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A Master's Paper
Submitted in Partial Fulfillment of
The Requirements for the Degree of
Master of Science in Education-Reading

Major Advisor's signature

Date

University of Wisconsin-River Falls 2012
Abstract

Research has shown that parental involvement in children's early literacy is critical to their development. The problem is that parents may lack the knowledge, skill set, and confidence to obtain this involvement. The purpose of this action research project is to provide parents with interactive tools, focusing on print characteristics, that equips them to play a more prominent role in their child's literacy education. This action research presents the findings in a two part study. In part one, parents were asked to focus on the characteristics of print while reading aloud daily to their children. While in part two, the focus expands to include print found in their environment. This project design was inspired by research indicating that explicit instruction on the concepts about print builds a connection between oral language and reading. This instruction thus creates a link that can build a solid foundation for reading readiness.

In part one of the study, the researcher used Marie Clay's *Concepts About Print* observation checklist to obtain a base print score for each of the eight participants (Clay, 2000). She created 12 different book bags, each book bag contained one print salient book and a brochure for parents. Print salient books are defined as books featuring diagrams, labels, speech bubbles, and unique fonts. The parent brochure provided examples on how they can draw their child's attention to print when reading aloud daily. Each preschooler chose their own book bag, based on their interests. They were encouraged to exchange book bags daily, but this was not enforced. After three weeks, the researcher again used the *Concepts About Print* observation checklist to reveal what effect the reading program had on the emergent preschool readers (Clay, 2000).
The results showed that each of the participant's knowledge about print increased, on average 6 points. Proving that, given the proper direction and tools, parents can have a positive impact on their children's literacy development.

The second part of the study expanded beyond conventional print found in books, to include environmental print. Environmental print is text that surrounds our daily lives, on billboards, signs and logos. The researcher opted to use a single child case study model to assess the effects of parental and preschooler engagement in environmental print. The researcher, again, used Marie Clay's Concepts About Print observation checklist to obtain a base print score (Clay, 2000). The researcher also assessed the preschooler's knowledge base of environmental print by choosing twenty examples of print found in our environment. Three print cards were developed for each example. One used multiple visuals as cues for the preschooler, the second used minimal visuals and the third used no visuals, just the word (reference figure 6 for example). Over the course of six weeks, the researcher engaged the preschooler in guided discussions and activities that focused on these specific environmental print examples. She also followed the parental brochure guide, used in part one of the study, to draw the child's attention to print during daily read alouds. At the end of the study, the researcher reassessed the preschooler's print knowledge by administering both Marie Clay's Concepts About Print checklist (Clay, 2000) and the 20 examples of environmental print cards. When comparing the base print score to the post print score the results clearly showed a significant growth in print knowledge. The participant's Concepts About Print knowledge grew 33%; while his environmental print knowledge grew an average of 11.1 points.
These results clearly show that explicit print instruction using both conventional books and environmental print will increase print knowledge. Print knowledge is important for building a solid foundation for reading and is a skill that needs to be established before entering Kindergarten. Including parents in creating this foundation is integral to success because they have the opportunity to impact their children’s knowledge of print on a daily basis.

