in conjunction with the Instruction Manual for Braille Transcribing and Mastering Literary Braille.

Mastering Literary Braille CNIB 1989

A comprehensive Canadian Course for braille transcribers. It has a cross-referenced index, clear examples, explicit instructions and a good order of presentation. The use of Canadian material adds local interest. An excellent reference manual.

Just Enough to Know Better National Braille Press

A print/braille book produced primarily for parents of blind children to help them understand and learn braille. Well presented.

Read Again APH 1991 This is a program designed to teach braille to people who were print readers before losing their vision. Part A involves tactual discrimination Parts B and C introduce Grade One. Parts D to I introduce contractions of Grade Two. There are both teacher and student editions.

English Braille Grade One ICEB 1991

This is a provisional international code for Grade One. It contains rules and examples for letters, numbers, composition signs and punctuation. It should be available in a few years.

Reading With Feeling. Ann V. Strauss, Oregon Commission for the Blind, 1988.

Book One introduces Grade One. Books Two, Three and Four introduce Grade Two. Letters, words, drills, reviews and common phonetic combinations allow student to improve skills at own pace.

A Handbook of Braille Contractions Harry Schuchman, American Brotherhood for the Blind, 1990.

This is a list of braille contractions with print beside in a book form.



## Tactual Discrimination Test

A braille copy of the lines of letters is given to students. They are told to look at each letter carefully and answer the question which the tester asks for each line by reading that line aloud. Test is administered individually.

The tester has a copy of the test and writes down under each letter what student says. When test is finished count errors and subtract from 100. The resulting number is score. Test should be completed in less than 5 minutes. Deduct 5 points if more time is taken. A pass mark is 90.

Is it an s, an l, or something else?

s l l wh gh l s s l l ar l wh l l s ar l gh

Is it a capital A, a p, or something else?

A p p A p st k p ch p A A p k st p ch

Is it a g, an m, or something else?

g m m m g sh u g ing g m m g sh g u ing g m

Is it a c, an n, or something else?

c n c c z y c n c ed the c c n y z c ed the

Is it a p, an a, or something else?

p a a a th a v p a ble a a p v a th a ble

Is it a b, a q, or something else?

b q q b of q b with er b b q b of with b q b er

Is it a d, a k, or something else?

d k k k j k h d k k f k d d h k f j k

Is it the word is, the word am or something else?

is is am are when am is am igh is am ear iar

Is it the word up, the word no or something else?

up no now up own up on no up now up on no

Is it the word bet, the word at or something else?

bet at bit bent at bint cent bet at bent

Is it the word dog, the word all or something else?

dog all fog jog all all dog hog jog

Is it k period, m period or something else?

k. m. k? m. k! k" m. kh kd k? m. k"