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Impact of Professional Development on Accessible Early Literacy Content for Preschool Children with Disabilities in Public Library Storytime

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Impact of Professional Development on Accessible Early Literacy Content for

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by

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Abstract

Library storytime programs provide opportunities for preschool children to develop readiness skills in early literacy that are linked in research to later success in learning to read and write. Children with disabilities that do not demonstrate school readiness skills upon entry to kindergarten are often placed in self-contained special education settings where opportunities to learn to read and write are diminished. English Language Learners (ELL) who have disabilities face additional challenges in benefiting from the models of language that are optimal for learning literacy when placed in self-contained settings. Despite the critical role that storytime programs play in equalizing the opportunities for children to learn early literacy skills, librarians report having few children with disabilities in their programs, and those that do attend experience difficulty participating due to sensory, behavioral, motor and communication challenges. Librarians in public libraries report minimal training in how to support children with disabilities and their families in meaningful participation in preschool storytime sessions. This study explored the impact of professional development, utilizing the principles of Universal Design for Learning (UDL) to increase the accessibility of early literacy content associated with foundational skills in reading and writing during preschool storytime. This mixed methods study incorporated elements of both descriptive and quasi-experimental design, and is one of the first conducted in a public library to measure pre and post data on how librarians plan and implement storytime before and after professional development. Parents' experiences attending preschool storytime were also

collected and analyzed in order to inform future policies and practices in the public

library.

for your support and advice, and for inspiring me with your amazing work on behalf of children.

This dissertation is dedicated to my father. He wasn't able to see the frame he built all those years ago "filled", but he was with me every day of this journey. I miss you more than I can say.

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Chapter 1: Problem Statement

Background and Statement of the Problem

Interactive reading, also known as shared reading, is supported in the literature as an avenue for increasing communication and literacy development for young children (Ezell, Justice, & Parsons, 2000). During shared reading, an adult (i.e., parent, teacher, librarian) engages children in a read aloud, provides opportunities for them to respond, and can incorporate instruction in skills such as vocabulary, print awareness, letter-sound correspondences, and early writing skills predictive of later success in reading and writing (National Early Literacy Panel, 2008). Research indicates young children who have opportunities to participate in shared reading build a foundation on which more conventional reading and writing skills can emerge (Lonigan, Shanahan, & National Institute for Literacy, 2009). Since the late 1940's, public libraries have been instrumental in providing early literacy opportunities, evolving from read alouds to taking a more purposeful role in early literacy development for children in their storytime sessions (Jacobson, 2017). Competencies outlined by the *Association for Library Services to Children* (ALSC) state that children's librarians should possess knowledge of child development and education and be informed of advances in early literacy (ALSC, 1999-2009). The 2001 partnership between the National Institute of Health and Child Development (NICHD) and the Public Library Association (PLA) was the most significant effort to utilize research-based practices in preschool literacy and has influenced the role of the children's librarian in facilitating early literacy skills related to school readiness. Since that time, public librarians have embraced the educational

research as a source to inform their practice (Stooke & McKenzie, 2011). Ghoting (2006), an early childhood literacy expert and program consultant with *Every Child Ready to Read*, asserts that while storytime at the public library does not have the consistency and duration to have lasting impacts on skill development, children's librarians can provide information, support and modeling of research-based practices in early literacy that can help parents get children ready to read and write. In addition, participation in preschool storytime offer opportunities for children to learn pro-social readiness skills essential for kindergarten readiness including increasing attention span, self-regulatory behaviors and social interaction (Diamant-Cohen, 2007). Library storytimes are a resource for many families to be exposed to the emergent and early literacy skills critical to school readiness, however little is known about the impact of these programs on the literacy development of children with disabilities. Some information about the home literacy experiences of children with disabilities is included in the literature, but librarians continue to struggle on how to best support these children and their families in accessing the early literacy supports available in their community libraries (Justice, Işıtan, & Saçkes, 2016; Kaeding, Velasquez, & Price, 2017).

Significance of the Problem

Children with disabilities often have difficulty accessing the programs at their local public libraries. This is documented in the field of library science, as well as reflected in anecdotal reports from parents of children with disabilities (Association of Specialized and Cooperative Library Agencies, 2000; Prendergast, 2016). Public libraries have long been a place for families to come and participate in programs and

activities that support literacy learning. By engaging in storytime programs that incorporate skill development critical to early literacy, the library can be a great equalizer for children with disabilities who often do not demonstrate school readiness skills related to reading and writing. Recent research indicates that literacy behaviors of children who attend storytime sessions can be influenced by the intentional planning and delivery of content by storytime leaders (Mills et al. 2018). This study expanded on that research to provide opportunities in library storytime that can augment the dosage of early literacy intervention for children who are at-risk for lags in school readiness skills. In this paper, the use of the term *storytime* will be used to describe programs incorporating shared reading strategies designed to facilitate early literacy skills. The term *school readiness* describes a wide range of skills in the literature, including the range of social-emotional, health, language and cognitive skills that all children need to excel (Zaslow, Calkins, & Halle, 2000). Current definitions of school readiness, according to the National Association for the Education of Young Children (NAEYC, 2009), assert that school readiness is contingent upon the interaction among families, communities, and schools in ensuring that all children have equal access to the supports that will enable them to be successful when they enter school. For children with disabilities, the term "readiness" has historically meant that they were required to demonstrate some prerequisite skills in order to receive instruction. Readiness skills were perceived as foundational for the future development of conventional reading and writing skills and were often a stumbling block for children with disabilities (Phillips & Meloy, 2012).

Varied definitions of literacy have historically influenced classroom practices for children with disabilities, including a focus on functional literacy approaches, decontextualized skill-based instruction, sight word only programs and developmental approaches that are linked to a readiness model (Copeland & Keefe, 2018). Research has been focused on the impact of high quality prekindergarten programs for children with disabilities in fostering school readiness for children with disabilities. Phillips & Meloy (2012) found that systematic, intentional engagement with print increased letter-word identification and pre-writing skills for children with mild and moderate delays who attended a school-based prekindergarten program.

Inclusion and school readiness. The preschool setting provides a context in which children with and without disabilities can learn together, benefitting from the collaboration and supports provided by a transdisciplinary team. A national summary of the literature on inclusion for young children with disabilities, however, reveals little growth in inclusive placements in early childhood programs since 2001 (less than one third of children enrolled) with equal numbers of children attending self-contained early childhood programs and a move to offer more "split placements" in which children attend inclusive placements for part of the day (Odom, Buysse, & Soukakou, 2011). While research is mixed on the academic gains for preschoolers who attend inclusive programs, evidence suggests that children who receive intervention in settings that offer structured, sequenced curricula (similar to pre-K programs) as opposed to in-home or therapy placements, have better scores on developmental measures (Phillips & Meloy, 2012. Public library programs offer additional opportunities for preschoolers to participate in

literacy-rich activities and provide parents with models of intervention that can boost school readiness skills.

School Readiness. Lloyd, Irwin, and Hertzman (2009) examined the school readiness skills of kindergarten children who exhibited a range of developmental disabilities and delays. School readiness included early literacy skills such as letter knowledge, print awareness, narrative and vocabulary skills, and early writing. Kindergarteners in all disability categories did not demonstrate the skills that would predict academic success (ranging from 58-96% of the children) and up to 62% of children who experienced academic lags continued to struggle in fourth grade. Incoming school-aged students who demonstrate some basic early literacy skills may be more favorably perceived as "ready" to benefit from general education instruction, resulting in more inclusive educational opportunities (Ruppar, Dymond & Gaffney, 2011). In addition to developing the school readiness skills that are so critical to success in school, participation in public library programs gives children with disabilities and their families opportunities to engage meaningfully in their communities, learn how to access information, and develop skills that will enable them to be lifelong learners.

A review of the literature related to the preservice training and professional development provided to children's librarians provides limited information on how to support individuals with disabilities in the library setting (Adkins & Bushman, 2015; Copeland, 2011; Kaeding, et al., 2017; Myhill, et al., 2012; Prendergast, 2016; Ross & Akin, 2002). Despite data from surveys indicating a desire to learn more about how to support children with disabilities in storytime, most librarians report knowledge as the

greatest barrier to increasing accessibility to content in storytime (Copeland,

2011;Kaeding et al., 2017; Prendergast, 2016).

Presentation of Methods and Research Question

The purpose of this study was to examine the accessibility of early literacy

content presented in preschool storytime at the library before and after professional

development. A survey of the knowledge, skills and experiences of children's librarians

in supporting children with disabilities in the library was conducted pre and post

intervention. A short, semi-structured interview was also provided to the parent

participants to examine their experiences in accessing preschool storytime at the public

library. The research questions were:

- How does professional development for children's librarians related to serving

  children with disabilities and the principles of Universal Design for Learning

  (UDL) affect the accessibility of content for children with disabilities in preschool

  storytime?

- What are the reported knowledge and skills of children's librarians related to

  serving children with disabilities pre and post professional development?

- What is the perceived usability of the content presented in professional

  development by children's librarians related to the implementation of preschool

  storytime?

- What do parents of preschool children with disabilities say about their

  experiences attending public library storytimes?

Definitions of Key Terms

Alphabetic principle. The understanding that letters represent sounds and that words are made from letters and sounds. Children who have this understanding are able to pronounce unknown words by applying their knowledge of this relationship (Ehri, 2005).

Engagement. Refers to the degree of attention, curiosity, interest, optimism or passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn or progress in their education. Retrieved from The Glossary of Educational Reform https://www.edglossary.org/student-engagement/.

Equity in education. The notion that all learners will receive the individual resources needed to be educated in school regardless of national origin, race, gender, sexual orientation, ability, language or other characteristic (Oregon Department of Education, 2018).

Inclusion. Inclusion is the ideology of securing opportunities for all learners to be educated with their peers in the general education classroom. Retrieved from Special Education Guide https://www.spetcialeducationguide.com/pre-k-12/inclusion/.

Phonemic awareness. The ability to manipulate the sounds in spoken words and the understanding that spoken words and syllables are made up of sequences of speech sounds (Ehri, 2005).

Print awareness. The understanding that the squiggly lines on a page represent spoken language and that print is organized in a particular way (e.g., left-to-right, has spaces between words, etc) (Justice, Logan, Kyderavek, & Donovan, 2015).

Shared reading. An interaction between an adult and a student over a shared text in which the teacher models skills and provides support and instruction (NELP, 2008).

School readiness. In this paper, school readiness is defined as the preparedness of children to participate in reading and writing instruction in a formal academic setting. This definition was adapted from a definition used in *Predictors of School Readiness: A Selective Review of the Literature.* Retrieved from http://ecrp.uiuc.edu/v15n1/linder.html.

Universal Design for Learning. Universal Design for Learning is a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn (CAST, 2018).