**Introduction: The genesis of this action research project**

As an Early Childhood educator, I wanted to discover opportunities in which I could involve parents more in their preschoolers’ early literacy development. I have been working with preschool age children for the past 10 years and each year parents would ask me, what can I do to help prepare my child for Kindergarten? My answer was always the same-read to them! As the years pass, I began to question if that was enough. I contemplated other ways to include parents in their child’s literacy education. I often incorporated print awareness activities during read alouds in the classroom and I wondered if I could educate parents to do the same during their reading time at home. I understood that developing print awareness in the preschool years is an interracial part in laying the foundation for later reading success, so why not share that share that with parents. I decided to create a structured home reading program that parents could use when reading to their children, emphasizing the characteristics of print. I wanted this program to spark the preschoolers interest in literacy while increasing parental involvement. I recognized that families’ lives are very busy so I knew that this program
would have to be easy to implement as well as engaging for both parent and child. I came up with the idea to assemble home book bags which contained one print salient books and a simple brochure that gave parents suggestions on how to draw their child's attention to print. After reviewing the results of the first part of the study I saw a significant growth in print knowledge, after just a few short weeks. I decided to expanded the home reading program to include explicit instruction on the print found in our environment. This home reading program not only assisted parents in emphasizing print found in books but also gave parents some ideas on how to emphasize environmental print. I created some games and activities that they could play with their child, all focusing on print. Some examples of these games are matching logos, eye spy grocery store and writing environmental print. I hoped that this program would increase parental involvement in literacy while increasing preschooler's print knowledge.

Literature Review

What is the Role of a Parent in their Preschooler's Literacy Education?

It is natural for parents to want to educate their children; they are their child's first teacher, after all. Parents' possess an inherent motivation to help their children succeed academically. It is only logical for teachers to see parents as a valuable resource in which to strengthen literacy skills outside the classroom. Taylor stated that "the home environment has a direct influence on children's early literacy development. The availability of reading and writing materials, the modeling of literate behaviors by adults,
siblings, and others, and the verbal interactions between children and adults impact language and literacy growth in different ways” (as cited in McCullough-Calabrese, 2002, p. 294).

It is the professional educator’s responsibility to communicate to parents the importance of home literacy education and to guide them in insuring that they are reinforcing the most beneficial literacy skills for their child. The question that most parents and educators may have is how? One study by Nicki McCullough-Calabrese, found an effective way to involve the parents of a pre-kindergarten classroom was to send home weekly literacy book bags. These book bags consisted of books, journals and activities that the children completed with their parents throughout the week; on Friday the finished products were sent back to school to share with their classmates (McCullough-Calabrese, 2002). A survey completed by the parents at the end of this pilot study reported that “One hundred percent of the families stated that they enjoyed the activities, leading to children’s increased motivation to engage in literacy tasks” (McCullough-Calabrese, 2002, p.303). This is a one simple, yet wonderful example of how teachers can create literacy experiences for parents to share with their children.

Reading to children is only one part of supporting preschooler’s developing literacy skills, another instrumental part is engaging them in crucial conversations. Vera Goodman (1995) states “reading skills are acquired as we read books, share experiences and engage in talk with children” (p.1). She attributes much of beginning readers’ success to quality dialogue about what is being read (Goodman, 1995). Quality dialogue includes questioning the content in the story, making predictions about
what will happen next and making connections to the story (Goodman, 1995). She emphasizes that reading is an active process between the reader and the learner (Goodman, 1995). Who better to participate in quality dialogue, assisting in making personal connections to the text, than a parent who knows their child so well. Torgersen (as cited in Bruns and Pierce, 2012, p. 8) report that families in particular have a variety of opportunities to practice literacy skills in natural settings throughout daily activities.

Parental involvement in literacy education can happen in many different settings at all hours of the day. It can be as simple changing the conversation by facilitating meaningful discussions about print while grocery shopping with their child, taking a walk around the neighborhood, or cuddling up with their child to read a favorite book. Workman and Gage maintain “the most powerful form of parent involvement has the parent actively involved with the child at home in all ways that relate to optimal learning and growing” (as cited in MCCullough-Calabrese, 2002, p. 295). In essence a parent’s role is instrumental in their child’s literacy education, this role is primarily to read to them and assist them in constructing meaning.

What is Print Awareness?

There are rules all written languages must follow. Print Awareness is a comprehensive term that describes the rules that we have for turning our spoken language into print (Clay, 2000). Children begin to understand these rules when they start becoming more familiar with books. They begin to realize that books have a title and cover page and that the pages of books are turned in a specific direction. They also begin to realize that print, not the illustrations, tells the story and that there is a
starting point with directional rules for how print is read (Clay, 2000). Clay maintains that explaining these rules to children would be a complicated task. Alternatively she offers a “good diet of book-sharing in the preschool years, plus warm responses to their efforts to find things in print or make messages by writing print (Clay, 2000 p. 1).

