A Report of:

The Carroll County Public Library
Emergent Literacy Training Assessment Project

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INTRODUCTION

The link between providing a rich early literacy environment in the preschool years and later success in school has been clearly established (Snow, Burns & Griffin, Bowman, Donovan & Burns, Strickland). Opportunities to develop oral language (expressive and receptive vocabulary), an appreciation of books and an understanding of story structure, an awareness of the sounds of spoken language (phonological awareness), an understanding of the alphabetic principle (knowing that letters represent the sounds in words, and this is the way we write and spell words), and an understanding of the basic concepts about print (that print tracks from left to right and top to bottom, the parts of a book, etc.) should be present in every early childhood setting. The Carroll County Public Library Emergent Literacy Training Assessment Project was designed to help achieve this goal in childcare homes that service Title I school districts in Carroll County, Maryland.

Carroll County Public Library (CCPL) was established in 1958 to serve all county residents, including children. CCPL has a history of reaching out to children in childcare settings, as they have provided service to childcare homes through their mobile library services since 1975. CCPL is recognized statewide for its emergent and early literacy training, puppetry & children's literature workshops, and school readiness training to parents and providers. Since 2001, their Library Discovery Zone has reached at-risk families through partnering with family literacy programs. In addition, all library programs for young children and their families are designed to incorporate principles of the Maryland Model for School Readiness (MMSR).

Although the library had developed and presented early literacy training workshops for both parents and caregivers, they saw a critical need to develop specific training to help home childcare providers in Title I school districts address the MMSR expectations. During the formative years of young children, at-risk parents in Title I school districts are often caught in a cycle of illiteracy and lack the skills and prior role modeling to provide

developmental experiences for their children. Since many of these children spend a large number of hours in the care of family providers, the providers play a vital role in their early literacy development. Fifty-three percent of Carroll County students were not ready in language and literacy when they entered kindergarten, according to the MMSR report of 2003-2004. At the same time, approximately 98 percent of home or family childcare providers in Carroll County had not taken the MMSR training that was offered to providers across the state. As a result of the library's on-going partnerships and services, the library was in a position to help meet the need of training home childcare providers in Title I school districts to incorporate MMSR practices into their curriculum, with an emphasis on the domain of language and literacy. Already familiar with the state level 54 hour MMSR training, the library's plan was to offer a shortened version of the main concepts for childcare providers, while also providing materials and follow-up services.

BACKGROUND

The Carroll County Public Library Emergent Literacy Training Assessment Project was designed for implementation in the 2005-2006 school year. In order to assess the effectiveness of this new initiative, two main components were included in the project development: 1) a pre-post survey of childcare providers on their knowledge of early literacy development and the activities/materials they used to foster this development in their childcare setting; and 2) a pre-post assessment of the three and four year olds in their care on the key areas of early literacy. The training, or treatment, consisted of four main components: 1) a fall and a spring workshop (4.5 total hours) based on MMSR principles in the seven domains, but focusing on language and literacy; 2) early literacy materials for the providers to use in their childcare homes to help implement the training, i.e., books, puppets, magnetic letters, flannel boards, CDs of children's songs, etc. 3) periodic newsletters to help the providers implement the training with their new materials; and 4) phone conversations to give the providers the opportunity to discuss the new activities they were trying, ask questions, etc.

The goal of this project was to design a treatment that would result in improved understanding and implementation of best practices in early literacy by the family childcare providers, which would then result in growth in the children's early literacy skills, thereby preparing them to start school ready to learn. With that goal in mind, an additional assessment component was added to the scope of the project: to follow the three and four year olds into kindergarten and analyze their MMSR scores in the area of language and literacy.

METHOD

CCPL collaborated with various stakeholders in the county for this initiative. Participants included:

- Director of the Judy Center, Robert Moton Elementary School
- Coordinator of Intervention Services, Carroll County Public Schools (CCPS)
- Director of Child Care Choices, Referral and Resource Center
- President of Carroll County Home Child Care Association

In addition, CCPL contracted with Resources in Reading, a consulting firm specializing in literacy needs, to complete the assessments.

Study Participants

To begin with, a total of 40 home childcare providers were identified to participate in the study. The majority of the providers resided in Title I school districts. Qualifications to participate were: 1) have three and/or four year olds in your care, and 2) have not yet had MMSR training. CCPL hosted an informational meeting with the providers to explain the project, and providers signed an agreement form to participate. Parents of the three and four year olds were informed of the study, and signed permission was obtained for each child to participate.