Chapter 2: Review of the Literature

Introduction

The literature reviewed for this study suggested that professional development for children's storytime providers in the public library, incorporating the principles of UDL and using a framework for delivering content that is preferred and supported by research, can facilitate equitable learning environments for children with disabilities. This section will include a description of the literature review process (inclusion and exclusion criteria) and introduce the theoretical frameworks used in the design of this study.

After determining the research questions for this study, the literature review was narrowed to an extensive search of the library science literature around accessibility, UDL, shared reading, storytime and professional development. Inclusion criteria in the library science literature included a focus on the setting, peer-reviewed journals, and reported outcomes on children's programming. Also included were two recent dissertations that utilized a quasi-experimental research design. These studies were included as they are the only library studies that employed this type of research design. The literature review related to the library yielded limited, but important information to support positive impacts on parent-child interactions with typically-developing children around literacy (Graham & Gagnon, 2013). Sources for shared reading and professional development were identified using knowledge of experts in the field of special education and following references to identify supporting studies. The primary sources for the literature review are peer reviewed journal articles. The literature review included research of evidence-based practices embedded in shared reading routines, as few studies

focus on the use of shared reading as an isolated intervention. Many studies exist that

support the use of shared reading as a strategy to facilitate growth in language and

literacy skills (Hudson & Test, 2011). The focus of my review included studies of shared

reading that examined the deliberate behavior of adults (e.g., explicit print referencing,

vocabulary instruction, letter name knowledge) as a part of the intervention. This

inclusion criteria was important in aligning my chosen theoretical framework, UDL, to

the planning and design completed by librarians in making shared reading experiences

accessible to a variety of children. An additional focus of my review is the knowledge

and skills of librarians related to inclusive programming for children with disabilities in

the library. There is a limited number of qualitative studies to review in that area and only

a few make mention of specific programs like storytime. My review of the literature

related to professional development included what is known from the rich history of

educational research in this area, combined with survey data in the area of library science.

I will also discuss what is known about experimental or quasi-experimental research in

the public library.

Theoretical Framework: Inclusive Library Model

        This study employed components of a model proposed by Kaeding et al. (2017)

that identified six key elements that promote access and inclusion in public library

settings. Using results of a study that examined the perceptions of librarians serving

children with disabilities in their library, their proposed model, The Inclusive Library

Model (Figure 1) is used as a framework for providing professional development to

children's librarians. As represented in the figure, the six elements identified as key to

creating inclusive public libraries are

1. programming for children with disabilities,

2. training,

3. partnerships with agencies and/or professionals that serve individuals with

    disabilities,

4. marketing to ensure families are made aware of the range of programs and

    services at their library,

5. eliminating physical barriers, and

6. providing collections of materials that are both available in accessible formats

    and represent a diverse community.

Respondents to the survey indicated management that shares a vision for an inclusive

library is key to implementing all of these elements. This study incorporated each of the

following elements in the proposed framework; training partnership, and programming.

Figure 1. Inclusive library model. (Kaeding et al., 2017)

Training. The professional development plan utilized in this study is aligned

with the need for training on access and inclusion reflected in the model. 78% of the

respondents to Kaeding et al. (2017) survey indicated a lack of awareness on how to

provide accessible environments for children with disabilities. This is aligned with the

Prendergast (2016) survey of librarians that revealed limited attention in library science

coursework related to children with disabilities and a feeling of unpreparedness to

support children and their families in the library. Of the respondents in the Kaeding et al.

(2017) survey, only 17% had training in UDL available.

Partnership. Through partnership with a university special education

department, the children's librarians had a unique opportunity to learn more about the

needs of children with disabilities and their families. The partnership between the university and the library that participated in the study has an established relationship that was expanded through the implementation of this research. The library has provided marketing to families of children with disabilities about the ongoing Inclusive Storytime Program (Pebly, 2016) on which the professional development was partially based. In addition, the library has provided space and resources for graduate students in special education to gain needed experience in supporting shared reading opportunities.

Programs. There is an increase in public libraries providing sensory storytime programs for children with autism. The Association for Library Service to Children (ALSC) describes sensory storytime as a program that provides repetition, opportunities for movement, and deliberate sensory input (https://www.alsc.ala.org/blog/2012/03/sensory-storytime-a-brief-how-to-guide/). In Multnomah County, Oregon, for example, two of 17 library locations offer separate programming for children with autism and other developmental disabilities. These programs have been initiated by many libraries across the country in response to parents who report feeling uncomfortable in traditional storytime sessions due to their child's behavior and attention. This study provided training for children's librarians to implement supports in traditional storytime programs that will facilitate more inclusive opportunities for all children.

An important missing component of this theoretical model are the voices of individuals with disabilities and their families. In order to get a better understanding of

the needs of this group, libraries must include a plan for collecting and analyzing their lived experiences and perceptions around library patronage.

Theoretical Framework: UDL

Some libraries are beginning to employ the principles of UDL in planning services that will promote accessibility for all of its patrons (Kaeding et al., 2017). The UDL framework has its origins from a term coined in architecture called Universal Design. Architect Ron Mace and others from the Center for Universal Design at North Carolina State University endeavored to design products and public facilities that were designed to ensure access for all users of that space without the need for any adaptations. Using UDL in learning environments refers to proactively addressing the curriculum, lesson goals, assessments, etc. to allow for options for students to represent their understanding in multiple ways (e.g., embed support for symbols, provide alternative text, etc.), express understanding differently (e.g., use multiple tools for writing, provide alternative means of response) and vary methods of engagement (e.g., provide choices and various levels of challenge for learners) (CAST, 2018). The principles of UDL, multiple means of representation, expression and engagement, operationalize what is known about the science of learning in the planning of learning activities to meet the needs of a diverse range of learners (Ok, Rao, Bryant, & Mcdougall 2017). Widespread use of this framework is reported in the educational literature (Browder, Mims, Spooner, Ahlgrim-Delzell, & Lee, 2009; Coyne, Pisha, Dalton, Zeph, & Smith, 2012).

The application of the UDL framework is reflected in public libraries in the form of flexible seating options, making a variety of assistive technology tools available, and

providing specialized collections of books and materials. While some libraries opt to

offer specialized programs for children with disabilities, utilizing the principles of UDL

in designing the storytime experience has not yet been addressed and can provide

opportunities for all children, including those with disabilities, to learn early literacy

skills together.

UDL was chosen as one of the theoretical frameworks for this study, as it aligns

with the creation of supportive learning environments in storytime sessions. The use of

UDL strategies are effective in supporting the needs of diverse learners, including those

children who are ELL. The participating library for this study is located in a county

where the Hispanic community represents more than 22.7% of the population and Asian

residents are 10.7% of population (Data USA, 2018). A universally-designed preschool

storytime in the public library can be beneficial for children with and without disabilities

who are learning English and need alternative methods of engagement, representation and

expression of early literacy content. Scaffolds such as visuals for language support,

technology that provides speech output as a model, explicit core vocabulary instruction,

and the choice of print materials that promote active engagement are key instructional

strategies that can be used successfully for all children including those who are learning

English.

The implementation research compiled by CAST (2018) provides a starting point

for researchers interested in applying the principles of UDL in varied learning

environments. For example, aligned with the research provided under *representation,*

Vasilyeva, Huttenlocher, and Waterfall (2006) discuss the implications of preschoolers

listening to stories and the impact of the experimental manipulation of the syntactic

structures on language development. This study provided support for the purposeful

selection of children's literature that can scaffold the growing language and literacy skills

of children in preschool storytime.

The research compiled on the effective implementation of UDL can be used to

create learning environments that provide support for a wide range of learners, including

children with complex communication and English language learning needs. Some

examples of UDL principles applied to an inclusive storytime experience include using

visuals, having a structured routine, choosing books to maximize engagement, and

employing components of systematic instruction including prompting techniques. Within

the context of a universally-designed storytime experience, the leader (i.e., teacher or

librarian) can provide scaffolding to assist children with more complex needs to interact

meaningfully with print (Coyne et al., 2012). Scaffolding refers to a process in which a

teacher provides supports (e.g., visuals, prompts, models) in order to support a learner in

understanding a task and then systematically withdraws them as the learner masters the

task (Rosenshine, 1976). Examples of scaffolding in a shared reading may include

modeling the use of vocabulary or pointing to pictures to help a learner with story

retelling.

Critiques of theoretical frameworks. The use of the Inclusive Library Model

and UDL as theoretical frameworks for this study is helpful as a lens to examine what is

known from the limited research on the impact of preschool storytime in the public

library setting for children with disabilities. One limitation of the Inclusive Library

Model is the exclusion of the families of children with disabilities in the discussion of

how best to serve this population in community literacy activities. Additionally, the wide

range of support needs for children with disabilities also provides challenges for

storytime providers in planning and implementing learning opportunities that will allow

all children to meaningfully participate. While UDL has a robust research base

supporting the many foundational practices used in many disciplines, limited research is

identified in both the "promising practices" and "implementation research" categories

identified by CAST (2018). This study adds to the growing body of literature that

addresses some of the previous components that have yet to be addressed by research.

Review of the Research Literature

  Shared reading and early literacy. The What Works Clearinghouse (2015)

identified interactive shared book reading as a promising practice in 2011 for promoting

early reading skills. In addition, the National Early Literacy Panel (NELP) cited shared

reading as a research-based intervention for promoting early literacy skills (NELP, 2008).

In a meta-analysis that reviewed 31 quasi-experimental studies on shared reading to

promote two components of early literacy skills, vocabulary and print knowledge, a

moderate effect size was found (reported as Cohen's D effect sizes 0.36 for vocabulary

development and 0.43 for print knowledge). The effect size can be used to determine the

efficacy of a particular intervention as compared to a related approach. This effect was

seen in educational settings where teachers read to whole groups of students and provided

accompanying activities to enhance vocabulary knowledge. Children's alphabetic

knowledge was linked to explicit referencing of print (7% of the variance) despite this

not being a typical skill targeted during shared reading interventions (Mol, Bus, & de

Jong, 2009). Print knowledge (or print awareness) and its relationship to later spelling

and decoding has been clearly established by the literature (Justice & Ezell, 2002; Piasta,

Justice, McGinty, & Kaderavek, 2012). Justice, Logan, Kaderavek, and Dynia (2015)

examined a print-focused intervention during shared reading on the print knowledge of

children who attended early childhood special education preschools over an academic

year. Assigned to one of three experimental conditions, preschoolers receiving early

childhood special education with teachers who engaged in targeted discussions around

print knowledge including book organization, print meaning, letters and words, had

significantly better scores on composites of print understanding than those whose

teachers engaged in traditional reading practices. In the first longitudinal study of the

effects of a print-focused read-aloud, preschoolers who participated in repeated readings

of stories with explicit attention to the forms and functions of print (e.g., differences

between letters and words, identifying the title, letter names, etc.), demonstrated

longitudinal benefits in print knowledge two years after the initial study (Justice, Logan,

& Kaderavek, 2017).