A recent study conducted by Ezell and Justice (2000, as cited in Justice and Ezell, 2002) states that a structured shared book reading between an adult and child that includes explicit print referencing is one notable method for increasing print awareness (p.18). Senechal, LeFevre, Thomas and Daley (1998, as cited in Zucker, Ward and Justice, 2009) cite parental survey results indicating that associate print referencing during read-alouds had a positive affect on their children’s emergent literacy skills (p. 65).

What is Print Referencing?

As described by Justice and Ezell (2002,2004) and Justice, Kaderavek, Fan, Sofka, and Hunt (2009) (cited in Zucker, Ward, and Justice, 2009) “Print referencing refers to techniques educators use to increase emergent readers’ knowledge about and interest in print by highlighting the forms, functions, and features of print during read-alouds” (p.62). Print Referencing is not only for increasing emergent readers’ print knowledge, but is also used to develop their interest in familiar social print and aid in developing their metalinguistic understanding of print (Zucker, Ward & Justice, 2009). Print referencing is not a technique that is solely used during read-alouds in a classroom setting, but can also be included in any shared storybook reading experience. As Holdaway (1979, cited in Beauchat, Blamey & Walpole, 2009) explains
"[A] shared storybook reading is a broad term, including all instances when an adult reads to a child or children, pausing to engage children in a discussion about text" (p. 27).

Print Referencing addresses four main domains of print awareness: (a) print as an object of meaning, (b) book organization and print conventions, (c) alphabet knowledge and (d) concept of a word (Zucker, Ward & Justice, 2009).

The Print Meaning Domain primarily focuses on environmental print, the concept of reading and print function (Zucker et al., 2009). Environmental print encompasses the print rich environment which surrounds our daily lives. Children see it on street signs, cereal boxes, advertisements and newspapers. According to Jennifer Prior (2009) children's "everyday experiences with print are an important classroom tool to help children connect what they already know about written language and what they are learning" (p.9). Print meaning also relates to the purpose of reading, for example, we read to get more information or to convey a message (Zucker et al., 2009).

Book Organization and Print Convention focuses with print direction and order, as well as the author's role and the title (Zucker et al., 2009). Print direction and order address the directionality of print, for example English is read from left to right, and top to bottom (Justice & Ezell, 2002).

The Alphabet Knowledge is composed of the concept and name of a letter, as well as upper and lower case letters. In this domain children learn that there are twenty-six letters in the English alphabet and that each letter has its own name. They also learn that the purpose of letters is to form words.
Lastly, *The Concept of a Word Domain* emphasizes word identification and letters versus words (Zucker et al, 2009). Within this Concept of a Word Domain, there is vocabulary instruction that is implemented into the shared reading experience. Introducing new vocabulary to emergent readers builds their repertoire of words, which can be accessed later to make connections and improve comprehension. Hart and Risley’s reported in *Meaningful Differences in the Everyday Experience of Young American Children* (1995, as cited in Neuman & Dwyer, 2009), found that “children who scored highest in reading and math at age 10 were reported to have heard 45 million words from birth to age 3, or about 30,000 words per day, compared with those children who scored lowest, at 13 million words” (p. 384).

**How can parents use this knowledge of print awareness and print referencing to support literacy development when reading to their children?**

Chaney (1992) and Snow, Tabor, Nicholson and Kurland (1995, as cited in Justice & Ezell, 2002) provide evidence that there are “interrelationships [that] have been observed between preschool children’s print awareness and their general language abilities, such as vocabulary knowledge” (p. 18). Shared reading experiences that focus on print is one way in which parents can expose children to the four domains of print awareness.