A true experimental design was used for this study, in that random selection was used to assign the providers to either the Treatment or the Control Group. Through attrition, we

began the study with 17 providers in the Treatment Group, and 15 providers in the Control Group. A total of 35 children (three and four year olds) began the study in the Treatment Group, and a total of 30 children began the study in the Control Group.

Treatment and Assessment Implementation

Resources in Reading developed the survey tool, with feedback from CCPL. ORC MACRO, a research design firm, reviewed the survey questions for validity and neutral language, and assisted with formatting and design. An assessment tool was chosen for the children, the Early Literacy Skills Assessment (ELSA), developed by the High/Scope Educational Research Foundation. This assessment was particularly well suited to the study, as it assessed the children in the areas of story comprehension, phonological awareness, alphabetic principle, and concepts about print. In addition, the ELSA provided an authentic assessment experience for the three and four year olds, in that the questions are embedded in a storybook that is read aloud to a child in a one-on-one setting.

Surveys were mailed to providers, who were then contacted by phone to schedule a fall visit by the Resources in Reading consultant. The fall visit consisted of: collecting the completed survey and answering any questions the providers might have, establishing rapport with the children, and assessing each child individually with the ELSA. Resources in Reading scored the assessments, and mailed a summary report to both the providers and parents of each child.

The Treatment Group then attended their initial workshop from CCPL in October of 2005. This three-hour workshop was planned and delivered by key CCPL staff to provide "hands-on" training in the research-based components of early literacy. At this event, they received an extensive kit of materials to use in their childcare homes to support the early literacy concepts and techniques shared in the training. This kit, consisting of "hands-on" materials such as flannel boards, puppets, picture books, magnetic letters, etc., was compiled from a variety of early childhood resources. One of the resources used was the "School Readiness Activity Cards" from the *Maryland Ready at Five Partnership*, an organization dedicated to helping children in Maryland start school ready

to learn. Each provider was also given a binder of written support materials (additional activities, songs, fingerplays, booklists, etc.). Modeling and practice opportunities were provided throughout the workshop to help ensure active learning by the participants. The providers valued this professional development training, as evidenced by their comments on written evaluations.

CCPL developed a total of two newsletters, with assistance from Resources in Reading. These newsletters were designed to refine and extend the providers' knowledge of best practices in the components of early literacy development from the training: oral language and comprehension, phonological awareness, alphabetic principle, and concepts about print. The newsletters were mailed to the Treatment Group providers in the fall of 2005, and in the winter of 2006. Each mailing included additional literacy materials (puppets, CDs, games) for use in their childcare homes. In addition, CCPL initiated telephone contact with the providers in the Treatment Group twice during the project**,** beginning at the midway point, to discuss their progress with the new techniques and materials and answer any questions they might have.

The Treatment Group attended their final training event in March of 2006. This one and one-half hour workshop was planned and delivered by key CCPL staff, with assistance from Resources in Reading. The workshop was designed to give providers an opportunity to share and celebrate their experiences and successes with implementing the new techniques and using the new materials. Additional materials to reinforce phonological awareness were distributed, as well.

Providers were enthusiastic about sharing what they had accomplished with the children in their care. Written evaluations showed that they valued both the resources & training they had received from CCPL, as well as the opportunity to share and learn from one another.

Resources in Reading then revised the fall survey tool, with feedback from CCPL. ORC MACRO again reviewed the survey questions for validity and neutral language, and assisted with formatting and design. Surveys were once again mailed to providers, who

were then contacted by phone to schedule a spring visit by the Resources in Reading consultant. The spring visit consisted of: collecting the completed survey and answering any questions the providers might have, and assessing each child individually with the ELSA. The final assessments were completed in May of 2006. Resources in Reading again scored the assessments, and mailed a summary report to both the providers and parents of each child.

