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Effects of Print in Early Childhood Programs

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Abstract

This paper will discuss the effects of print on early childhood classrooms. The first goal was to determine if referencing print during read alouds would increase foundational literacy skills. The second goal, was to identify if implementing the Sit Together and Read (S.T.A.R.) framework would increase emergent literacy skills with three, four and five year olds students. Two early childhood classrooms from the same school district were included in the study. One classroom embedded print references and the S.T.A.R. framework during repeated read alouds. The other classroom continued with normal read aloud routines. Data was analyzed using the Early Literacy and Language Classroom Observation tool and Teaching Strategies GOLD print data. The results concluded that by increasing print referencing in early childhood classrooms, emergent literacy skills will increase at a higher rate than those classrooms that do not use print referencing strategies.

Effects of Print in Early Childhood Programs

Reading aloud to children is a common and developmentally appropriate practice in early childhood settings. Researchers have found that by engaging children in a quality interactive read aloud, this stimulates emergent literacy skills needed for later academic success (Duke, 2005). Teachers of three, four and five year old programs may not necessarily need to go out and purchase a separate curriculum to help students read. Children listen at a higher level than they read. Listening to others read stimulates vocabulary, comprehension and other language patterns. What if educators simply read a picture book, and do not allow time for students to ask questions or provide feedback about the story that was being read to them? Some researchers believe that the youngest learners would be missing not only potential academic skills, but also the suspense, excitement and emotion of storytelling!

Through observations in early childhood classroom settings, all too often preschool teachers walk by their book shelf to select a book, and then begin to read it to their students all the way through without seeking input or asking questions. They also may not take the time to previously read or check out the book for their own learning. Teachers do this on purpose or intentionally. This is due to lack of exposure and training on the benefits of read aloud and focusing on print concepts. Sometimes, teachers do not know what they do not know! By providing training around embedding quality print concepts within structured read alouds, coupled with consistent coaching, teachers will feel more comfortable using print concepts during their daily story retellings. Dr. Laura Justice (2010) says it well; "it is not simply reading a book to a child that matters most, but rather what that reading interaction looks like. As long as we are sitting to read with a child, let's ensure that we maximize the opportunities for

learning that are taking place so that these interactions really can elevate children's long-term chances for academic success" (p. 7).

Literature Review

When learning how to bridge research into practice, there is a lot of support when it comes to embedding print in early childhood programs. Print awareness is one of the three main early literacy skills that are key indicators of later reading success (Jones, Clark, & Ruetzel, 2013). Three precursors associated with later reading achievement are phonological awareness, print awareness and oral language (Jones et al., 2013). Preschool settings are often the first structured learning environments for children. Within these environments, young children are exposed to print concepts for the first time. Justice and Sofka (2010) found that a large majority of children did not clearly understand many of the concepts about print upon entering school. They also indicated that children who failed to understand print concepts and the instructional terms used by teachers to offer reading instruction, may become confused and even disabled very early in the process of learning to read and write. Children who grow up in rich literate environments enter school with an advanced understanding of the concepts underlying reading; some of these children may already know how to read before entering school (Swanson, 2011). Regardless of a child's literacy background, it is imperative that we provide supports and experiences during the early childhood years to prevent the further development of reading difficulties.

Concepts of print are understandings about how texts work and how readers read (Duke, 2005). Justice and Sofka (2010) have determined that print knowledge can be collected

into four dimensions: book and print organization, print meaning, letters and words. Book and

print organization looks at title, author, page order and direction. Print meaning refers to the

function of print, environmental print and concepts of reading. The last two dimensions of

print (letters and words), focus on upper and lower case letters, concept of a letter, short words

vs. long words and the concept of word in print. Although the skills included under the rubric of

print knowledge have typically been measured separately, there is evidence to indicate that

they are interrelated and are all components of the larger construct of print knowledge (Justice

& Pullen, 2002). Highly constrained skills, like alphabet knowledge, are generally easier to

teach directly than less constrained skills, like phonological awareness. Thus, print knowledge

may be more accessible to children with language impairments than phonological awareness.

A study compiled by American Psychological Association (2008), indicated that when

adults read storybooks to preschoolers and simply read the text and talk about the illustrations,

children fixate on print about 11 times during the entire reading event. However, when adults

read the same storybooks and include nonverbal references to print, children fixate on print

about 21 times during the event. "Children who are read to by adults who nonverbally

reference print by tracking and pointing to print will fixate on print about 40,000 times during

their reading experiences compared to about 20,000 fixations on print for children who are

read to by adults who seldom reference print" (Justice, Pullen, & Pence, 2008, p. 25).