        Research supports the use of shared reading as an avenue to increase language

and literacy for all children including those who have complex support needs (Browder et

al., 2009; Justice, Logan, & Kaderavek, 2017). A meta-analysis by Hudson and Test

(2011) using Horner, Carr, Halle, Mcgee, Odom, & Wolery (2005) Quality Indicator

Checklist found that shared reading has a moderate level of evidence to support this

intervention to promote literacy for students with extensive support needs. A meta-

analysis of shared reading to increase literacy skills for students with significant

disabilities indicate that this practice, coupled with elements of systematic instruction

(e.g., task analysis, time-delay procedures) revealed a moderate level of evidence to

support its use in promoting literacy for students with significant disabilities.

An observational tool has been developed that can be used to measure the quality

indicators associated with shared reading in early childhood settings (Pentimonti et al.,

2012). The Systematic Assessment of Book Reading (SABR) includes five constructs

outlined in the literature as instrumental in fostering the language and literacy skills of

preschool children during shared reading. These behaviors include 1) intentional

techniques to support vocabulary, 2) attention to higher order thinking techniques, 3)

explicit attention to print and phonological skills, 4) support for child responses, and 5)

attention to a warm instructional environment. These instructional components were

partially used in the design of a model Inclusive Storytime Program (Pebly, 2016) that

was expanded to include UDL strategies to provide an equitable shared reading

experience for children with disabilities. Specifically, an approach to explicit modeling

of vocabulary during shared reading is included in the proposed professional

development. Aligned with the research supporting users of augmentative and alternative

communication (AAC) in building language and literacy skills, core vocabulary

instruction is an effective strategy to build communication skills (Buekelman, Jones, &

Rowan, 1989, Clendon & Erickson, 2008). Core vocabulary is described as a small set of

words that have been identified in the research as the most commonly used in both oral

and written language. During shared reading, a storytime leader can provide a visual

representation of the most frequently used words and model preselected words that have

been chosen to encourage communication and engagement in the story (Cristani,

Clendon, & Hemsley, 2010). Another key component referenced in the SABR is explicit

attention to print and phonological skills. The professional development included a focus

on deliberate print referencing strategies referenced in the literature such as finger

tracking while reading and commenting on features of print during read alouds (e.g.,

capital letters, title, words versus letters, etc.) (Justice, Pullen & Pence, 2008).

Knowledge and skills of librarians. Public libraries have long been a place for

families to participate in programs and activities designed to support literacy learning.

Currently, libraries are increasing their commitment to partnering with schools to close

the gap for the more than one-third of North American children that enter school lacking

the early literacy skills required to be readers and writers. Evidence exists that

professional development for librarians can impact the planning and implementation of

quality storytime programs that improve outcomes for children (Russ et al., 2007).

Despite this research and the widespread offering of children's programming at public

libraries, the success of children's programs are often measured by data such as

attendance, increasing numbers of library cards, circulation of books, etc. These

measures do not quantify or qualify these important contributions to a literate community

(Mills et al., 2015). While much attention has been given in the literature to the home

literacy activities provided by parents to support early literacy, little attention has focused

on the knowledge and skills of children's librarians as resources for supporting school

readiness skills in reading and writing. Many children's librarians receive graduate

training in early literacy as part of their preservice education, however there is a wide

range of expertise and experience among the library staff who are responsible for

implementation of children's programming, including storytime. The content and format

of storytime programs are often designed with the unique characteristics of the

community they serve in mind. As a result, analyzing the success of these programs is

often left to the individual libraries, leaving a gap in understanding how these programs

impact the literacy learning of the children who participate (Campana et al., 2016).

In the year 2000, one of the most widely known foundational early literacy

programs created to assist librarians support parents and caregivers in developing early

literacy was implemented as a joint partnership with the American Library Association

and the National Institute of Child Health and Human Development (NICHD). *Every*

Child Ready to Read (ECRR) was developed based upon the work of Whitehurst and

Lonigan (1998) who identified critical early literacy skills (e.g., phonological and

narrative skills, vocabulary) and suggested activities to develop them (e.g., singing,

talking, playing). Librarians received specialized training emphasizing the early literacy

skills identified in the research and then taught parents and caregivers how to interact

with their children to promote language and literacy based upon research-based practices.

In addition, a high-quality storytime was implemented that modeled and instructed

parents of varying backgrounds with tools and strategies for reading with their children.

A review of the program revealed that all of the parent participants increased their

"literacy behaviors" (e.g., visiting the library, sharing books, explicitly introducing

vocabulary). The most significant gains in the frequency of literacy behaviors were seen

with low income and teen parents (Arnold, 2003). Libraries and library outreach programs to families have been shown to increase parent engagement in their child's literacy development for children at-risk. Results of ECRR increased the attention on evidence-based interventions in early literacy originating at public libraries and expanded the role of librarians to focus on training caregivers and early childhood providers in literacy methods in both storytime sessions and outreach in the community (Prendergast, 2016).

The increasing focus on the expanding role of libraries as an additional resource to develop early literacy skills is evident. A meta-analysis conducted by NELP (2008) reviewed 500 experimental and quasi-experimental studies of preschoolers and the relationship to exposure to research-based practices and school readiness. Results are clear that these practices do positively impact the preparedness of children for kindergarten. Programs such as ECRR and mission statements and statewide goals for libraries that reflect early literacy as a primary focus continue to grow; however, a lack of scientific evidence related to outcome measures of library programs leaves a gap in our understanding of how they impact the early literacy outcomes of the children they serve.

Research in the library. There are significant challenges in conducting research that addresses the relationship between participation in public library programs and the early literacy skills that are associated in the literature with school readiness. These include inconsistent attendance and variability in age ranges of storytime participants, and the lack of a designated "storytime curriculum" that is uniform among public library settings. In addition, the education and experience of those implementing the program

vary widely. In order to address this research gap, Valuable Initiatives in Early Learning

that Work Successfully (Project VIEWS) was designed to examine how explicit attention

to early literacy skills in public library storytime impacts outcomes for the participants.

This two-year study employed a mixed methods quasi-experimental design to examine

both the content of library storytime (pre and post professional development) and the

literacy behaviors of the participants. During the initial year of the project, researchers

found that an increased early literacy content that included activities focused on

alphabetic knowledge, vocabulary knowledge, print awareness, etc., impacted the literacy

behaviors of the children who attended. This was measured by two new evaluation tools

created by the researchers. The second year of the project included professional

development for librarians in order to increase the early literacy content of the storytime

that was presented. This model was used in my research design proposal and expanded to

include universally-designed elements to meet the needs of children with disabilities

(Campana et al., 2016).

      Knowledge and skills of librarians related to children with disabilities. An

examination of the preservice content offered to graduate students in school librarianship,

based upon U.S. News and World Report, 2009, indicates that there is a lack of content

related to best practices in serving students with disabilities in educational settings

(Myhill, Hill, Link, Small, & Bunch, 2012). In addition, a survey of 67 school librarians

revealed that they would grade themselves with a "C" or "D" if asked to review their

knowledge of teaching practices in special education (Allen & Hughes-Hassell, 2010).

Despite their reported lack of knowledge and skills, school librarians indicated that they

commonly conduct "read alouds" and choose books paired to the student's identified reading level. A review of the research around accessibility and libraries revealed that very little attention has been given to issues beyond providing accessible spaces and technology to support patrons with disabilities (Small, Myhill, & Herring-Harrington, 2015). Research on accessibility to libraries has, until recently, focused on the provision of tools and services for adults with disabilities. Little research is available that addresses the public library needs of children with disabilities and their families (Kaeding et al., 2017).

Kaeding et al. (2017) surveyed 18 librarians who provided information on the factors they believe resulted in increased accessibility for children with disabilities in library programs. Respondents to the surveys and interviews indicated that barriers to creating more inclusive programming included limited training to UDL (only 17% had this training), discrepancy in attitudes related to the need for inclusive or separate programs for children with disabilities, and limited knowledge on the part of staff about disabilities. An important finding in the study was the lack of perception about the importance of literacy for children with disabilities on the part of families. A comment from one respondent was "...libraries are often seen as books and if you don't think your child is going to read, you may not see a purpose to the library." Including children in preschool storytime at the public library provides opportunities to support parents in facilitating early literacy skills that will promote school readiness in reading and writing, resulting in more equitable opportunities in school.

Professional development. In a recent survey of more than 350 librarians from across the United States and representing a variety of libraries, preferred methods of professional development that included face-to-face collaborative interactions with other professionals was prominent (Stephens, 2018). Additional feedback from the survey identified preferences for professional development that provides opportunities for engagement in the topic and workshops that allowed for follow-up and feedback from the instructors. Stephens' 2018 survey is aligned with what has been learned from more than 30 years of research in professional development in education that indicates the need for active engagement in content that is critical to the mission of the group and facilitates collaboration among its participants (Yoon, Duncan, Lee, Scarloss, & Shapley 2007; McCutchen et al., 2002; Loucks-Horskley, Love, Styles, Mundry, & Hewson, 2003). Yoon et al. (2007) reviewed over 1300 studies on professional development to identify those factors that resulted in moderate effects on student achievement as measured by the What Works Clearinghouse (2007) evidence standards. Nine of the studies that met the criteria were used by Browder et al. (2012) to create a professional development package for teachers that include the following steps; *Tell* (provide information on a topic), *Show* (model the instructional practice or strategy), *Try* (provide practice for the participants), and lastly *Apply* (provide an activity in which the participants can use the information learned). Components of this methodology include intensive training (at least 14 hours), the provision of follow-up activities, and direct contact with the participants. The Tell, Show, Try and Apply methodology was applied in this study. Three professional

development modules that address key areas of inclusive programming for inclusive

storytime were developed and implemented in this study.

Synthesis and Critiques of Previous Research

The review of the literature indicates that shared reading is a promising practice

for children with disabilities in acquiring literacy skills foundational to school readiness.

The use of this practice, however, has not been investigated widely in inclusive settings

in either school or the library. Community libraries can play a key role in supporting

school readiness for all children, including those with disabilities. In addition, librarians

who implement storytime sessions can support families in connecting to services in the

community and serve as a primary change agent in promoting accessibility in their own

library programs (Adkins & Bushman, 2015). The little research that exists using the

library as a context for study suggests that children's librarians have a desire to provide

accessible storytime programs, but have limited training in both the principles of UDL

and the needs of children with disabilities. Much can be learned from the little research

that is available in the school library literature, however, conducting research in an

informal setting such as the library presents unique challenges in scientific inquiry.

These challenges include the variability of attendees who can be included as participants

and the difficulty in identifying tools that can effectively measure program impact (Mills

et al., 2018). This study offered a next step in understanding how to implement the

principles of UDL in public library storytimes in order to provide equitable opportunities

for preschoolers with disabilities.