There are multiple techniques that can be implemented during shared storybook readings to assist the reader in highlighting these different domains about print. Zucker,
Ward and Justice (2009) describe four different methods for referencing print. The first method is asking questions about the text such as, “What do you think that the dog is saying?” The next is giving requests, “Please point to where I should start reading.” Then there is a technique where the reader offers comments about the text while they are reading, such as “The word school is written on the picture of a school.” The last method is the nonverbal technique in which the reader points to the print while they are reading (Zucker et al., 2009). It is important to note that not all of these methods should be used during one shared reading experience. The story needs to continue to read fluidly; otherwise, all story meaning will be lost. The reader needs to choose the print techniques that have the most meaning to each story. As Zucker, Ward and Justice (2009) express so accurately “When adults embed print references into book reading, lively discussions about print unfold because your children typically find print as interesting as other text stimuli, such as illustrations; this can promote children’s positive orientation toward literacy” (p.68).

Shared reading experiences are not the only way in which parents can encourage their children to reference print. Environmental print is all around us on street signs and logos, providing parents with opportunities to have deliberate meaningful conversations with their children about print. Commercial environmental print found on food logos and toy labels are very meaningful to children, therefore automatically providing an intrinsic motivation for them to want to read this type of print. Giles and Tunk (2010) explain that “engaging children in conversations about print seen in everyday settings increases their curiosity, expands general knowledge, and improves communication skills while helping them understand the alphabetic
system” (p. 26). These conversations can take place in many different settings and can be used to highly motivate children, such as in a grocery store, trying to find their favorite treat to purchase. Some additional activities in which parents can encourage their children to read environmental print is to have them create their own book using food labels found in their kitchens, that they can later sit down and “read” to you. Taking photographs of print in their neighborhood or play matching games with labels (Giles and Tunks, 2010).

Exposure to numerous types of print in a variety of situations provides children with knowledge of not only the form of print but the function of print as well.

**Why is print knowledge important?**

Research shows that understanding the concepts about print assists children on where to direct their attention when reading. Consequently introducing children to the purpose of print as carrying the message. It is important that the foundation of the concepts about print becomes solidified in the preschool years, so that literacy can be built in the later years. Adams (1990), Ball and Blachman (1991) and Vellutino and Scanlon (1987, as cited in Justice & Ezell, 2002) confirm that preschool is a critical time when the structure of the written language is acquired (p.18). A study conducted by Levy, Gong, Hessels, Evans and Jared (2006), found a developmental link between activities that focus on print, letter knowledge and word elements during children’s early literacy experiences correlated with improved reading skills.

Justice and Ezell (2002) conducted a research study to evaluate the impact of shared book-reading, with a focus on print awareness, with 30 preschool children from
low-income houses. This was an eight week small group book reading intervention. The experimental group featured print focus reading activities and the control group featured picture focus activities (Justice & Ezell, 2002). There were six informal measures used to examine the children’s early literacy skills and those assessments were administered pre and post reading intervention. After comparing the pre and post data the results showed gains for both the experimental and control groups. However, overall the experimental group made significantly more gains in print awareness than the control group. The results of this study suggest that any shared reading experience is going to be beneficial for preschool children, but a shared reading that focuses on print has a more profound effect on children’s early literacy skills (Justice & Ezell, 2002).

The National Association for the Young Child, N.A.E.Y.C, which is a non-profit organization dedicated to developing exceptional education for all young children, states (1998, as cited in Young, 2009) “failing to give children literacy experiences until they reach school can severely limit the reading and writing levels they ultimately attain (p. 177). Therefore it is imperative that we expose children to a wide variety of literacy experiences, including print knowledge.