RESULTS

Through attrition, the number of participants in both the Treatment Group and the Control Group changed from fall of 2005 to spring of 2006. The final number of both groups assessed at the end of the nine-month period was as follows:

Treatment Group = 15 Providers & 31 children
Control Group = 11 Providers & 20 children

Early Literacy Skills Assessment (ELSA) Results

The ELSA assesses children in four key areas of early literacy: comprehension, phonological awareness, alphabetic principle, and concepts about print. Regression analysis was used to test for the effect of the treatment in each of the four areas individually. The final test results showed the treatment effect to be statistically significant in three of the four areas: comprehension, phonological awareness, and concepts about print. In the area of alphabetic principle, the children in the Treatment Group did post a gain compared to the children in the Control Group, although it was not found to be statistically significant. Table 1 lists the treatment areas tested, the treatment effect expressed in raw score points, whether or not the treatment effect was found to be significant, as well as the significance level for each treatment area. For example, based on the regression analysis, the treatment effect for the area of comprehension was a gain of 6.479 raw score points, which was found to be significant at the .001 level, or very highly significant.

TABLE 1: SIGNIFICANCE OF TREATMENT EFFECT

TREATMENT AREA	TREATMENT EFFECT	TREATMENT EFFECT SIGNIFICANT?	SIGNIFICANCE LEVEL
COMPREHENSION	6.479	YES	< .001
PHONOLOGICAL AWARENESS	2.137	YES	< .05
ALPHABETIC PRINCIPLE	3.263	NO	>.05
CONCEPTS ABOUT PRINT	3.269	YES	< .001

As Table 1 illustrates, the area of phonological awareness produced a treatment effect of 2.137, which was found to be significant at the .05 level. The area of alphabetic principle, while posting a treatment effect of 3.263, was not found to be statistically significant. This finding will be analyzed further in the Discussion section of the report. Finally, in the area of concepts about print, the treatment effect was 3.269, which was found to be significant at the .001 level, or very highly significant.

The ELSA produces a raw score in each of the four areas and then coverts that score to one of three levels for each area:

Level 1: Early Emergent – Exploration

Children explore books, play with sounds, look at and handle letters, and use words to convey ideas and experiences.

Level 2: Emergent – Awareness

Children begin to pay particular attention to book parts, print conventions, sounds that make up words and letter names. They use an increasing number of words to convey meaning and to talk about the immediate past and future.

Level 3: Competent Emergent – Application

Children test their own theories as they "read" books, experiment with sounds that make up words, and recognize and use letters. Their growing vocabularies enable them to express increasingly complex ideas and narratives.

Analysis of the data included both the raw scores and the developmental levels for each area. The following is a summary of the results for each area.

Comprehension

The ELSA measures comprehension by the following items:

- ❖ Prediction: Guessing what will happen next in a story based on picture cues and/or previous text
- ❖ Retelling: Explaining in sequence what happened so far in a story or summarizing the complete story sequentially
- ❖ Connection to real life: Relating plot, concepts, or characters in a book to real-life experiences

The area of comprehension showed the greatest gain in both raw scores and developmental levels for the Treatment Group in comparison to the Control Group. As the two groups had different numbers of children, Table 2 illustrates the percentage of change in the raw scores for each group based upon the percentage of children who achieved that amount of change. For example, 19.4 percent of the children in the Treatment Group increased their score from the pre test to the post-test by 5 points, compared to 5 percent of the children in the Control Group.

TABLE 2: RAW SCORE CHANGES IN COMPREHENSION FROM PRE TEST TO POST TEST

RAW SCORE CHANGES	TREATMENT *n=31*	CONTROL *n=20*
-4.OO	0%	10%
-3.00	0%	10%
-2.00	0%	10%
-1.00	0%	20%
.00	0%	10%
1.00	3.2%	20%
2.00	0%	5%
3.00	9.7%	5%
4.00	9.7%	5%
5.00	19.4%	5%
6.00	6.5%	0%
7.00	12.9%	0%
8.00	12.9%	0%
9.00	19.4%	0%
10.00	3.2%	0%

12.00	3.2%	0%

As Table 2 illustrates, 58 percent of the children in the Treatment Group increased their scores by 6 or more points, while none of the Control Group children achieved this amount of growth.

When looking at the change in levels, the comparison again shows a substantial difference between the two groups. Sixty-seven percent of the children in the Treatment Group went up one level, and 16 percent went up two levels. In comparison, none of the children in the Control Group went up a full level, although they did make raw score gains.