Review of the Methodological Literature

Interviews, case studies, and other qualitative approaches contribute to the knowledge base around early literacy practices that children's librarians share a commitment and responsibility for providing in their programs (Griffith & André-Bechely, 2008). Experimental studies are not widely available in library research. Although the call for evidence-based practice (EBP) gained from a solid foundation of experimental research has infiltrated many disciplines and has been mobilized to include library science (Marshall, 2006), scholars in community literacy and librarianship propose the use of a "wider lens" in using research to illuminate library practice (Stooke & McKenzie, 2011). The evolution of scholars' understanding of literacy development has changed the role of the public library and preschool storytime. As scientific approaches to reading instruction became prominent in the 2000's and the later *Every Child Ready to Read* preschool reading initiative, the role of the children's librarian has matured from storytelling into a key role in preparing all children for school. The use of experimental and quasi-experimental research was instrumental in shaping educational policies that impacted community libraries, however until recently, no experimental or quasi-experimental research was conducted in this setting. A wealth of sociocultural research exists including descriptive, case study and ethnographic research designs that contribute to our growing understanding of the contributions of the public library (Stooke & McKenzie, 2011). More research, however, is needed to contribute to our understanding of how to support a diverse community of early readers and writers benefit from the opportunities provided in their local libraries.

In a pretest/posttest quasi-experimental design, a researcher can measure the dependent variable before and after treatment to measure treatment effects. While using a pre/post intervention design does not allow the researcher to conclude that the independent variable (i.e., professional development) caused the change in the dependent variable (i.e., survey data), the use of this design is helpful in educational research in seeking to measure the effects of an intervention. Quasi-experimental pre/post designs eliminate the need for random assignments to control groups, a difficult task in field-based research (Cook & Campbell, 1979). A pre/post quasi-experimental design was chosen for this study as it allowed for the researcher to identify a small number of purposefully selected participants to represent storytime providers, conduct the study in an authentic setting, and still measure the impact of the intervention (i.e., professional development).

Summary of the Research Literature and Application

In summary, the use of shared reading is supported in the literature as an intervention for increasing early literacy skills for children with and without disabilities. Early literacy content (i.e., print awareness, vocabulary and narrative skills, phonological skills and early writing) embedded in shared reading can be made accessible using the principles of UDL, which in turn, can facilitate more inclusive opportunities once children begin school. Preschool library storytimes provide additional opportunities to increase access to this content for all children, especially those who are at-risk for lagging school readiness skills. The limited research conducted in library settings suggests that children's librarians can play a critical role in the design and implementation of storytime

programs that can contribute to school readiness in early literacy for preschoolers. Using

a model of professional development that is linked by educational research to positive

student outcomes, this study provided needed attention to the creation of equitable

learning environments in public library storytimes for children with disabilities. This

study expanded on the work done previously by Project VIEWS who determined that

professional development and coaching had a statistically significant impact on the

content of early literacy storytimes delivered by librarians and resulted in increased

literacy behaviors of the children who attended. Professional development provided to

the librarians in this study was developed, in part, using the pilot work done by the

researcher and Portland State University faculty in planning and implementing an

inclusive storytime for preschoolers in the local public library. This three-year project,

conducted in partnership with the local public library, employs evidence-based practices

in special education and incorporates the principles of UDL to ensure that a diverse range

of learners can participate in preschool storytime (Pebly, 2016).

Using a mixed methods design including descriptive elements and a model of

quasi-experimental research based upon the work of Mills et al. (2018), this study was a

first step in using a systematic approach to evaluating an intervention in a public library.

Some external factors will undoubtedly impact the findings of this study as discussed in

the limitations section.   Variability in the home experiences and other influences that

impact learning to read and write are difficult to control for, as is attendance at non-

mandatory designated storytime sessions. Although effort was made to encourage

attendance for the children with disabilities at designated storytime sessions, library

storytime is optional. The librarians were not given a prescribed curriculum for use in

their individual storytime sessions, however an effort was made to encourage participants

in the training to address the preliteracy skills identified as foundational to school

success. Interview data was collected from parent participants in order to include

information about the lived experiences of families in accessing the public library

storytimes. Opinions and values regarding inclusive programming which may influence

advocacy for their children on the types of programs offered in community libraries can

augment our understanding of needs and challenges of the participants with regard to

accessibility in library storytime. The choice of semi-structured interviews enables the

researcher to include both predetermined questions that highlight information desired

from the study but allow for open-ended questions that allow for more exploration on the

topic. A strength of this approach is the ability to be flexible in the direction of the

interview in order to gain a more comprehensive understanding on the participants'

responses. A weakness, however, is the inclusion of the researcher as a part of the

context, which may inadvertently impact the validity and reliability of the data (Merriam

& Tisdell, 2016).

Chapter 3: Methods

Introduction

The limited availability of research in the library sciences and the voices of both librarians and families of children with disabilities illustrate the need for professional development for children's librarians to improve inclusive programming for children with disabilities in preschool storytime. This is reflected in the proposed Inclusive Library Model developed by Kaeding et al. (2017) and was used to frame this study. Using the principles of UDL to provide accessible curriculum content for students with diverse needs is supported in educational research and is often emphasized in professional development in school settings. This study applied what is known about meaningful professional development in the educational setting to the public library to equalize the early literacy experiences provided to all children through preschool storytime. In addition, the voices of families was included to gain a greater understanding of their needs with regard to inclusive programming. Data was collected and analyzed over a three-month period. Table 1 provides an overview of the study sequence and procedures.

Table 1

Study Sequence and Procedures

Phase 1: Preintervention
- Recruitment of participants (e.g., children's librarians and parents of children with disabilities) (January, 2019)
- Institutional Review Board approval (amendment received January, 2019)
- Informed consent from all participants (February, 2019)
- Training for graduate student observers (February, 2019)
- Children's librarians given a link to the Qualtrics Knowledge and Skills Survey (Appendix A) (February, 2019)
- Baseline Observational Data collected on pre-professional development storytime sessions using Preschool Accessibility Observational Tool (Appendix B) (February, 2019)
- At least two parent participants will be asked to attend each baseline sessions

Phase 2: Intervention
- Professional development modules (Table 7) implemented with children's librarians - 3 three-hour training Modules (February, March and April, 2019)
- Individual Coaching Sessions (two per participant) with children's librarians after each training module
- Parent interviews began during intervention (See Table 6)

Phase 3 Post-Intervention
- Children's librarians completed the post-observation Knowledge and Skills Survey (Appendix A) (April, 2019)
- Observational data collected on individual children's librarians (Appendix B) (April, 2019)
- At least two parent participants attended each post-intervention session (April, 2019)
- Completed parent interviews (April, 2019)
- Social validity scale for children's librarians completed (Appendix C) (April, 2019)
- Data analysis and summary (April, 2019)

Research Methods

This mixed methods study included both descriptive and quasi-experimental elements including a pre/post measure of the impact of professional development, a pre/post measure of a knowledge and skills survey, and results from parent interviews describing their experiences attending preschool storytime. The Quality Indicators for

both essential and desirable components of a quasi-experimental research study identified

by Gersten et al. (2005) were applied in this study. In addition, a social validity measure

was provided to the librarians to evaluate the feasibility of the training using a Likert

scale (Appendix C).   The Quality Indicator calling for a "clearly identified intervention"

in Gersten et al. (2005) is reflected in the use of evidence-based instructional strategies

for supporting literacy included in the training. The design of the professional

development modules was aligned with the research practices on effective teacher

training suggested by Yoon et al. (2007) which is also linked to this Quality Indicator.

Additionally, the researcher incorporated 5 semi-structured interviews with the parents of

the children with disabilities who participated in the storytime sessions. This

methodology was important in order to enable the voices of the families to be heard as it

related to the need for supports and future programing. Quality indicators have also been

established for the use of interviews in qualitative research designs. These indicators

were used to ensure that appropriate participants were recruited and represented,

questions are worded fairly and were not leading, and participants had an opportunity to

review transcripts for accuracy of representation (Bratlinger, Jimenez, Klingner, Pugatch,

& Richardson, 2005).

Table 2

Alignment of Research Questions to Data Collection

Research Questions	Data Collection
What are the reported knowledge and skills of children's librarians related to serving children with disabilities pre and post professional development?	Pre and post survey data/social validity measure
How does professional development for children's librarians related to serving children with disabilities and the principles of Universal Design for Learning (UDL) affect the accessibility of content for children with disabilities in preschool storytime?	Pre and Post Survey Data; Observational data pre and post professional development using Preschool Accessibility Observational Tool
What is the perceived benefit/usability of the content presented in professional development by children's librarians related to the implementation of preschool storytime?	Social validity measure
What do parents of preschool children with disabilities say about their experiences attending public library storytimes?	Semi-structured interview data

Participants

Librarians. Four children's librarians participated in the study. Eligibility for

participation included having primary responsibility for planning and/or implementing

preschool storytime in the Hillsboro Public Library, Hillsboro Oregon (three at the main

Brookwood Branch and one at the Shute Park location), and expressing an interest in

learning how to increase the accessibility of storytime content for children with diverse

learning needs. The children's librarians who participated in the study all served as

storytime providers at the main branch of the library, which was selected due to

flexibility with scheduling and was the site of an ongoing Inclusive Storytime Program

run by the researcher. Demographic information was collected for each participant as

part of the survey including age, education, gender, and years in role.

Table 3

Characteristics of the Librarian Participants

	Gender	Age	Education	Experience
Librarian 1	Female	51	MILS	10+ years
Librarian 2	Female	30	MILS	4 years
Librarian 3	Female	34	M.Ed.	9 years
Librarian 4	Female	36	MILS	10+ years

Parents of children with disabilities. Five participating parents and their

children were recruited based upon their interest and availability to participate in

storytime sessions. Eligible parents had a preschool-aged child, ages 3-5, with an

identified disability (i.e., eligible for Early Childhood Special Education, any category)

and were patrons of the Hillsboro branch of the Washington County Library Service

District. An effort was made to recruit at least five parents of children that represent a

range of support needs including children with intellectual disabilities, autism, or

complex support needs including those with multiple disabilities and children who are

ELL and eligible for Early Childhood Special Education. The community of Hillsboro,

Oregon has the fifth largest population in the state of Oregon and is one of the most

ethnically diverse communities in the state, with a large number of both Hispanic and

Asian residents ("Demographic & Economic Data", 2017). Attention was given to the

selection of families that represent the served community. In addition to participating in

parent interviews, parents were asked to bring their child to at least two storytime

sessions; occurring before and/or after the librarian training. Demographic information on the parents was collected including age, education, marital status, home language, number of children, nature of their child's disability, gender, race, and history of attending community library programs.