Young, Morrison and Wilcox (2003) conducted a study with 97 participants (ages 4-7) to examine how concepts about print knowledge affects children’s reading of environmental print. They found that the knowledge of concepts about print, graphic awareness and phonemic awareness facilitated in the ability to recognize environmental print in and out of context. Meaning that the participants were able to read the word “stop” written in a book as well as “stop” written on a stop sign. These results clearly link
the knowledge of print concepts in the early years to the ability to develop future literacy skills.

Conclusion

The review of the literature addresses the significance of parental involvement in early literacy. Professional preschool educators need to share the responsibility of preparing their students for Kindergarten with their parents. One way that this can accomplished is by coaching parents on specific ways in which they can assist in educating their children about different aspects of literacy. Literacy home book bags combined with a parental guide and specific instructions on how to play environmental print games are two examples of how parents can become involved. By informing and educating parents on the different opportunities they have to educate their children about print two very important things are accomplished. Number one, parents become involved in their children’s literacy education and number two, preschooler’s print knowledge increases. Both of which are indicators of later reading success.

Action Research: Part 1
Home Literacy Book Bags and Print Referencing Techniques

Methodology-Participants

This action research project consisted of participants that attend a Nationally Accredited Preschool Program on either a part time or full time basis. There were 8 preschool children, 6 boys and 2 girls, ranging in age from 3.5 to 5 years, who participated in this home reading program.
Methodology-Procedure

I sent home permission slips at the end of February 2011 with all the preschoolers that attend a Nationally Accredited Childcare Center. I received 8 permission slips back and completed Marie Clay's Concepts About Print Assessment, using Marie Clay's book *Follow Me Moon*, for each of the involved students. This score was used as their base print score. Then I sent home a book bag that contained one print salient book and a brochure for parents giving them specific techniques that they could use to highlight general concepts about print when reading to their children. Print salient books are defined as books that have unique fonts, labeling, speech bubbles and print in the illustrations. I choose to use print salient books in the home book bags because these books allow for more interesting dialogue about print. When selecting books for the book bags I looked specifically at print the salient criteria to guide me in making my decision process. I also tried to have a mixture of non-fiction and fiction books. **Figure 1** is a copy of the brochure and some samples of the print salient books that I used in the home book bags. Students chose their own book, based on their interests. They were encouraged to return their books the next day and choose a new book each night, but this was not enforced. The home reading program lasted three weeks in total. At the end of the three week period, I re-assessed the students, again, using Marie Clay's Concepts About Print Assessment with Marie Clays book, *No Shoes*. This score was used as their post print score. When the three week home reading program was completed, I distributed a parent survey to ascertain what parents thought of this home reading program.
In April 2011 I had collected the assessment scores and parent survey results and I began to analyze the data.

**Figure 1: Handout and sample books used in home book bags**

_Suggestions to help draw your child's attention to print:

_Questions to ask:
1. How many words do you see on this page?

2. Where should I start reading?

• Where should I go next?

• Point to a word and ask if any letters in that word are in their name?

_Comments:

• Point out the labeled words in the book, such as the illustrator wrote school on that building in the picture!

• Look at how long the word watermelon is, it has 10 letters in it. Now look at the word the, and let's count how many letters that word has.

• Point to a talk bubble and tell your child "That is what the dog is saying."
Results

When comparing the base print scores and post print scores, it clearly shows that each of the preschoolers involved grew in their print knowledge. To determine the amount of their growth, I used Marie Clay’s stanine scores (normalized scores) that she compiled in her research as a guide to compare the participants with an average score taken from a sample of nine different groups of children ages 5 to 7 years. Stanine scores are a standard system that divides the standard curve of test results into nine groups. Most of the test scores will fall into the average groups 4-6 while groups 1-3 are below average and groups 7-9 are above average. The base print scores of each of my participants put them primarily below average, after 3 weeks all the participants saw significant improvement, growing multiple stanine groups. One student started at stanine group 4, the bottom of the average, grew to stanine group 6, the top of the average. Four students that started below average climbed to average, while the 3 students who remained below average, but still grew a stanine group, were among the youngest students. Five of the participants in my research project were younger that 5 years old, but I accepted them into my action research to see how their age might affect their score. My findings were that although each of the participants successfully transitioned to a higher stanine group, the older children grew multiple stanine groups. This is likely because the older participants were at the correct developmental stage to learn about the concepts of print.