Phonological Awareness

The ELSA measures phonological awareness by the following items:

- ❖ Rhyming: Pairing words with corresponding ending sounds
- ❖ Segmentation: Orally dividing words into syllables
- ❖ Phonemic awareness: Understanding that a spoken word consists of a series of individual sounds; attending to the sound structure of a word rather than the meaning

The area of phonological awareness showed significant gain in both raw scores and developmental levels for the Treatment Group in comparison to the Control Group. Table 3 illustrates the percentage of change in the raw scores for each group based upon the percentage of children who achieved that amount of change.

For example, 3.2 percent of the children in the Treatment Group showed no change from pre test to post test, compared to 10 percent of the children in the Control Group.

TABLE 3: RAW SCORE CHANGES IN PHONOLOGICAL AWARENESS FROM PRE TEST TO POST TEST

RAW SCORE CHANGES	TREATMENT *n =31*	CONTROL *n = 20*
0.00	3.2%	10%
1.00	9.7%	15%
2.00	12.9%	15%
3.00	9.7%	5%
4.00	6.5%	10%
5.00	9.7%	25%
6.00	9.7%	5%
7.00	3.2%	5%
8.00	3.2%	5%
9.00	19.4%	0%
10.00	3.2%	0%
11.00	6.5%	0%
12.00	0%	5%
13.00	3.2%	0%

As this table illustrates, 48 percent of children increased their scores by 6 or more points in the Treatment Group, while 20 percent of children in the Control Group showed this amount of growth.

When looking at the change in levels, the comparison again shows a significant difference between the two groups. Fifty-two percent of the children in the Treatment Group went up one level. In comparison, 40 percent of children in the Control Group went up one level. Sixteen percent of children in the Treatment Group achieved two levels of growth, compared to 10 percent of children in the Control Group.

Alphabetic Principle

The ELSA measures alphabetic principle by the following items:

- ❖ Sense of Word: Understanding that a word is a consistent set of letters and sounds
- ❖ Alphabet letter recognition: Recognizing and naming letters on sight
- ❖ Letter-sound correspondence: Identifying sounds associated with the letters

The area of alphabetic principle showed a gain in both raw scores and developmental levels for the Treatment Group in comparison to the Control Group, though it was not found to be statistically significant. Table 4 illustrates the percentage of change in the raw scores for each group based upon the percentage of children who achieved that amount of change. For example, 9.7 percent of the children in the Treatment Group increased their score by 23 points, compared to 5 percent of the children in the Control Group.

TABLE 4: RAW SCORE CHANGES IN ALPHABETIC PRINCIPLE FROM PRE TEST TO POST TEST

RAW SCORE CHANGES	**TREATMENT** ***n =31***	**CONTROL** ***n = 20***
1.00	0%	5%
2.00	12.9%	5%
3.00	3.2%	5%
4.00	3.2%	5%
5.00	0%	15%

6.00	3.2%	5%
7.00	6.5%	0%

TABLE 4 CONTINUED

RAW SCORE CHANGES	**TREATMENT** ***n =31***	**CONTROL** ***n = 20***
8.00	3.2%	5%
9.00	3.2%	0%
10.00	0%	10%
11.00	3.2%	5%
12.00	0%	5%
13.00	3.2%	5%
14.00	3.2%	0%
18.00	6.5%	0%
19.00	3.2%	0%
21.00	3.2%	0%
22.00	6.5%	5%
23.00	9.7%	5%
24.00	3.2%	0%
26.00	3.2%	0%
29.00	3.2%	0%
30.00	0%	5%
32.00	0%	5%
33.00	3.2%	0%
35.00	3.2%	0%
38.00	3.2%	0%
39.00	3.2%	0%
41.00	0%	5%
44.00	0%	5%
45.00	3.2%	0%

As the table illustrates, a greater range of scores was found in this area, along with a greater number of subtest items. In comparing the change in raw scores, 58 percent of children in the Treatment Group went up more than 20 points, while 30 percent of children in the Control Group increased their scores by this amount.

When looking at the change in levels, the comparison also shows a gain for the children in the Treatment Group. Fifty-five percent of the children in the Treatment Group went up one level. In comparison, 45 percent of children in the Control Group went up one level. Ten percent of children in the Treatment Group achieved two levels of growth, compared to 5 percent of children in the Control Group.