Table 4

Participant Characteristics

	Age	Education	Gender	Race	Marital Status	Home Language	Number of Children at Home	Age, Gender and Eligibility of Focus Child
Parent 1	32	PhD	F	W	M	English	2	Boy, 3, Autism Boy, 5, Autism
Parent 2	33	B.S.	F	W Middle eastern descent	M	English and Arabic	2	Boy, 3 developmental delay Boy, 4 developmental delay
Parent 3	37	2 year-Community College	F	W	M	English	3	Boy, 5, Autism
Parent 4	34	Master's degree	F	W	M	English	1	Girl, 5, Orthopedically Impaired; Communication
Parent 5	35	B.S.	F	W Middle eastern descent	M	English and Farsi	4	Boy, 4, developmental delay

Recruitment. Librarians were recruited via email with support from the Youth

Services Library Manager from the main branch of the public library based upon their

reported interest and responsibilities for running preschool storytime. Once potential

participants were identified, the researcher followed-up with an email to confirm interest,

obtain informed consent and provided more detailed information on the training. Parents

of children with disabilities were recruited for participation through agency liaisons who

serve this population and included the local Northwest Regional Education Service

District Early Childhood Special Education Center serving the Hillsboro area. A

participant recruitment flyer was distributed in both English and Spanish to the Hillsboro

Early Childhood Center, Shriner's Hospital for Children, Columbia Regional Low

Incidence Program, and Oregon Health and Science Hospital outpatient clinic to solicit

participation from a range of families. Informed consent was obtained for each of the

participants in the study, librarians (Appendix D), and parents (Appendix E).

Data Collection Procedures and Analysis

Phase 1: Pre-intervention procedures and measures. A Knowledge and Skills

survey (Appendix A) was distributed electronically to each of the four librarians in order

to measure their knowledge, skills and experiences related to accessibility of storytime

for children with disabilities. An electronic survey (Qualtrics, Provo, UT) was used both

for pre and post measures. The survey included 20 questions requiring six short answer

responses, six multiple choices responses and eight Likert-scale items. Participants were

given one week to complete the survey. In order to establish content validity for the

survey, library professionals who have been involved in Inclusive Storytime were asked

to review and provide feedback about the questions, length of the survey, and ease of

directions. Feedback was used to make needed revisions. Participants completed and

returned the surveys before baseline observations on storytime implementation were

conducted.

Baseline observational data was collected on each librarian using the Preschool

Storytime Accessibility Observation Tool (Appendix B). The PSAOT was created using

a model from CAST (2018) to collect data on the librarian's use of UDL strategies. The

PSAOT was used during each 30-minute observation of individual librarians to identify

supports representing the principles of UDL that were implemented in each storytime

session. The types of supports included on the PSAOT were based upon what is known

from the literature about how to support early literacy skills with children with

disabilities.

Table 5 provides a definition of the types of supports included in the PSAOT and

the research base around their use. The presence or absence of these supports were

identified using the PSAOT and represented as a percentage for each category on the

checklist.

Table 5

Planned Supports in Preschool Storytime, definition and research-base

Support	Description	Reference
Visual Schedule	A visual tool (includes photos, symbols, words) that supports an individual to know what is happening next. Examples can be symbol-supported note cards with time-stamps, steps of the storytime routine on the whiteboard or photographs	(Zimmerman, Ledford, & Barton, 2017)
Social Story	A short story that describes an upcoming event and common responses to situations in those events in order to promote social awareness and increase self-regulation.	(Wang & Spillane, 2009)
Seating squares	Visual cues to help children identify where and how far to sit from peers	(Reichow, Barton, & Wolery, 2006)
First/Then Prompts	A visual support that helps children organize what should be done first (i.e., non-preferred activity) and then (i.e., preferred activity)	(Heflin & Alaimo, 2007)
Fidgets/Lap Pads	Manipulatives that can be used to encourage "quiet fidgeting"; A sensory tool used to help children with self-regulation	(Case-Smith, Fristad, & Weaver, 2015)
Choice boards	Visual tool that allows children who have limited verbal skills opportunities to respond to a question or make a choice of an activity	(Cole & Levinson, 2002)
Use of assistive technology	"Any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability." IDEA, 20 U.S.C. § 1401(1)	(Alper & Raharinirina, 2006)
Tools for engagement	Engagement refers to the degree of attention, curiosity, interest, optimism or passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn or progress in their education	(Rangvid, 2018)
Core word modeling	Explicit modeling of high utility group of words used frequently in reading and writing; core words incorporated into reading and/or writing activities	(Crestani, Clendon, & Hemsley, 2010)
Embedded picture mnemonics	A strategy for teaching letter sounds in which the letter is embedded in a picture of a familiar object having the same first letter sound as the targeted letter	(McNamara, 2012)
Explicit, supported instruction with multiple opportunities to respond	Systematic, direct presentation of content that is coupled with many opportunities for choral and individual response	(Archer, 2011)
Culturally-relevant instruction	Instruction that incorporates the diverse cultures of the students in order to provide content relative to students' experiences	(Aronson & Laughter, 2016)

Fidelity of implementation guidelines provided by CAST (2018) indicate that all elements of UDL are not required to be present in each learning opportunity. The usefulness, or fidelity, of the support used was rated by the researcher, a second observer, and input from parents using the 2-point scale. The scale reflects the following criteria: Two points to indicate the child uses the support when presented (e.g., points to a symbol, presses the switch); One point to indicate the child uses the support with partial prompting (e.g., verbal or physical prompts) or Zero points to indicate no response to support.

A second observer, trained by the researcher, was present on all baseline sessions. Inter-observer agreement for fidelity measure was targeted at 80% or above for all observed sessions. Agreement was calculated during pre-intervention by comparing agreement between two raters on the PSAOT for the presence or absence of UDL supports. For Librarians 1, 2, 3, and 4 respectively, the inter-observer agreement was 100%, 83%, 100%, and 96%. Post training observational data had observers only for Librarians 2 and 3, and inter-observer agreement was 88% and 100% respectively.

Graduate students in special education were asked to assist with interrater reliability observations of storytime sessions. Training for student observers was provided by the researcher using the ongoing Inclusive Storytime Program as an opportunity to practice data collection strategies in addition to pre-meetings with observers prior to data collection.

Parent interviews. One-on-one parent interviews were conducted with five mothers of children with disabilities who represent the diverse community of Hillsboro, Oregon. Characteristics of the parent participants are detailed in Table 4.

Locations and length of the interviews varied with individual participants (i.e., library, coffee shop) but all incorporated a semi-structured interview format (see Table 6 for questions). The time of parent interviews ranged from 30-70 minutes. Parent interview questions were developed using information gathered from the Prendergast (2016) study which included interviews of thirteen families that described their experiences in including their children with disabilities in storytime programs. Questions allowed for open-ended responses. Interview responses were hand scribed and coded for themes that addressed factors that influence attendance at preschool storytime (positive and negative), perceptions of the purpose of public library storytime, desired supports and individual experiences. As interview data was collected from additional participants, themes were continuously revisited and analyzed. Member checking was done immediately following the interview. This consisted of a verbal summary of the notes taken during the interview by the researcher provided to each participant and asking for validation of the responses by the parent.

Table 6

Parent Interview Questions

How often do you attend preschool storytime at the library?
What do you see as the purpose of preschool storytime?
What are some factors that make you return to storytime?
What are some factors that would dissuade you from going to storytime?
How do storytime leaders support individual children in their sessions to engage meaningfully in the activities?
What types of support would be most helpful for you in engaging your child in the activities during preschool storytime?
What activities or strategies have you learned from preschool storytime that you use at home to engage your child in reading and writing?

Phase 2: Intervention procedures and measures. Each three-hour professional development session took place in a large conference room that was available for public use at the Hillsboro Public Library. Training was provided by the researcher, with support from faculty involved in the ongoing Inclusive Storytime Project that has been operating at the library for four years. The researcher is faculty in special education with an interest and expertise in literacy for children with disabilities and supporting faculty have interest and expertise in literacy and inclusion. The training modules occurred in February (session one), March (session two) and April (session three) 2019.

Professional development. Table 7 provides an outline describing the content of each of the modules. Module One provided an overview of the principles of UDL, the importance of school readiness for children with disabilities and components of a universally-designed storytime that embeds early literacy content into shared reading opportunities. Module Two introduced specific strategies on selecting books to maximize engagement for children with communication challenges, planning and implementing

visual schedules and other visual and behavioral supports. Module Three provided an

overview of laws that impact early intervention and early childhood special education and

providing resources to families of individuals with disabilities in the public library.

Using the TSTA framework, activities included a combination of powerpoint

presentations, videos, application activities during the session and applications to use the

content in their storytime sessions with support.

During Module One, participants were provided with opportunities to develop

individual visual schedules based upon their personal storytime routines. In collaboration

with each other, participants discussed similarities and differences between their

storytime sessions and agreed to utilize common visuals and songs to help children

transition among the sessions. Module Two focused heavily on how to embed specific

early literacy activities and utilize explicit instructional strategies in presenting them.

There was a range of knowledge and skills related to early literacy instruction among the

group and the training and participants modeled their approach to shared reading and

provided feedback to their peers. Participants' "favorite" storytime books were used to

demonstrate strategies for promoting engagement and targeting specific early literacy

skills. In Module 3, a representative from Families and Communities Together (FACT)

Oregon, came to discuss some ways to reach out to families of children who experience

disabilities to offer resources and support. During this session, a plan for developing a

more welcoming environment in the library was developed including the dissemination

of social stories at the circulation desk and the presence of core word boards in both the

children's area and individual core word boards at the circulation desk. FACT pamphlets

were also made available for patrons at strategic places in both the Shute and Brookwood

branches of the public library.