Figure 2 details the 24 possible test score points that align with the 9 stanine groups.
Figure 2: Marie Clay’s Stanine Group Scores.

<table>
<thead>
<tr>
<th>Stanine Group</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Score</td>
<td>0</td>
<td>1-4</td>
<td>5-7</td>
<td>8-11</td>
<td>12-14</td>
<td>15-17</td>
<td>18-20</td>
<td>21-22</td>
<td>23-24</td>
</tr>
</tbody>
</table>

Figure 3 depicts the base print and post print stanine scores of each of the participants as well as their age. Figure 4 breaks down the base and post scores by the 24 total possible points. These graphs shows the dramatic individual results of each participant. When the three week action research project was complete I distributed surveys to each of the participant’s parents. Figure 5 is a copy of the parent survey that was distributed. 5 out of 8 parent surveys were returned. 100% of the surveys returned stated that the child had begun to notice print more often since starting the home book bags. 3 out of 5 parents agreed that their child had showed more interest in reading books since starting the home reading program, while the remaining 2 parents commented that their children have always had a strong interest in reading books. 3 out of 5 parents stated that their involvement in their child’s reading had not changed, while 2 agreed that they had become more involved. I would like to point out that although 3 parents stated that their involvement in their child’s reading had not changed, they stated this because they were always highly involved in their reading and their children still grew in their print awareness score. This across the board improvement indicates that the program has assisted all families in enriching their home reading experiences.
Figure 3

![Bar chart showing Stanine Group Base Score and Stanine Group Post Score for participants aged 3 1/2, 5, 3 1/2, 4, 3 1/2, 5, 4, and 5 years old.]

Figure 4

![Bar chart showing Base Print Score and Post Print Score for participants 1 to 8.]

Figure 5:

<table>
<thead>
<tr>
<th>Parent Survey</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Since starting home book bags, your child has began to notice print more often?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. You enjoyed reading these books with your child?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Here are some unsolicited parent comments about the home reading program from the survey's.

- "I liked being educated, as a parent, of some of the things she should notice or learn about the "print" (& not just the story)."

- "He has started to ask me what this word says, example a sign we see at the store, very cool to see!"

- "He is also in the Kelsey Reading program and I think they collectively (with the book bags) have sparked his interest in words and reading."

- "Since reading these books, G***, has been interested in punctuation. That is a very good thing."

- "I've enjoyed having to "think" about consciously making time each day to read. We used to, but over the last couple of years have gotten away from it. After a few days I started to see the benefits again it's also made our daughter more curious about books which is an added bonus!"
Action Research: Part 2

Environmental Print Activities and Discussions

Methodology-Participants

This action research project was a case study model in which one preschool boy, Oliver, age 5 participated. Oliver is a pseudonym used only to protect his privacy. Oliver attends a Nationally Accredited Pre Kindergarten program 2 days a week. He is going to be attending Kindergarten in the 2012-2013 school year.

Methodology-procedure

Oliver was given Marie Clay's Concepts About Print assessment on February 17, 2012, using the book Follow Me Moon (Clay, 2000). This score would be used as Oliver’s base print score. Next Oliver was assessed using three sets of twenty environmental print cards. The first set of environmental print cards were in full color and contain multiple visual and context cues. The second set of cards contained no context cues but some visual font and color cues. The third set of environmental cards contained only the environmental print written in black ink using Times New Roman size 48 font. The twenty environmental print logos, signs and products that were used were; McDonald’s, Dairy Queen, Burger King, Skittles, Oreo, Lego, Rice Krispies, Crayola, Play-Doh, Hot Wheels, Walmart, Target, Exit sign, Stop sign, M & M's, Walt Disney, Toys R Us, Mott’s One Way sign, and Cheerios. Figure 6 shows one example of the three sets of environmental print cards that were used with further explanations of the visual and context cues.
Figure 6 (Stop sign)