Concepts About Print

The ELSA measures concepts about print using the following items:

- ❖ Orientation: Knowing which is the top and bottom of a book
- ❖ Story beginning: Identifying where in the text one begins to read
- ❖ Direction of text: Understanding that text is read from left to right and top to bottom
- ❖ Book parts: Identifying the front cover, back cover, and title of a book

The area of concepts about print showed significant gain in both raw scores and developmental levels for the Treatment Group in comparison to the Control Group. Table 5 illustrates the percentage of change in the raw scores for each group based upon the percentage of children who achieved that amount of change.

For example, 12.9 percent of the children in the Treatment Group increased their score by 8 points, compared to 5 percent of the children in the Control Group.

TABLE 5: RAW SCORE CHANGES IN CONCEPTS ABOUT PRINT FROM PRE TEST TO POST TEST

RAW SCORE CHANGES	TREATMENT *n =31*	CONTROL *n = 20*
-3.00	0%	10%
-1.00	3.2%	5%
.00	3.2%	5%
1.00	6.5%	25%
2.00	16.1%	15%
3.00	6.5%	5%
4.00	12.9%	15%
5.00	9.7%	5%
6.00	9.7%	5%
7.00	9.7%	5%
8.00	12.9%	5%
9.00	3.2%	0%
10.00	6.5%	0%

As this table illustrates, 42 percent of children increased their scores by 6 or more points in the Treatment Group, while 15 percent of children in the Control Group showed this amount of growth.

When looking at the change in levels, the comparison again shows a significant difference between the two groups. Fifty-two percent of the children in the Treatment Group went up one level. In comparison, 35 percent of children in the Control Group went up one level. Three percent of children in the Treatment Group achieved two levels of growth, while none of the children in the Control Group increased by two levels.

Childcare Provider Survey Results

The pre-post survey of childcare providers included both selected response questions and opportunities for open-ended response. It was designed to assess changes in understanding and application of key early literacy concepts. The open-ended questions allowed the providers to explain some of the ways they applied their knowledge of these concepts, as well as their opinions about how the training had impacted their early literacy program. A number of the questions remained the same for fall and spring, allowing a comparison analysis to be completed. New questions were added to the Spring Survey, as well, allowing additional data to be gathered from the providers as a result of their participation in either the Treatment Group or the Control Group.

A paired samples test was performed for the selected response questions that could be measured in a pre-post manner. The final survey results showed a statistically significant change for the Treatment Group vs. the Control Group on the following questions:

- **How familiar are you with the term <u>oral language</u>?**
- **How familiar are you with the term <u>phonological awareness</u>?**
- **How familiar are you with the term <u>alphabetic principle</u>?**
- **How familiar are you with the term <u>concepts about print</u>?**

The paired samples test was performed for one other question:

- **How frequently do you read aloud to the children in your care?**

The Treatment Group did not demonstrate a statistically significant change in their response to this question. Interestingly enough, the majority of providers in both the Treatment and Control Groups indicated they read aloud to the children in their care at least once a day, on both the pre and post surveys. This finding will be discussed in light of the children's performance on the comprehension portion of the ELSA in the Discussion section of this report.

Analysis of the survey data included both the selected and open-ended responses. The following is a summary of the key findings.

Providers in both groups were asked the following questions on the Spring Survey. In each instance, the Treatment Group had a higher percentage of respondents indicating the greatest amount of change. (See Table 6.)

Questions:

- **How has your understanding of ways to increase a child's oral language changed since the fall?**
- **How has your understanding of ways to increase a child's phonological awareness changed since the fall?**
- **How has your understanding of ways to increase a child's knowledge of the alphabetic principle changed since the fall?**
- **How has your understanding of ways to increase a child's knowledge of concepts about print changed since the fall?**

Response options:

❑A Great Deal ❑Some ❑A Little ❑Not at All

TABLE 6: PERCENTAGE OF PROVIDERS FROM BOTH GROUPS THAT REPORT INCREASING THEIR UNDERSTANDING "A GREAT DEAL" FROM FALL TO SPRING

AREA OF EARLY LITERACY	TREATMENT GROUP PROVIDERS *n=15*	CONTROL GROUP PROVIDERS *n=11*
ORAL LANGUAGE	43%	0%

PHONOLOGICAL AWARENESS	29%	10%
ALPHABETIC PRINCIPLE	43%	0%
CONCEPTS ABOUT PRINT	43%	10%

Table 6 illustrates a major difference in the two groups when examining the highest level of change. For example, 43 percent of providers in the Treatment Group indicated their understanding on ways to promote oral language had increased a great deal, as compared to 0 percent in the Control Group.