Measurements collected of young children's knowledge across these different

dimensions show that their cumulative knowledge about print is one of the more reliable and

robust indicators with which they will progress as readers (Justice & Sofka, 2010). With that

said, children who do not have this foundation in place may struggle in beginning reading

instruction, which, in turn could compromise their reading success in the primary grades. Some

reading researchers suggest that children learn about the conventions of print language

informally (Weiss & Hagen, 1988). It is unclear as to why children experiencing language

disabilities have less knowledge about print compared to others; some researchers theorize

that it occurs due to a combination of factors that include both experiential issues (e.g., less

frequent participation in book-reading interactions) coupled with developmental difficulties

that make learning about written language particularly challenging (e.g., challenges processing

linguistic stimuli) (Justice and Pullen, 2002).

Justice and Sofka (2010) have also concluded that print knowledge can be considered a

"watershed event" in a child's development of emergent literacy skills. A watershed event is an

important event upon which future development happens. Print is everywhere! By calling

attention to print, teachers can teach children that print is important and deserves students'

attention. In order to do so, children must first have the foundation of print concepts in order

to have the skills necessary to unlock the alphabetic principle code and comprehend what is

being read to them. A study suggests that children aged five, began to direct more attention to

print than those aged 3 and 4 to the visual word form (Zhao, Zheo, & Weng, 2014). Through

systematically testing the influence of various cues on children of different ages, the

researcher's findings highlighted this critically transitional period in reading development. For

many children, the development of print knowledge begins as early as birth. They begin to take

in the world around them, by looking and listening to all of the sights and sounds. From then

on, children are vastly accumulating knowledge and the functions of print. One can tap into

these early years of learning by explicitly and intentionally teaching the functions of print. Without this foundation, children will lack the skills necessary to become successful readers.

Knowing the adverse effects that print knowledge has on children, researcher's next looked at incorporating print in read alouds. Daily read alouds can be engaging for children – just as engaging as dressing up, building with blocks or playing on a jungle gym (Duke, 2005). The ability to read and write does not happen naturally for students, without planning and instruction. The use of daily read alouds in preschool environments provides an avenue to expose children to the print concepts previously mentioned. As well as instilling a love for literature! Research shows that there is far more to reading, than just reading a book. If children are ever going to make a connection between meaning and print, there needs to be a co-constructed time between the adult and child (Jones et al., 2013). Read alouds can provide a time during both large and small groups to focus on print concepts, introduce meaningful conversations with students and target emergent literacy skills. Consequently, reading aloud happens at an early stage in life. Infants as young as nine months of age start to handle books, turn the pages and maybe even try to babble some of the words (Jones et al., 2013). As children grow into preschool years, read alouds become a critical tool when introducing that print conveys meaning. Daily read alouds can also help children to; "internalize language and structures they'll apply to their own reading" (Jones et al., 2013).

Another systematic method of reading aloud is repeated read alouds. Repeated read alouds can also support students print referencing. During repeated read alouds, teachers may scaffold students learning by checking for understanding, model print referring strategies, and teach vocabulary concepts as they read the same book more three to five times. A study on

language acquisition found that children pick up new vocabulary quicker from repeated readings of the same book than when they encounter the same words in different new texts (Harbaugh, 2018). This is especially helpful for English Language Learners. Multiple readings of the same book support them as they learn new words, phrases and sentence structures. The National Early Literacy Panel (2009) also reported that shared reading interventions demonstrated moderate effects on children's print knowledge and oral language skills. Shared reading was examined across settings (e.g., schools, home, pediatricians provided books to parents, etc.) and across adult readers (parents and teachers). While the overall effect size for children who were not at risk seemed to be higher than for children who were at risk, the difference in effects was not statistically significant.

Some reading researchers also suggest that in addition to repeated read alouds, children learn through conventions of print informally – through an immersion of print within their environments. Research by Ruetzel (2002) supports the idea that children can acquire print concepts from environmental print rather than formal instruction. Environmental print is the print in everyday life. For example, signs read in traffic or letters on a cereal box. Many early readers begin to recognize symbols in their environment and 'read' them. Non-readers are not necessarily reading the signs in their environment. Their brains are not quite ready for reading at such a young age. Instead, they are responding to the clues associated around the sign, or tapping into their prior background knowledge. Parents, teachers, and caregivers can help build and strengthen these skills by providing a print rich environment, which allows them to understand that print carries meaning.

Even though there is a plethora of research indicating how to support young readers, there are other conditions that place children at risk for reading difficulties. These may include poverty, cultural and linguistic differences, neurologically based problems, inadequate instruction, limited development-enhancing opportunities, or familial history of reading disabilities (Neuman & Dickinson, 2001). However, these predictors do not distinguish all children of having a reading disability.

Methods

Participants

This action research project was conducted in two inclusive and integrated preschool classrooms, both within the same school district and early childhood building. Classroom A is comprised of 16 - three and four year old students (six were females, and six were males). When looking at demographics, there were three African-American, 1 Latino and the other 12 were Caucasian. Of those 16 students, three are on Individualized Education Plans (IEPs) and 13 are considered typically developing students. Classroom A has a certified Early Childhood Special Education teacher, along with two one-on-one para's and one classroom associate.

Classroom B has 15 – three and four year old students (7 were females and 8 were males). When looking at demographics, there were 2 of mixed-decent, 2 African-American, and the other 11 were Caucasian. Of the 15 students in classroom B, four are on an Individualized Education Plan (IEP) and 11 are considered to be typically developing students. Classroom B also has a certified Early Childhood Special Education teacher. Along with a one-on-one para,

and one classroom associate. Both classrooms follow the Iowa Quality Preschool Program

standards.

Data Collection

The focus of this project was to determine if the emphasis of calling attention to print

during read alouds increases emergent literacy skills. First off, teachers were trained using a

three-day cohort-training model (Classroom A attended in September and October, 2017). The

training and coaching support around this model concentrated on how to call attention to print

during read alouds. The basis of the training was built around print concepts from Justice and

Sofka; *Engaging Children with Print* (2010). Classroom A teachers would then be able to go

back and immediately adapt their new learning to their small and large group read alouds.

Techniques that were implemented were tracking print as they read, calling attention to the

environmental print in the story, pointing out letters vs. words etc. In order to support the

learning, coaching support was provided by an Early Childhood Consultant. The Consultant

provided guidance around the previously learned strategies through three face-to-face

meetings and two online zoom meetings. Teachers within the data collection classrooms

indicated that the coaching support was helpful in the implementation process. However, no

data was collected to determine if coaching support had a direct impact on the results of the

study.

During the second day of training, participants were introduced to a supplemental

reading framework – Sit Together and Read (S.T.A.R.). The S.T.A.R framework is a research

based set of interactive practices that support learners at all levels while reading. S.T.A.R. read

aloud practices are organized around a set of 30 pre-made cards and children's storybooks. The

S.T.A.R. cards outline scaffolding strategies (for repeated read alouds) that are designed to

support educators to explicitly focus on print strategies as they read. Teachers that use the

print strategies primarily focus on the verbal and non-verbal references as supported within the

S.T.A.R. framework. By using S.T.A.R., the intent is that teachers in Classroom A will feel more

confident in focusing on print concepts by having a tool that supports them as they work

through the read aloud. Adults have the option to create their own S.T.A.R. cards using the

guidelines provided, however for this study only pre-made S.T.A.R. cards and previously

determined texts were used. In order to show the impact that print would or would not have

on repeated read alouds, we made sure to choose a control classroom that did not attend the

same two-day training. Classroom B has had previous training with Creative Curriculum and

uses daily repeated read alouds.

The data collected in this study was collected by two different observation scales – Early

Literacy and Language Classroom Observation Scale (ELLCO) and Teaching Strategies GOLD

assessment (particularly objective 17b – Demonstrates knowledge of print and it's uses: uses

print concepts). The Early Language and Literacy Classroom Observation (ELLCO) tool helps

build better literacy programs by assessing the quality of the classroom environment and

teachers' practices. With ELLCO, educators gather the essential data needed for professional

development and program improvement that lead to better literacy outcomes for young

children. ELLCO Pre-K is designed specifically for early childhood settings, focusing on

important pre-literacy activities like storybook reading, circle time conversations, and child-

originated story writing. The ELLCO observation was conducted by an outside evaluator on

each of the two classrooms participating in the study. The evaluator has a background in early childhood, but does not have a relationship with the classrooms in the study creating minimal bias on the data collected. The outside observer conducted a pre and post ELLCO. Pre ELLCOs were completed on both classrooms before the first day of training. The Pre ELLCO painted a picture for the researcher of the current reality within each of the classrooms. At the end of the school year, a post ELLCO was completed to show the impact print referencing did or did not have on the environment and read aloud practices.

Teaching Strategies GOLD assessments are ongoing observations conducted by the teacher. The teacher collects data on student development and growth from 38 developmental objectives and levels. Scores are based on the students' development and growth three times a school year (fall, winter, and spring). To collect documentation, the teacher makes observational notes using a journal or iPad, uploads pictures and videos during daily instruction, and learning centers of each student's development. Even though this project has been in the works for over three years, the data collected for this particular action research project was taken in just two classrooms with alike demographics. The alike demographics will assist in the validity of the results.

During the data collection process, we will focus particularly on objective 17b from the Teaching Strategies GOLD to show progress from before and after the training. The purpose for this source of data collection was to ensure personal bias did not affect the data. Quantitative data was analyzed using percentages of growth in student's successfully applying print concepts.