Environmental Print Card Example set one: Visual and Context Cues (shape of the sign, color of the sign and the setting where the sign is found)

![Stop Sign](image1)

Environmental Print Card Example Set two: Some Visual Cues, No Context Cues. (shape of the sign, no color, no setting where the sign is found)

![Stop Sign](image2)

Environmental Print Cards Example Set Three: No Visual or Context Cues (no shape of the sign, no coloring and no setting where the sign is found)

![Stop Sign](image3)

Building Knowledge of Environmental Print and Concepts About Print

After a base print knowledge was established the researcher began using different methods to teach Oliver the twenty specific environmental print signs. These games were developed to encourage Oliver to focus on the print found on signs and logos, instead of relying on only the visual and context cues.
Eye Spy Grocery Store. Oliver was given a list of items that he was asked to find in the isles of the grocery store. The list contained the logos in full color and print. When he found the items he put them into the cart, when all the items were located, we purchased them and brought them home. Once the items were home, Oliver was able to snack on one of the treats! Once the food containers were empty he cut out the logos out to make his own environmental print book.

He glued a single logo on each page of a book made out of a cut up file folder. Next he searched a word list for the Times New Roman printed text that matched the text on the logo.

Environmental Print Book

Lastly, he cut out the matching text and glued it next to the logo. Oliver was then able to successfully read this book on his own, allowing him to build confidence while also building print knowledge.
Eye Spy Neighborhood. For this activity Oliver and I went for a walk around his neighborhood searching for the street signs that were on the environmental print list. Once Oliver found a sign on the list I took a picture of him next to the sign and we discussed the meaning of the print on the street signs. For instance, what does it mean when you come to a stop sign? Later, we looked at the pictures we took on the computer and he searched the printed environmental word cards (with no visual cues) to match each of the signs.

Environmental Print Match. A logo flip book was created with two different sets of the environmental print cards. The first set featured the picture of the logo or sign with the most visual and context cues. The second set featured a picture of the logo or sign with some visual cues. Oliver was asked to flip through the two sets of cards to find the matching logos. This activity strengthened his knowledge that the logo has the same meaning even without the visual cues.
Environmental Print Match

**Books with Environmental Print.** I used a variety of books that contained environmental print for daily read alouds with Oliver. As I was reading to Oliver I would initiate deliberate conversations linking the print in the story to the print found in our environment. I also drew his attention to print by using the suggestions from the handout described in **Figure 1.** **Figure 7** contains a list of some of the environmental print books used during daily read alouds with Oliver.

**Figure 7:**

![Environmental Print Books](image)

**Environmental Print Books:**

1. *The Grocery Store* by Carol Greene (Library Binding, 1998)
5. *I see a Sign* by Lars Klove (Aladdin, 1996)
7. Murals: Walls that Sing by George Ancona (Cavendish, 2003)
10. Signs on the Road by Mary Hill (Children's Press, 2003)

Writing Environmental Print. Oliver was given a file folder with a list of environmental print words written inside. I asked him to choose a few words and write these words on a piece of paper. This writing activity allowed Oliver to focus on the individual letters that make up environmental print. Figure 8 is a sample of Oliver's writing. He wrote these while looking at a printed word list. Figure 9 was a self initiated writing activity that Oliver completed by himself in his room, without looking at any print examples.