As a follow-up to these questions, providers were asked to describe the resources and/or training that had helped them further develop their understanding of ways to increase a child's knowledge in each of the four areas. These open-ended questions were designed to capture the Treatment Group's understanding and application of the library's training and to discover if the Control Group had increased their understanding through other means. The following is a sampling of responses from both groups.

Treatment Group: Oral Language

The Emergent Literacy Training taught me about stopping when reading a story and giving them a chance to tell part of a story their way.

The training reinforced the importance of activities such as adult interactions in their pretend play and giving them more time for storytelling. Storytelling examples at workshop were helpful. Sharing of ideas of group also helped inspire ideas! Incorporate speaking in everything.

Control Group: Oral Language

Reading more books; using tapes and CD's.

Tapes, discussions.

Treatment Group: Phonological Awareness

New game ideas! Encouraged me to use more nursery rhymes in my program. We now clap syllables for many words in circle time! I've learned to accept make believe or nonsense words when rhyming!

Emergent Literacy Training - CDs from training and other CDs: rhyming game from training.

Control Group: Phonological Awareness

Library books.

Websites, books, songs.

Treatment Group: Alphabetic Principle:

Magnetic letters have been well received and used. Used to make our names and words. Writing center has become more developed for all ages. Use of mailbox encourages writing.

The magnetic letters work great. The kids like to handle the letters as they say them.

Control Group: Alphabetic Principle:

Letter puzzles, books, songs.

Repeat the alphabet daily; recognizing letters and the sounds that they make.

Treatment Group: Concepts About Print

Reading to them. Taking picture walks of books before and after we read them.

Everyday going over different books, different signs, i.e., road signs, stop-drop-roll; touching letters with their finger.

Playing restaurant with menus and running an office have become favorite activities; dry-erase boards helped children see what the words looked like and to have fun writing letters.

Control Group:

Book mobile, arts and crafts.

Practicing writing skills, also classes on kindergarten readiness through child- care.

During circle time we talk about the cover of what the story will be about by title and who wrote it.

Questions Concerning the Childcare Environment

Several of the survey questions were designed to gather information about the early literacy environment in the childcare homes. The following is a summary of the key findings for this set of questions from the spring survey.

Table 7 represents the findings for opportunities for pretend play in the childcare homes.

TABLE 7: **PERCENTAGE OF OPPORTUNITIES FOR PRETEND PLAY**

OPPORTUNITY FOR	PRESENT IN	PRESENT IN

PRETEND PLAY	TREATMENT GROUP HOMES	CONTROL GROUP HOMES
HOUSEKEEPING CENTER	75%	56.3%
BUILDING BLOCKS	91.7%	68.8%
CLOTHES FOR DRESS-UP PLAY	75%	56.3%
PUPPETS	91.7%	68.8%
PLAY STORE	70.8%	53.1%

As Table 7 illustrates, the results reflect greater opportunity for pretend play in the childcare homes of providers who had completed the Treatment.

When asked about the types of reading/storytime materials they used in their childcare setting, the majority of providers in both groups indicated that they used picture books, board books, books with rhyme and repetition, concept books, nonfiction books, alphabet books, big books, poetry and nursery rhymes, and tapes and CDs of children's songs. The two differences reported were that the majority of providers in the Treatment Group also used flannel boards / magnetic boards and puppets, compared to half of the providers in the Control Group using these materials.

Questions Concerning Library Usage

All providers in both groups indicated that they used the library to supplement their collection of reading material for the children. A high percentage of providers in both groups were aware of the library's services available to them (i.e., daycare van service or bookmobile, summer reading program, concept kits, storytime programs and the resource area of the library). In addition, the majority of providers in both groups indicated that these services were very helpful.

Parental Involvement

When asked if they encouraged parental involvement in their children's literacy development, 100 percent of providers in both groups indicated that they did so. The following is a sampling of responses when asked to describe how they encouraged this involvement.

Treatment Group:

Show parents what we have done on a daily basis. Give "homework" on occasion. Send different books home that we have read so the children can show the parents and they can talk about what we read that day.

Send home books the children have practiced to share with their families. Let parents know of favorites. Update them on library events. Share stories about new learning each day.