Table 7

Professional Development Modules

Module 1			
Tell	*Show*	*Try*	*Apply* *
Participants will become familiar with the principles of Universal Design for Learning (UDL) in order to support children with a range of needs in the library (PPT)	Activity: Participants will identify components of UDL in videos of an inclusive storytime	Participants will identify opportunities for UDL within the context of a collaboratively planned storytime session	Participants will describe how they can incorporate the principles of UDL during their individually-led storytime session
Participants will become familiar with the barriers to early literacy learning for children with disabilities including intellectual, motor, multiple disabilities and autism (PPT presentation)	Activity: Participants will view/discuss a timeline that demonstrates the evolution of knowledge and skills in teaching early literacy skills to children with disabilities)	Participants will identify (via video) barriers to participation in typical storytime/early reading activities	After viewing a typical preschool storytime, participants will describe how to implement the principles of UDL to support children with disabilities
Participants will become familiar with the state's early intervention and special education referral process as it relates to supporting preschoolers in the library setting	Activity: Participants will view and discuss a video detailing the laws and referral process surrounding early intervention and special education	Participants will work collaboratively to discuss scenarios related to the early intervention and referral process as it relates to supporting families in the library	Participants will develop a plan for providing resources to families of children who may be eligible for early intervention/special education in the library setting

Module 2

Tell	*Show*	*Try*	*Apply* *
Participants will become familiar with strategies to select/adapt books that will promote active engagement for children with disabilities	Activity: Participants will examine resources for choosing books that will engage diverse learners and/or adapt texts to increase accessibility (i.e., content, pictures)	Participants will work collaboratively to choose and adapt picture books that can be used in storytime to promote accessibility	Participants will utilize books that can facilitate active engagement for children with disabilities in their storytime session
Participants will become familiar with the communication needs of children with intellectual, motor, multiple disabilities and autism in order to access storytime programs (PPT)	Activity: Participants will become familiar with low and mid-tech supports for communication that can be used by children with disabilities to engage in storytime (hands on)	Participants will practice using low and mid-tech supports for communication in a storytime context (role-play with other participants)	Participants will use low and mid-tech supports including speech generating devices (SGD) during their storytime
Participants will become familiar with explicit strategies to address phonological, vocabulary, narrative, print awareness skills and early writing into preschool storytime for all children, including those with disabilities (PPT)	Activity: Participants will identify early literacy skills within the context of an inclusive storytime using a checklist	Given a children's book and working collaboratively, participants will identify opportunities to embed early literacy skills into a storytime session	Participants will embed early literacy content into preschool storytime sessions using explicit instructional strategies that will engage a range of learners
Participants will become familiar with strategies to manage behavior in storytime sessions (PPT)	Activity: Participants will become familiar with tools and strategies used to support challenging behavior in the library (hands on)	Participants will engage in discussions around supporting challenging behavior in storytime sessions	Participants will utilize supports for behavior in storytime sessions (e.g., fidgets, first-then prompts, visuals)

Module 3

Tell	*Show*	*Try*	*Apply* *
Participants will become familiar with strategies to provide a welcoming environment to children with disabilities and their families in the library (PPT)	Activity: Participants will examine and discuss tools and supports (i.e., social stories, core word supports, adapted signage) to provide welcome spaces in the library for children with disabilities and their families	Participants will role play scenarios for working with families of children with disabilities in the library setting	Participants will display tools and implement strategies for supporting families of children with disabilities in the library
Participants will become familiar with strategies to develop resources for families of children with disabilities used to support early literacy learning (PPT)	Activity: Participants will examine take home resources designed to support early literacy skills aligned with storytime sessions	Given storytime goals, participants will collaboratively design take home resources for families to support early literacy aligned with storytime sessions	Participants will create and disseminate take home resources designed to support early literacy skills aligned with storytime sessions

*indicates that this will occur outside of the professional development sessions in the context of their storytime sessions

Adapted from the work of Browder, D., Jimenez, B., Mims, P., Knight, V., Spooner, F., Lee, A., & Flowers, C. (2012). The effects of a "tell-show-try-apply" professional development package on teachers of students with severe developmental disabilities. Teacher Education and Special Education, 35(3), 212-227.

Coaching sessions. Following training modules two and three, the researcher

provided two coaching sessions for each participant, aligned with the TSTA Model

suggested by Browder et al. (2012). Each coaching session was individualized to support the needs of the participant; two librarians engaging in co-taught sessions with the researcher, while two received individual meetings that focused on co-development of materials.

Coaching session 1 for Librarian 1 consisted of co-planning and developing materials for her individual storytime session following Module 2. Each coaching session aligned with the length of individual storytime sessions ranging from 30-45 minutes. During the coaching session, the researcher modeled the use of the core word board for the children, while the librarian read the books supported by the visual schedule and props such as picture mnemonics and the single switch message device to engage the children with the repetitive line of the book. The second coaching session involved incorporating a visually-supported "listening song" to present expectations around behavior.

Coaching session 1 for Librarian 2 involved co-planning and shared development of materials for her first individual session using the visual schedule. The researcher prompted the librarian to use the visual schedule and other visually-supported songs (e.g., "Here are My Glasses) during the session. The second coaching session was to create and model the visually-supported behavioral expectations (e.g, Criss Cross Applesauce/Listening Song).

Coaching session 1 for Librarian 3 was also a co-presented storytime session focused on increasing supports for increasing attention to the text (e.g., *The Cow Who Clucked)* and using the switch for the repetitive line in *I'm Not Hatching*. More attention

to using the books as a vehicle for facilitating specific early literacy skills was part of the coaching sessions for Librarian 3. Coaching session 2 focused on a review of content from Module 2.

Librarian 4 requested a co-presented storytime session to help facilitate use of the visual schedule. This participant created an adapted version of her visual schedule using different materials to support her unique presentation style and steps of her routine. Coaching session 2 was the addition of some visually-supported songs that the librarians decided to keep constant among their sessions.

Phase 3: Post-intervention procedures and measures. Post-intervention observational data was collected on all participants. Following completion of the modules, the researcher and a second observer (for three of the four participants) conducted a follow-up 30-minute observation to collect data on the implementation of the targeted content at their assigned storytime sessions. The PSAOT was used to collect observational data. One parent participant and their child attended each of the follow-up sessions for individual librarians in the study. Fidelity of implementation of UDL was measured with the PSAOT using the above described 2-point scale. Following completion of post-observation data collection, participants were asked to take the post-knowledge and skills survey that measured their knowledge, skills and attitudes about utilizing the principles of UDL to support children with disabilities in preschool storytime.

Social validity. Each librarian was given an opportunity to evaluate the professional development and sessions provided in the study. Five questions related to

their satisfaction with the professional development were included using a Likert scale

(Appendix C) and distributed electronically to the participants. In order to maintain

anonymity, social validity measures were collected in the researcher's library mailbox in

a sealed envelope.

Role of the Researcher

The researcher has been active in library programming for children with and

without disabilities for four years and has developed and implemented an Inclusive

Storytime Program run twice per month at the library chosen for this study. The

researcher is a special educator for more than 35 years with an interest in promoting

literacy skills for children with significant disabilities. As such, the researcher may

approach preschool storytime with a more skills-based lens than children's librarians.

Care was taken to ensure that the mission statement of the library (i.e., accessibility and

opportunity for all of its patrons) is at the forefront during intervention. In order to do

this, the researcher met with the Youth Services Manager of the Hillsboro Library to

discuss current and future initiatives around accessibility for all at the library. These

materials were used when developing the training modules. The researcher conducted all

training sessions for the graduate students who collected observational data and provided

all professional development and coaching at the participating library.

Instruments and measures. The researcher created all instruments and measures

(i.e., Knowledge and Skills Survey, Preschool Storytime Accessibility Observation Tool,

Parent Interview Questions, and Social Validity Scale) with attention to checking for

personal bias by having practitioners with leadership roles in library settings provide

feedback on all measures used in the study. A second, trained observer was present to

collect all observational data in baseline and for two of the four post-intervention

conditions.

Chapter 4: Results and Analysis

Introduction

The purpose of this study was to examine the impact of professional development, including coaching, for children's librarians on the accessibility of preschool storytime in the public library. Employing the TSTA model of professional development suggested by Browder et al. (2012) and incorporating one of the first pre/post intervention designs conducted in a public library, this study sought to inform how the principles of UDL support engagement in preschool storytime, enabling children with disabilities to participate in activities designed to promote school readiness in early literacy. Five individually conducted, semi-structured interviews addressing the experiences of families of children with disabilities were included in the study. Acceptability ratings on the training are also included in this section. Table 8 correlates the research questions with the data collected for each.

Table 8

Research Questions and Data Collection Results

Research Questions	Reference to Data
What are the reported knowledge and skills of children's librarians related to serving children with disabilities pre and post professional development?	Table 9 and Table 10 reflect summarized data collected from the Knowledge and Skills Survey pre and post training and coaching. Table 9 includes specific knowledge and skills from the librarians, while Table 10 includes responses to questions about the experiences, attitudes and beliefs related to inclusive storytime programming for children with disabilities. Table 13 summarizes the pre and post change in the application of UDL principles observed by the researcher aligned with questions one and two.
How does professional development for children's librarians related to serving children with disabilities and the principles of Universal Design for Learning (UDL) affect the accessibility of content for children with disabilities in preschool storytime?	
What is the perceived benefit/usability of the content presented in professional development by children's librarians related to the implementation of preschool storytime?	The perceived usability of the content of the training is reported in Table 4.
What do parents of preschool children with disabilities say about their experiences attending public library storytimes?	Parent interview data is summarized according to themes and is reported in the narrative.

Analysis

Survey data was compared pre and post baseline. Open-ended questions requiring a written response were compared for content and presented in tabular form for comparison (Table 9). Experiences and beliefs about inclusive practices were also compared pre and post and presented in Table 10. Pre and post observational data gathered from the PSAOT checklist, which is categorized by purpose of support, was

converted to a percentage, and growth over baseline also represented as a percentage in Table 11. Totals of pre and post use of UDL strategies were calculated per librarian, and an overall growth per participant was calculated. Total growth over baseline per UDL support category was also calculated by totaling the participants' pre and post scores by category.

Results

  Pre/post-knowledge and skills. Table 9 provides the responses to the questions requiring short answers measuring knowledge and skills making preschool storytime accessible. For librarian 1, adaptations to storytime included use of the felt board, visual schedules, and core boards to facilitate engagement and represent vocabulary. Book selection for librarian 1 pre and post focused on moving from vibrant pictures to a focus on repetitive line text, increasing opportunities for children with communication challenges to meaningfully engage in shared reading. On the pre-knowledge and skills survey, Librarian 2 described an adaptation to storytime as providing toys and activities in the back of the storytime space for children who need breaks and some use of American Sign Language (ASL). Post-training, more deliberate adaptations to keep children engaged included fidgets, props and core vocabulary. Librarian 3 was focused on books that highlighted themes (i.e., social justice, equity). Post-training data reflect a more focused approach to choosing books that will engage children with limited background knowledge/communication skills in shared reading that will also provide opportunities to embed early literacy skills. Librarian 4 provided more general

information on adaptations to storytime sessions, but post-survey data reflected more

specific, targeted examples of the use of core boards, visuals and props.