Figure 8

Figure 9

Results

Oliver made significant gains in both his environmental print knowledge and his Concepts About Print knowledge. When Oliver was first assessed using Marie Clay's
Concepts About Print checklist he received a score of 12 out of 24 possible points, putting him in the stanine group 5 (See Figure 2 for Stanine Group Scores Table). After six weeks of specific print referencing during daily read alouds Oliver’s score rose to 20 out of 24 possible points on the Concepts About Print checklist (Clay, 2000). Therefore jumping two stanine groups from group 5 to group 7. Not only did his score increase but his ability to verbalize his metacognition about print increased as well. For example on page 7 of Marie Clay’s Follow Me, Moon (Clay, 2000), the test is the inversion of the picture. The administrator must ask the child to “show me the bottom of the picture,” but the illustration is upside down. The child receives 1 point for a verbal explanation, pointing to the top of the page or turning the book around and pointing appropriately. The first time I asked Oliver to point to the bottom of the picture he turned the book around and pointed to the bottom. The second time I assessed Oliver, asking him this same question he again turned the book around and pointed to the bottom. The difference is this time he looked over at the print and said “Now the words are upside down, that’s funny.” Both times he received the full point, but the second time his comment told me that he is now focusing on the text.

Oliver’s environmental print knowledge also increased tremendously. When Oliver was first assessed, in February, using the first set environmental print word cards, with the most visual a context cues, he received 9 out of 20 possible points. He also relied very heavily on the visual cues to read the text. I came to this conclusion because of some of the answers that he gave when asked to read the print. For example, when asked to read Crayola he said “crayons,” instead of Mott’s he said “applesauce” and for One Way he said “that way.” Oliver scored 7 out of 20 possible
points on the second set of environmental print cards, with some visual cues and no context cues. For the last set of environmental print cards, with no visual or context cues, Oliver’s score was 2 out of 20.

When Oliver was assessed again in April, after six weeks after building his print knowledge, he scored 20 out of 20 possible points for set one of the environmental print cards, 20 out of 20 for set two of the environmental print cards and 12 out of 20 for set three of the environmental print cards. See figure 10 to notice his dramatic growth from his base print score to his post print score.

**Figure 10 Environmental Print Score**

![Bar chart showing environmental print score]

**Implications and Reflection**

The positive results and comments that derived from study one, Home Literacy Book Bags and Print Referencing Techniques, were very encouraging. These results were dramatic, given that the study only ran for three weeks. I would like to extend this
program for the entire school year to see what effect it would have on preschoolers early literacy development.

I feel my biggest limitation in implementing part one of the study was that I was not the regular classroom teacher. I gave the preschool teachers the materials and they were responsible for making sure that the book bags were being exchanged. Fortunately, the preschool teachers took this responsibility seriously, but I believe that it would have been much easier for me to manage had I been the regular classroom teacher.

Part two of the study, Environmental Print Activities and Discussions, also yielded very positive results. This part focused primarily on what types of activities could be implemented to effectively teach environmental print.

A limitation in part two would be the fact that it was a case study so it is difficult to generalize the results without larger trials. I believe I have designed a good home literacy environmental print focused program. I tried to make these activities fun and easy to complete. A true examination of this would be to include multiple parents in analyzing the efficiency and ease of these activities. The emphasis of the two parts of this study is finding ways to include parents in their child's literacy development. So it is important to make sure that these activities can translate well to parents.

I am, however, confident that giving parents tools to enhance their home reading can increase their preschooler's print knowledge as well as increase parental involvement in literacy.
Conclusion

In Conclusion, parents are their child’s first and most important teacher! When given the tools they can have a positive impact on their child’s early literacy education. I believe that a the next step in this study would be to extend the combination of both home literacy book bags and environmental print activities to all of the students in my class. I believe that implementing a combination of these studies at the start of the school year and running the duration of the year will offer more comprehensive results. Continuing this research to include multiple preschooler participants and their parents, will confirm if the growth found can be duplicated. This research has greatly affected the way in which I will involve parents in their children’s literacy development In the future. I have dedicated myself to educating and coaching parents on not only the importance of their involvement in early literacy education, but also the specific ways in which the can become involved in this education process.

References:


