

Division on Visual Impairments



Council for
Exceptional
Children

D.V.I. QUARTERLY

Volume 49, Number 3

Spring 2004

SPECIAL ISSUE
ON
EARLY INTERVENTION



Dots for Families

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A father of a 3 year old future braille reader asks, "But how will my daughter learn that these dots are words?" The mother of an 8 month old child who is blind marvels at the braille skills of a 2nd grader who demonstrates how she can read and write braille. As the 2nd grader reads her Halloween story "Which Witch is Which?" a look around the room at the families of the 6 children whose parents (and one uncle) are participating in this 8 week braille literacy class makes it clear that these families are learning more than just how to read and write the literary braille code.

In the Spring of 2003 Susan Greer, Director of the Visually Impaired Preschooler's Center and Parent Outreach Program of the Arizona State Schools for the Deaf and the Blind and L. Penny Rosenblum, an Adjunct Assistant Professor at the University of Arizona's program to prepare teachers of visually impaired children, formed a partnership. Our goal was to offer *Dots for Families*, an 8 week course for families to not only learn the beginning of the literary braille code, but to also have the opportunity to meet braille readers, learn about technology for individuals with visual impairments, and gain appreciation of how children who are blind use braille to access literacy in their environment. Families would also have the opportunity to meet each other and share stories of their experiences with their child and literacy challenges and successes. This article describes the class logistics, data from the pre- and post-test, and the content covered in the class.

Class Logistics

The class was open to ten individuals and six families registered for the class. The class was held in the fall of 2003 from 6:00 to 8:00 p.m. on Monday evenings so that all family members could participate. The participants included the mother, father, and uncle of an 8 month old girl; the father of a 3 year old girl; the mother of a 2 year old girl; the mother of a 4 year old boy, the mother of a 3 year old girl; and the mother of a 6 year old boy. Each family member was provided a braille writer to use for the 8 weeks, a notebook of materials compiled by Dr. Rosenblum, and childcare services. The equipment, materials and childcare were provided at no cost to the families.

Dr. Rosenblum developed a schedule for the 8 sessions. Each session was divided into 2 or 3 parts. The schedule is presented in Table 1.

Table 1: Schedule for 8 Sessions

Week	Part 1 – Braille Code	Part 2 – Information	Part 3 - Literacy
One	Loading paper in the braille, parts of the braille, the cell, letters a-j	Brief history of tactile writing, foundational skills for braille readers	Video: <i>Personal Touch</i> (Hadley School for the Blind)
Two	Review letters a-j by playing a bingo game, introduce letters k-z	Commercial braille books, resources for obtaining braille materials	Adult braille reader who is congenitally blind
Three	Review alphabet through gin rummy game, introduce capitalization and punctuation	Book boxes and bags, homemade experience books	Video: <i>Elizabeth's Story</i> (America Printing House for the Blind)
Four	Review previous material, introduce additional punctuation and numbers	2 nd grade braille reader, the child's mother, and the child's teacher of students with visual impairments	
Five	Review previous material, introduce 23 alphabet contractions	"Cooking Activity" – Bumps on a Log	Video: <i>Understanding Braille Literacy</i> (AFB Press)
Six	Review with a reading passage, introduce contractions (and, for, of, the, with & dot-5 contractions)	Slate and stylus (Video <i>Introduction to the Slate and Stylus</i> – Exceptional Teaching Aids), practice loading paper and writing	5 th grade dual reader and her mother
Seven	Introduce short form words	Technology Field Trip to Arizona State Schools for the Deaf and the Blind Computer Lab	
Eight	Review short form words, introduce some other groups of contractions	Make and Take, post-test, course evaluations	

Pre- and Post-Test Information

The first class began with a pre-test and the last class had a post-test. The pre- and post-tests were a combination of multiple choice questions and open-ended questions. The pre-test was taken by 8 class members. There were 10 multiple choice questions with scores as follows: 30% (n=2), 40% (n=3), 50% (n=1), 60% (n=1), and 70% (n=1). In comparison, when the same 10 multiple choice questions were asked on the post-test, the scores for the 6 participants who completed it were 60% (n=1), 70% (n=1), 80% (n=2), 90% (n=1), and 100% (n=1). Thus the average score on the pre-test was 45% and on the post-test it was 80%. Sample questions included: "Seedlings is a company that:," "In braille contractions are:" and "The braille bug is:"