Table 9

Knowledge and skills of children's librarians in supporting children with disabilities in the library

Survey Item/number	Librarian 1 Pre Responses	Librarian 1 Post Responses	Librarian 2 Pre Responses	Librarian 2 Post Responses
Q4 Example of adaptation	Bulletin board with felt pieces	Visual schedules; props	Activities are in the back of the room for children who can't sit with the group	Core boards; visuals; fidgets; props
Q5 What is UDL	Design strategy	Multiple means of representation, expression, engagement	Unsure	Method for designing the learning space; representation, engagement, expression
Q6 Process for Choosing Books	Vibrant illustrations; opportunities to sing	Repetitive lines;	Themes; cultural representations	Titles with repeating phrases; careful selection of text
Q7 Example of Support for Communication	Fidgets	Visuals; core boards	Unsure	Method for designing the learning space; representation, engagement, expression
Q8 ECSE Law	No discrimination for children with disabilities	Provide resources to families	Libraries are for all	Provide equal access to library resources; support families

Survey Item/number	Librarian 3 Pre Responses	Librarian 3 Post Responses	Librarian 4 Pre Responses	Librarian 4 Post Responses
Q4 Example of adaptation	Unsure	Visuals; lyrics on song boards; fidgets,	Adapt activities to fit short attention spans	Core words; visual schedules; props; songs
Q5 What is UDL	Don't know	Planning process		
Q6 Process for Choosing Books	Themes	Books that rhyme; repetitive line	Short text; illustrations	Repetitive line; engagement
Q7 Example of Support for Communication	Slow down; use some ASL signs	Core boards; visuals	Signs; gestures	Core words; technology
Q8 ECSE Law	ADA; allow physical access for wheelchairs	IDEA	ADA; equal access	Support for families of young children with disabilities in the home and community

   Results across participants. On the pre/post knowledge survey, three of the four

librarians were unfamiliar with the principles of UDL and the fourth had only a cursory

understanding (i.e., "a design framework"). Pre-knowledge surveys related to the laws

around accessibility indicated that children's librarians understand that "libraries are for

everyone" and that they have a responsibility for inclusive practices. None of the

librarians had knowledge or experience adapting materials for children with

communication challenges, although that was identified as a primary factor that interfered

with meaningful participation in storytime for three of the four librarians on the survey.

   Pre/post librarian experiences and beliefs. Table 10 provides data on the

experiences and beliefs around supporting children with disabilities in preschool

storytime measured using multiple choice questions and rating scales. Librarian 1 reports

"rarely" having children with disabilities attend her storytime, has never been approached

by a parent for help, and was unsure about her beliefs regarding children attending

separate vs. inclusive storytime programs in the pre-survey. Following the training,

Librarian 1 reported feeling "fairly confident" in her ability to support parents with

children with disabilities and felt that children should be included in regularly offered

storytime programs, despite their perceived ability to participate. Pre-survey data for

Librarian 2 indicated that she felt "not very confident" providing support to parents of

children with disabilities during storytime, and was "unsure" if children with disabilities

should attend a separate or inclusive program based upon their ability to participate.

Following the training, Librarian 2 was "fairly confident" in her ability to support parents

with children with disabilities, if approached, and believed that children should attend an

inclusive storytime program despite their perceived ability. Librarian 3 initially indicated in the pre-survey that she was "fairly confident" in her ability to support parents of children in her storytime session and believed that children with disabilities should be included in regular programming if they could participate. For this participant, the post-survey data reflected a change in the level of confidence in supporting parents to "very confident". Librarian 4 initially indicated on the pre-survey that she felt "not very confident" in her ability to support parents and "unsure" of how to support children with disabilities in her storytime. Final survey data indicated that she felt "fairly confident" in supporting parents of children with disabilities, if asked, and "fairly confident" in supporting children in her storytime sessions.

　　Results across participants. Three of the four participants responded that children with disabilities, although only "rarely" or seldom" attend their programs, do not participate socially with other children in the group. Only one of the four respondents has ever been approached by a parent for help in making the library program more accessible for their child. None of the four participants in the study reported any previous professional development beyond "disability awareness" preparing them to support individuals with disabilities in the library. Participants' responses on the pre-knowledge and skills survey indicated that while public library storytime providers "strongly agree" that children with disabilities should be included in regularly offered storytime programs,

three of the four respondents rated their comfort level in supporting children with disabilities in their programs as "unsure" and one as "fairly confident".

Post-survey data across participants revealed an increase across all four participants in their confidence level supporting parents of children with disabilities and providing supports for the children themselves in storytime sessions. Three of the four participants reported a change from believing that "children with disabilities should participate in storytime sessions if they are able," to "children should attend regular programming despite their ability to participate."

Table 10

Experiences and Beliefs of Children's Librarians in Supporting Children with Disabilities in the Library

Survey Item	Librarian 1		Librarian 2		Librarian 3		Librarian 4	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Observation of children with disabilities	Do not interact socially, but enjoy activities	Participate with the others in the group	No children attending	Participate with others in the group	Do not interact socially	Participate with others in the group	unsure	Participate with others in the group
Provide support to parents	Never	Never	Never	Rarely	Occasionally	Occasionally	Rarely	Rarely
Confidence in supporting parents	Somewhat	Fairly confident	Unsure	Fairly confident	Fairly confident	Very confident	Unsure	Fairly confident
Belief in inclusive versus separate programming	Should participate with others if they are able	Should participate in inclusive programming	Unsure	Should participate in inclusive programming	Unsure	Should participate in inclusive programming	Unsure	Should participate in inclusive programming
Solicited input from community/ parents	Unsure	No	No	No	Unsure	No	No	No

Prior to professional development, observational data was collected on each of the participants' individual storytime sessions examining features of accessibility outlined in the PSAOT (Appendix B). A second observer was present at all baseline observations and for two of the four post-intervention sessions to ensure reliability. Observers were a trained graduate student in special education, a professor in special education and two practicing storytime leaders who have been running an Inclusive Storytime Program for close to four years. Criterion for inter-observer agreement (at least 80% agreement) was reached on all baseline and two post-intervention sessions.

Pre/post observational data. Table 11 is a summary of the observational data using the PSAOT for each of the librarians. Items on the checklist were clustered according to the purpose of the supports (e.g., tools to support behavior, engagement in the book, communication tools/strategies, etc.) in order to provide a descriptive analysis. The number of supports for each grouping was recorded and the change pre and post represented as a percentage. Pre-observation of Librarian 1 indicated she provided 20% of the identified visual supports in baseline and 40% post-training. This represents a 100% increase over baseline in the use of visual schedules, and visually-supported songs and anchor charts in her individual storytime. Tools to support behavior for Librarian 1 also increased by 100% over baseline and included presenting expectations using visuals (i.e., Whole Body Listening visual and Listening Song anchor chart). Supports for early literacy consist of picture mnemonics for letters and explicit instruction for skills such as print awareness (e.g., two words that sound the same at the end is called a rhyme) and increased from 33% in baseline to 66% post-training. Use of communication tools and

strategies for Librarian 1 increased from zero baseline to 50% post-training and included the use of a core word board and modeling of vocabulary. Significant increases in the use of visual schedules and supports were evident for Librarian 2 with a 300% increase over baseline post-training. The use of culturally-relevant instructional strategies increased from zero to 25% and included use of language represented in the group (i.e., Spanish words) and request for group response. No change in use of tools to support behavior were evident pre and post-training. Significant pre and post-training observational data for Librarian 3 included a 400% increase in the use of visual tools and strategies over baseline. Of note for Librarian 3 was the reduction in specific early literacy supports from 17% to 0%. During the post-observation training, many movement activities and read aloud strategies were observed, although no attention was given to specific activities focused on early literacy skills. Librarian 4 also demonstrated an increase from zero to 60% in the use of visual support strategies including the use of schedules and songboards. The use of the core word board was also present in post-training observation.

Table 11

Pre/Post Observational Data for Use of UDL

UDL Checklist Items	Librarian 1			Librarian 2			Librarian 3			Librarian 4			Average Growth
	Pre	Post	Growth	Pre	Post	Growth	Pre	Post	Growth	Pre	Post	Growth	
Use of Visual Supports (e.g., visual schedule, anchor charts/songs)	20%	40%	+100%	20%	60%	+300%	20%	80%	+400%	0%	60%	NaN	+400%
Tools to Support Behavior	20%	40%	+100%	0%	0%	0%	0%	0%	0%	20%	20%	0%	+50%
Supports for Early Literacy Skills	33%	66%	+100%	0%	17%	NaN	17%	0%	-100%	50%	66%	+33%	+50%
Communication Supports	0%	50%	NaN	0%	25%	NaN	0%	25%	NaN	0%	25%	NaN	NaN
Culturally-relevant Instruction	0%	0%	NaN	0%	50%	Nan	25%	25%	0%	25%	25%	0%	+150%
Total	17%	46%	+275%	4%	29%	+700%	13%	25%	+100%	21%	42%	+100%	+162%

Note: Since the number of supports per category varies, the total percentage is weighted by category and not a simple average of the categories.

Fidelity of implementation data.   Table 12 summarizes the data for a focus

student in the post training observation for each librarian on the fidelity of

implementation of UDL. Parent participants who were available based upon individual

schedules brought their child to at least one of the librarian's post-training sessions in

order to measure response to the supports used in the session. As reflected in the table,

the focus child in Librarian 1's session responded independently to the use of the visual

schedule, tool to support behavior (e.g., bean bag fidget), and required some prompts

from the parent to use the picture mnemonic (e.g., "L" for ladybug during the shared

reading). In addition, the librarian's use of wait time enabled the focus student to engage

with the activity. In post-training observation for Librarian 2, the focused child had

similar response to the visual schedule, engaged in the activity supported by the

songboard, responded to the repeated use of the "listening song" with the pictures and

was provided an individual opportunity to respond. In Librarian 3's post-observation

session, the focused child was prompted by the parent to attend to the visual schedule

(i.e., pointed and said "look"), responded to the prompt by the parent to use the core

board that was present (i.e., "turn" the page) and was encouraged with visual prompts to

engage with peers with bubbles (i.e., *bubbles* symbol). Librarian 4 seated the focus child

directly in front of the visual schedule and songboard and offered opportunities for the

child to remove the symbol when "all done" with the activity. Additionally, Librarian 4

reseated the focused child when he moved to help with engagement, pointed to the

songboard symbols during each familiar song and used appropriate wait time to allow the

child to respond to a request (i.e., "would you like to take the book symbol off?") and

paused.

Table 12

Fidelity of Implementation for Supports

	Post-Training Librarian 1	Post-Training Librarian 2	Post-Training Librarian 3	Post-Training Librarian 4
Use of Visual Supports (e.g., visual schedule, anchor charts/songs)	2	2	1	2
Tools to Support Behavior	2	n/a	n/a	1
Supports for Early Literacy Skills	1	1	n/a	2
Communication Supports	1	1	1	1
Culturally-relevant Instruction	1	1	1	2

2: uses the support independently
1: uses the support with prompts
0: no response to support
n/a: no support provided

Social validity data.   After completing the three professional development

modules, a Likert Scale measure (Appendix C) was provided to the participants asking

them to respond to five statements focused on their perceptions regarding the usefulness

of the training. Participants were asked to rate their level of agreement with statements

about their opportunities to collaborate with library professionals, content of the training,

ability to use the tools and strategies modeled in the sessions, and contribution to their

professional practice. Table 13 displays the responses to each question on the survey for

each participant and the average for each question. Data shows that all participants either

agreed or strongly agreed with each of the five statements. Scores reflect that participants felt most strongly that the training offered opportunities to collaborate with the lowest score of "agree" around feasibility of implementation. The training for all five participants was viewed as contributing to their overall practice as a storytime leader.