Keep journals and daily progress to communicate with parents. Then they can share in their child's day.

Keep them aware of the things we are doing on a daily basis. Let the children do "show and tell" with the parents of the things that we have done.

Control Group:

I encourage them to read to them every night and to use the library.

I give homework assignments in which the parents must participate and the homework is required to come back to me so the children can receive a sticker for their hard work.

Just by letting the parents know the material their children enjoy reading – letting parents know what their children's interests are while in my care.

I educate my parents with info I find online. I also provide them with books – special occasions.

As a final survey question for the Treatment Group, providers were asked to indicate how helpful the professional development resources (workshops, materials, and newsletters) had been to them and to provide examples of how these resources had impacted their early literacy programs.

One hundred percent (100%) of the providers indicated that the resources had been "very helpful."

The following is a sampling of their responses to the open-ended follow-up question.

They have definitely rejuvenated me with ideas and excitement! Newsletters have continued to reinforce ways we can teach reading in day-to-day activities. Music is now a daily activity due to great resources.

The suggested books and music CDs in the newsletters were great. It was nice especially with the books-they were excellent choices that all the children loved!

Getting more out of reading books. Each child has learned lots of letters if not all. Enjoying the CD - dancing, and exercising and singing.

Getting ideas from other providers always helps me - can expand on their ideas and be flexible in working it into my daily daycare program. Using everything in my materials box.

Newsletters are awesome, it is nice to see other ideas that other providers have and use them. The books we've read and activities we've done, letters on the fridge, children also traced them to learn, the bean bags - we played games with, the dishes – all was used.

DISCUSSION

Limitations

The study presented in this report is limited in several ways. These limitations are not a weakness of the study; they are simply the parameters by which the study was conducted. As such, any discussion of the findings should begin with an explanation of the limitations.

This study was conducted in a suburban / rural setting only. Study participants (both providers and children) were almost all white. All spoke English as their primary language. The study began with an equal number of providers in both groups (20), but through attrition, ended with an unequal and lower number of providers in both groups: Treatment Group (15); Control Group (11). The majority of providers served families in Title I school districts. A total of 51 children, aged three to four years old, completed the study; 31 in the Treatment Group, 20 in the Control Group.

Major findings

The treatment effect of the CCPL Emergent Literacy Training and Assessment Project had a significant impact on both the children's performance and the providers' knowledge of how to best promote early literacy development in their childcare homes. Promoting oral language development through the children's active participation in storybook read-alouds, pretend play, and "hands-on" learning experiences was a major component of the workshops and newsletters. As the answers to comprehension questions on the ELSA are scored for relevance and complexity of ideas expressed, it was not surprising that the area of highest gain was in Comprehension. This finding was particularly significant due to the fact that providers in both the Treatment and Control groups reported reading to the children at least once a day in the pre and post surveys. This suggests that participation in the Treatment Group produced a change in the *quality* of the read aloud experience (i.e., more verbal interaction between the child and the caregiver, in the form of actively engaging the child to participate by asking questions, making predictions, discussing interesting vocabulary and story events, etc.).

The treatment also produced significant change in the children's performance on the ELSA in the test areas of Phonological Awareness and Concepts About Print. The combination of training and materials allowed the providers to improve their knowledge base on how to best promote early literacy development in these areas, as evidenced by their survey responses and the children's test results. The failure of the treatment to show a significant effect in the area of Alphabetic Principle, as measured by the children's performance on the ELSA, was at least partly due to the fact that all of the children improved in this area. The difference between the Treatment Group's performance and the Control Group's performance on this particular subtest wasn't large enough to attribute to the Treatment. Although it was not found to be statistically significant, the children in the Treatment Group did post a gain in scores on the Alphabetic Principle portion of the ELSA, when compared to the Control Group. In addition, the providers who participated in the Treatment Group indicated that they had improved their knowledge base on how to best promote early literacy development in this area, as evidenced by their survey responses. Since we cannot attribute the gain in the children's test scores to the treatment based on the statistical analysis of the children's scores, it would suggest taking a closer look at the possible explanations for this finding. One hypothesis is that there was not enough of a difference between the instructional practices of the Treatment and Control Groups to produce a significant change in the students' performance, as both groups may have recognized that teaching children their letters is a widely accepted practice to prepare them for school. Another possibility might be environmental factors beyond the study parameters that could contribute to growth in this area for both groups (i.e., time spent watching television programs such as Sesame Street, time spent playing computer games focusing on alphabet recognition, parental involvement in teaching their children the alphabet, etc.). Examining the treatment components of the workshops and newsletters for the delivery of information on

developing the alphabetic principle should be considered. Yet another consideration would be the assessment tool, itself. It might be valuable to consider using an additional assessment tool to measure alphabetic principle, in order to further isolate and measure this part of the treatment.

An examination of the providers' responses to the open-ended survey questions reveals a deeper understanding of the key early literacy principles for those participating in the Treatment Group, as evidenced by the complexity of their responses. An understanding of the importance of "active learning" for the young children in their care was also evident in the extended responses of the providers in the Treatment Group. Of final note, is the enthusiasm expressed by the providers in the Treatment Group for the professional development they had received, as evidenced by their responses to the final survey question. This enthusiasm combined with a willingness to learn new techniques are tributes to both the quality of professional development provided by CCPL, and the dedication of the childcare providers who participated in the study.

IMPLICATIONS

The statistically significant positive effects of the treatment indicate that this intervention was a success with the population of childcare providers and young children who participated in this study. It appears that the goal of this project was met: to design a treatment that would result in improved understanding and implementation of best practices in early literacy by the family childcare providers, which would then result in growth in the children's early literacy skills, thereby preparing them to start school ready to learn. This is promising news for public libraries that wish to launch a similar initiative in their communities.

What caused this level and intensity of intervention to produce such positive effects in the time span of one school year? Part of the explanation may be that compared to other training opportunities, the CCPL treatment included both professional development training *and* the materials needed to support the use of best practices in their childcare

homes. The combination of modeling and guided practice combined with actually being able to take the materials back to use with the children may have contributed to the success of the treatment. Another contributing factor may have been the ongoing contact in the form of detailed
newsletters, additional resources, and phone conversations that provided sustained support for implementing the training concepts. Finally, the ability of the library's trainers to translate the research into easily understandable language and practical application activities may have helped empower the providers to feel they could truly make a difference for the children in their care.

Replicating the Study

This intervention or treatment would involve a similar commitment of collaboration, training, and materials if replicated in a similar setting, in order to expect similar results. Given the promising results with the population in this study, it may be worth exploring if an intervention with the same goal could be designed and tested for other population groups (i.e., urban populations, racially and/or culturally diverse populations, etc.).

Extending the Study to Year Two

Members of the National Early Literacy Panel have expressed the need for longitudinal research in early literacy. Extending the CCPL study to the 2006-2007 school year is a logical next step in this research design, because it will provide additional details in the evaluation of the effectiveness of the training program, document the progression of literacy competency over time, and validate the findings from the first cohort.

The first component of this extension is to assess whether the childcare providers who were part of the Year One Treatment Group continue to apply what they learned, and whether it continues to help their children develop and improve their reading skills. Examining performance data from both years will help to determine if the new instructional methods applied by the providers have had a sustained (and perhaps enhanced) effect on their children's performance. Extending the treatment for this group to provide opportunities for the providers to share ideas as they refine and extend the

knowledge gained from year one will provide additional data on the long-term effects of the intervention.

The second component of this extension study is to confirm the findings of the initial study. Monitoring the childcare providers who were part of the Control Group in year one of the study, as they go through the training that was given to the Treatment Group, will provide data for this comparison. The training content will be revised slightly for Year Two, based on the results of the initial treatment. Examining performance data from both the providers and the children will allow us to compare the groups between years.

Using the ELSA again (different version) as the children's assessment tool for the extension study will capture comparison data. An additional assessment tool for the area of Alphabetic Principle may be added for Year Two. The survey tools for the providers' assessment component will be revised to fit the goals of Year Two of this study.

Continuing the research on the CCPL Emergent Literacy Training Assessment Project will be a positive contribution to the research base on effective ways to promote school readiness for all children.

References:

Snow, C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children.* Washington, DC: National Academy Press.

Bowman, B. T., Donovan, M. S., & Burns, M. S. (2001). *Eager to learn: Educating our preschoolers.* Washington, DC: National Academy Press.

Strickland, D. S. (2004). The role of literacy in early childhood education. *The Reading Teacher*, 58, 86-88.