On the pre- and post-tests there were open ended questions. On the pre-test families were asked what questions they had about braille and literacy opportunities. Answers included:

- How long does it take to learn [braille]?
- How do I help my child to become more interested in books?
- What is available to children after completing high school and college?
- What, as a family member, should I expect as my child gets older?
- When does slate and stylus training begin?
- Is it [braille] hard to read and understand?
- Do public libraries carry a large amount of braille books or do they have to be specially ordered?
- How hard is it [braille] to remember for children/adults with sight problems?

On the pre-test they were also asked why they were taking the course. Answers included:

- To help my daughter read.
- To be 100% involved in my child's learning and life.
- To help ourselves to get a head start on it since our daughter is only 8 months old.
- To help my son in his studies and to be able to write to him.
- Because I want to learn every resource available for my daughter's well being.

The following question was asked on the pre-test in anticipation of the visit in week four of the 2nd grader, her mother and her teacher of visually impaired students. "When your child is in 2nd grade, what do you see him or her being able to do in regards to reading, writing, and being literate?"

Answers to this question included:

- Fluent
- Hadn't thought about it.
- Pretty much the same things as a child who is not visually impaired.
- I see him reading, writing, being literate and being very excited and confident in his abilities.
- For him to succeed, but I'm unsure of what to expect for a 2nd grader.

This same question was repeated on the post-test. On the post-test all answers given by participants focused on their children having literacy skills in braille and/or print. A typical response was "I am sure my son will be using his brailier, expanding his knowledge of braille, reading aloud to his family, going to the library and writing his own stories. I hope to continue my own study of braille right along with him."

On the post-test participants were asked to list three things they learned about braille and literacy opportunities. Responses fell into four categories. An example quote from participants is provided for each category.

- Braille code – "There are a lot of different ways to use only 6 dots."
- Literacy Instruction – "To begin and to continue to foster in my child the interest in literacy."
- Tools – "The equipment the visually impaired guests brought to the class, slate and stylus etc. I had not seen them [before nor] actually used them."

(Continued on next page)

- Awe – “I’ve learned to appreciate my sight and appreciate the amount of effort visually impaired people put forth to get them through life with braille.”

On the post-test all six participants checked “yes” when asked “Would you recommend this class to other families?” Many positive comments were made about why. One participant commented, “It is a wonderful opportunity to reacquaint one with how literacy was acquired in the first place, and how to help our child become literate, as well.”

The final data collected on the post-test was a rating by participants of all activities associated with the class. A 4-point Likert scale was used with 1 being not very useful, 2 being somewhat useful, 3 being useful, and 4 being very useful. The mean for the 6 participants for each item is reported in Table 2.

Table 2: Post-Test Mean Ratings of Class Activities

Mean	Activity
4.00	Weekly braille homework.
4.00	Parent, 2 nd grade child and teacher visiting the class.
4.00	Learning about different types of books and where these can be obtained.
4.00	Visit to technology lab.
4.00	Talking with other families about their experiences.
3.83	Parent and 5 th grader visiting the class.
3.83	Weekly braille lesson in class.
3.66	Games / activities to promote braille knowledge (e.g., bingo, rummy, how to make “bumps on a log”).
3.50	Learning about the slate and stylus and how to use it.
3.50	Adult who is a braille reader visiting the class.
3.25	Adult with low vision visiting the class and talking about technology.
3.00	Video tapes (e.g., <i>Personal Touch</i> , <i>Understanding Braille Literacy</i>) viewed in class.

Class Content

As noted earlier, the intent of the class was not to teach the families the entire braille code, rather, the intention was to develop beginning level braille skills while fostering an understanding of how children develop literacy skills. Each week the participants were introduced to new braille information. They were given homework, both a reading and a writing activity. During class time a review activity was done. “Fun” activities were often used for the

review activities (e.g, bingo, gin rummy) to reinforce to the families that learning braille can be fun for them and their child. One of the highlights was a “cooking activity” where the families were given a recipe for “Bumps on a Log” and first had to decode it. Once the recipe was read then each person was given two logs (celery), 8 bumps (raisins), and “glue” (peanut butter). With eyes closed they were told to assemble their snack following the recipe. As the families struggled to assemble their snacks much learning occurred. For example, they learned the importance of organizing the workspace, using one’s hand to see which way the knife’s point was facing, and giving additional time to complete a task. A discussion of the benefits of hand-under-hand and hand-over-hand assistance, working from behind the child, and repeated practice followed the activity.

The use of videos such as *Personal Touch*, *Elizabeth’ Story*, and *Understanding Braille Literacy* enabled the instructor to introduce many braille readers to the families. However, videos do not have the power that real life experiences have as shown by the ratings in Table 2. Thus, four speakers were arranged for the class. The first speaker was a 25 year old woman with congenital blindness who had been educated in a combination of a rural community where she was the only student with a visual impairment and the Arizona State Schools for the Deaf and the Blind where she attended high school. She was able to talk with the families about her early education, the importance of her families promoting her independence and reading to her, and the ways in which she uses braille as an adult. She demonstrated her portable note taking device to the families and spoke about the types of information she uses the device for every day.

The second speaker was a triad of a 2nd grader, her mother, and her teacher of students with visual impairments. The 2nd grader had started out in the early intervention program and preschool where the families in the class were currently served. As a kindergartner she attended Arizona State Schools for the Deaf and the Blind. Then in first grade her family moved her to public school where she is now receiving services from the teacher who attended the session with her and her mother. The triad was able to talk about how braille instruction was started, the role of the TVI is in the general education classroom, where braille materials come from in the public school environment, and how the family and teacher work together. They brought with them examples of the child’s work and she read from several of her braille books. She also demonstrated how she uses a braille writer.

The third speaker was a 5th grader who is a dual reader. She and her mother visited the class together with the 5th grader doing the majority of the presentation. She demonstrated some of her low vision devices (e.g., monocular, Ott lamp), showed her talking books and how she uses a 4 track tape player, and discussed the importance of her cane for orientation and mobility. She described what activities in school she uses print for, what ones she does with braille, and what ones she does by listening.

The final speaker was a low vision adult in his early 20’s. He spoke about why he didn’t choose to learn braille and how he uses technology in his home and work. He demonstrated Zoom Text, JAWS, reading glasses, and a talking dictionary.

The combination of these speakers and the field trip to the technology lab gave the families the opportunity to see first-hand the many options their children will have in regards to literacy. In the technology lab the families were exposed to technology used by individual with visual impairments including JAWS, Zoom Text, Duxbury, the Braille Note, and the Mountbatten brailier. They were given an opportunity to try the various technologies as they completed simple activities (e.g., used JAWS to listen to a document, opened a document in Duxbury and then translated it, entered text into the Mountbatten brailier).

Summary

Dots for Families provided the participants with a wealth of information they can carry forward with them as their child learns and grows. These families are more knowledgeable about the braille code, methods of instruction, and the impact of vision loss on child development than they were at the beginning of the class. They have discovered many resources related to braille and literacy and have had the opportunity to see first had how literacy impacts the life a person with a visual impairment. As one parent said in the post-test, "My hope is that [this class] will become part of every institution that serves the blind (educational). It is a great help to parents." We couldn't agree more!

PHOTO 1: Greeted by the Australian accent of the Mountbatten brailier, this father tries his hand at using the device.

PHOTO 2: This mother finds that slate and stylus isn't as hard as she thought it would be.

PHOTO 3: A mother marvels at the refreshable braille and speech output of a portable notetaking device.

PHOTO 4: With his eyes closed, this father tries to prepare "Bumps on a Log" following the directions he decoded from a braille recipe.