Data Analysis

As the research was compiled, it validated what other researchers have found to be true. Referencing print during read alouds and displaying print throughout the classroom does indeed have a valued impact on preschool learners. Table 1 shows the increase in emergent literacy skills for both classrooms provided by the ELLCO observation. Even though both classrooms did show an increase in print rich environments, the pre and post ELLCO scores show that Classroom A increased at a much higher rate than Classroom B. Classroom A increased 36% vs. Classroom B, which only increased 10% throughout the school year. We believe that this is attributed to the amount of print that the teacher in Classroom A focused on; engaging in deeper print focused read alouds, and ultimately received the learning through training along with continual coaching support around the implementation of S.T.A.R.

Table 1

Pre and Post ELLCO Observations

Classroom	Pre-ELLCO Scores	Post – ELLCO Scores	% Increase in Scores
Classroom A	65 out of 95 points	90 out of 95 points	36% increase
Classroom B	70 out of 95 points	80 out of 95 points	10% increase

Even though the evaluator conducted a full ELLCO observation, for this particular project the researcher focused primarily on section IV – books and book reading. By only pulling the data from section IV, this allowed the researcher to have a more concise idea of the impact S.T.A.R. and focusing on print have on students emergent literacy skills. In Table 2, Classroom A

had a larger increase in print and book reading at 28%, rather than Classroom B, that only

increased 16%. Results are clear that the Sit Together and Read framework can support

teachers in increasing literacy skills by using scaffolding strategies with a print rich focus.

Table 2

Pre and Post ELLCO Observations (Section IV only)

Classroom	Pre-ELLCO Scores	Post – ELLCO Scores	% Increase in Scores
Classroom A	15 out of 25 points	22 out of 25 points	28% increase
Classroom B	12 out of 25 points	16 out of 25 points	16% increase

Using the widely held expectations report (from Teaching Strategies GOLD), the results

indicated that Classroom A did again show a slightly more significant increase, than that of

Classroom B. Of all four-year-old students in Classroom A 82% were able to fall within the four-

year-old color band: shows awareness of various features of print; letters, words, spaces, upper

and lower case, and some punctuation.

Table 3

Fall and Spring Checkpoint Comparison (Objective 17b)

Classroom	Fall % Within Widely Held Expectations	Spring % Within Widely Held Expectations	% Growth
Classroom A	27%	82%	55%
Classroom B	22%	71%	49%

Discussion

Summary of Findings

Throughout this study, the findings concluded that students in Classroom A achieved higher emergent literacy skills than the four year olds from Classroom B. The data shows that by focusing on print – rich repeated read alouds, in conjunction with the Sit Together and Read (S.T.A.R.) framework, this allows students to achieve higher literacy results. Prior to the training and implementation of S.T.A.R., the teacher from Classroom A indicated that she often overlooked focusing on these practices. She also mentioned that by having the S.T.A.R cards; it allowed her to feel more confident when supporting all students during a large group read aloud. Classroom B teacher referenced that while she felt confident in her repeated read alouds, she did not focus on the print, but rather oral language and vocabulary. Both print and vocabulary are strong predictors of later reading success. One area that may not be clear is the correlation with later reading success. Even though the data analysis showed an increase

within print concepts within the early childhood setting, it is unknown if these results will

continue until the end of third grade.

Limitations

During this study, one apparent limitation was Classroom B ended up having more

students on an IEP than Classroom A. When the study first started in the fall, there was only

one more student on an IEP in Classroom B than there was in Classroom A. Throughout the

school year, multiple students entered and left in both classrooms. This is likely due to the

demographics of the clientele within the school district. By spring, Classroom B had two more

students (for 17 students' total). Of those two new students, one was on an IEP. This brought

the total number of students on an IEP in Classroom B up to five. In the future, (if the study is

conducted again), the researcher would need to break up the IEP students and general

education students to show the breakdown of their data.

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Conclusion

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The findings compiled from this study indicated that by adding print related practices to

repeated read alouds help boost foundational literacy skills. Literacy skills increased by an

average of 15% from both the ELLCO and TS GOLD data collection methods. By adding the

supplemental reading framework – S.T.A.R., teachers were intentional about meeting student

needs during read alouds. As well as, calling attention to print in a variety of facets. Justice and

Sofka (2010) make note of this in their multiple studies of storybook reading; "it is not simply

reading a book to a child that matters most, but rather what that reading interaction looks like.

Given this body of information, as long as we have multiple opportunities to read with children,

educators and families should not only focus on the quantity of reading aloud, but more

importantly the quality of focusing on print. By doing this, educators use every opportunity

possible to instill a strong foundation for the love of reading! If we are to make a difference in

the lives of children, we must provide appropriate supports and experiences during the early

childhood years to prevent the development of reading difficulties.

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