Table 13

Acceptability Rating Scale Results

Acceptability Rating Scale Questions	Participant				Average of Scores
	1	2	3	4	
This professional development incorporated opportunities to collaborate with other professionals.	4	4	3	4	3.75
This professional development offered tools and strategies that are feasible to implement in my current library setting.	3	3	3	3	3.00
This professional development provided meaningful opportunities to practice newly introduced skills and strategies.	4	3	3	3	3.25
This professional development contributed to my understanding of how to make library storytimes more inclusive for all children.	4	4	3	3	3.50
This professional development contributes to my overall practice as a storytime leader.	4	4	3	3	3.50

Note: Likert Scale range: 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree

Parent Interview Data

Five parents of children with disabilities participated in semi-structured interviews to gather data on their experiences attending preschool storytime in the library. Parent interviews were scheduled individually and conducted at various locations to meet the needs of the participants.

Parent participant 1 has two children, ages 3 and 5, who are eligible for ECSE due to autism. Parent 1 reports attending only specialized programming at the library (i.e., Inclusive Storytime) two times per month. Parent 1 reports coming to the library to check out books for her children when they are at preschool due to the ability to "browse without distraction." A barrier to attendance described by Parent 1 include the other parents talking among each other while she was trying to support her child with engagement in the session. She has never asked a storytime leader for help in finding additional supports to engage her boys in the activities, though she said she would feel comfortable doing so, if needed. When asked to describe a positive experience at storytime, this parent described a Hindu storytime that she attended "accidentally" when wandering through the library one afternoon with the children. When asked what made it a positive experience, she described the storytime leader as having chosen "simple books" that were read in both English and Hindi and supported by pictures and color-coded text.

Parent 2 also has two boys with developmental delays who attend storytime sessions up to 3 times per week. Parent 2 primarily feels that storytime encourages the development of social skills, which are main reasons for her attendance. This family speaks both English and Arabic at home. Parent 2 described "feeling comfortable" asking a storytime leader for strategies to help her children engage if she felt it was necessary, but strongly believed that the parent has the primary role in supporting their child during preschool storytime.

Parent 3 has only attended specialized programming (i.e., Inclusive Storytime) at the library due to her son's limited ability to "sit and listen." This parent reports several negative experiences being "embarrassed" by her son's behavior and fear of others' lack of understanding, including thinking that she is a "bad parent." Parent 3's son receives Applied Behavioral Analysis at a local center where storytime is part of the intervention. She reported that she is only able to watch her son in a group during her time at the library in Inclusive Storytime. Social skills are the primary reason for her attendance.

Every attempt was made during the study to include a participant who has a child with physical disabilities and/or complex communication needs. None of the librarians reported ever serving a child with more significant disabilities in their library program. In an effort to find out more about the barriers to attendance for this low incidence population, a parent was specifically located who would conduct a phone interview. Parent 4 reports never having brought her five-year-old daughter to storytime at the library. Further exploration of this perceived barrier resulted in the statement that "my child isn't the targeted population for this and I was thinking the librarians wouldn't be prepared."

Parent 5 is part of a bilingual family who speaks both Farsi and English at home. Her son attends storytime up to 3 times per week with a goal of social interaction with other children. When asked if there were barriers to attendance, Parent 5 discussed feeling especially motivated to take her son to storytime if his behavior was challenging. Storytime provided an opportunity to work with her son on appropriate behaviors in small group settings.

Attendance. There was a range among parent respondents regarding the frequency of attendance at preschool storytime and the use of the library in general. All of the parent respondents reported that social interaction was the primary reason for attending preschool storytime.

Child enjoyment appears to be the primary factor that influenced parents' decisions to return to storytime. Factors that would dissuade a parent from returning to storytime reported by two of the parents were embarrassment over their child's behavior.

Experience with storytime leaders. None of the four parents interviewed has ever asked a librarian for help in engaging in their child, although one of the parents said she would feel comfortable in doing so if needed. Two of the parents provided responses to the types of supports that would be helpful for children with disabilities. One parent suggested some alternative seating "like they have in preschool" as she felt it would minimize some of the challenging behavior that occur when her child sits on the carpet. The second suggestion was to have books with adaptations (i.e., page fluffers) to help with page turning for her child with physical disabilities.

Skills generalized to home. Three of the four parents reported using print awareness skills they observed in storytime with their child during shared reading at home. Responses included "I always have my child point to the author when we read a book, and I never would have thought to do that before." Other responses were "using the pointer finger and pointing to words" when reading and having their child say "turn the page" to continue reading. All four participants who have previously attended a

specialized program that provided take-home activities related to the book reported using

them at home.

Interpretation of Results

This study focused on how the provision of training for children's librarians

impact the accessibility of preschool storytime for children with disabilities. The primary

research question was: How does professional development for children's librarians

related to serving children with disabilities and the principles of Universal Design for

Learning (UDL) affect the accessibility of content for children with disabilities in

preschool storytime?

Across librarians, the biggest increase in UDL strategies was observed in the use

of visual tools and schedules. All four of the participants were able to effectively use

visual schedules and visually-supported songboards to increase accessibility to storytime

activities by an average of 400% over baseline. The use of behavior supports was the

least observed strategy across participants (i.e., 20% for two participants), which is of

note as it is the most frequently identified barrier to participation in the pre-knowledge

and skills survey. A 50% average gain in the use of early literacy supports was reflected

in the data, suggesting a need for more attention to this area in future training as well.

Librarians also included more visually-supported songboards and props to engage the

children in shared reading, as evidenced by the increase in choice boards, some picture

mnemonics and repetitive line texts. While core boards were present in three of the four

post-observation sessions, none of the librarians consistently referenced them during their

individual sessions. Evidence of attention to print awareness (e.g., pointing out the title

and author) was also observed in all post-observation sessions, though none of the librarians provided explicit, supported instruction with opportunities to respond to questions demonstrating their understanding of the concepts presented. In summary, librarians' use of UDL strategies increased 162% over baseline.

Post knowledge and skills survey. With regard to the surveys, all four of the librarians could define UDL and list some evidence-based strategies to make library storytime more accessible. A shift in choosing books based upon themes or pictures to a focus on books that could support early literacy skills such as rhyme, core word modeling, and the use of repetitive lines was evident in the post-training survey. Experiences and attitudes around serving children with disabilities in the library changed for all of the librarians from "unsure" to "should participate in regular programming if they are able" to "be included in regularly offered storytime sessions".

Social validity measure. Data collected from the Social Validity Measure indicate that all of the participants felt that the training was useful in their professional development. Follow up discussions with the participants based upon the data revealed that the "hands on practice with the supports" and the "coaching sessions" were the most valuable part of the training. In addition, "walking through the process of choosing books and making them more accessible" were additional areas noted as important to the participants.

Parent interview data. Parent interview data revealed that parents of children with disabilities see the purpose of storytime as a context to learn social skills. Despite that finding, children's librarians reported in the pre-training data that children with

disabilities who attend their storytime "rarely interact socially" in those settings. Parents

report using some of the print awareness strategies they observe in storytime sessions at

home with their children. Children's librarians were able to easily incorporate those

strategies into their ongoing storytime sessions.

Limitations of the Study

There are several limitations to this study. First, conducting quasi-experimental

research in public libraries presents many challenges, the most significant of which is the

variability in attendance at preschool storytime. The lack of representation of children

with disabilities in regularly scheduled storytime became more evident as the researcher

recruited participants. This posed challenges in ensuring that children who experience

both high and low incidence disabilities were included. The range of children who

require supports to meaningfully participate in storytime is wide, and those who require

the most significant tools and strategies did not participate in the sessions. In order to

include the voices of those families, a parent interview with a child who experiences

significant disabilities was conducted.

An additional limitation of the study is the number of participants. Constraints

imposed by the number of hours required to align with the TSTA model (Browder et al.,

2012) of professional development (minimum of 14 hours) impacted the number of days

librarians would receive release to participate. While the sample size limits the ability to

determine a causal relationship between the independent and dependent variable, the

researcher was able to provide more individualized coaching support for the librarians in

the study and allowed for a descriptive analysis of the data occurring in the natural environment.

There is a growing body of implementation research around UDL, but currently no research-validated tool exists that can be used effectively in an informal setting such as the library. As such, the researcher created the observation tool using evidence-based practices used in special education as a primary instrument.

Chapter 5: Discussion and Recommendations

Introduction

Public libraries are increasingly interested in providing learning environments that contribute to literacy learning in the communities they serve ("Every Child Ready to Read", n.d.). Programming at the public library is largely a reflection of the diverse range of knowledge and skill of the librarians who endeavor to serve the community in which they are situated. Recent studies have focused on applying scientific methods to measure the impact of children's programming for young children on the development of school readiness skills (Campana et al., 2016; Mills et al. 2018). Excluded from these studies, however, are children with disabilities for whom participation in storytime sessions does not reflect general attendance trends. This is reported in the limited surveys of children's librarians (Prendergast, 2016) and anecdotal evidence collected by the researcher over a four year period in partnership with the library in this study (Pebly, 2016). The presence or absence of school readiness skills for children with disabilities has the potential to impact teacher perceptions of their ability to learn conventional reading and writing skills when they reach kindergarten (Ruppar, Dymond, & Gaffney, 2011). The public library provides meaningful opportunities for children to explore and practice early literacy skills, however, children's librarians have not been provided with the knowledge and skills needed to make these programs accessible for the diverse range of patrons in their communities.

The literature review revealed that shared reading, an evidence-based practice used widely in special education, has potential to increase the literacy behaviors of all

children, including those with disabilities. This is evident in the literature when adults

are deliberate and systematic in their approach to engaging children with books (Justice,

Logan, & Kadaverak, 2017). The public library has demonstrated a commitment to

accessibility in all of its programming, but has primarily focused on issues of physical

accessibility for individuals who need access to print or technology (Hill, 2013).

Employing what is known from the literature around UDL to preschool storytime in the

public library has been ongoing through a partnership with Portland State University and

the Hillsboro Public Library. The research questions were developed by coupling the

knowledge gained from that partnership and aligned with the research around best

practices in professional development in special education.

Synthesis of findings

Children's librarians are poised to play a significant role in the acquisition of

early literacy skills for all children, including those with disabilities, when provided with

professional development related to the principles of UDL. The data from the pre and

post knowledge and skills surveys indicate that participants could plan storytime sessions

that incorporate multiple means of engagement, representation and expression, choose

books that allow for maximum engagement, employ tools and strategies to support

behavior, and embed early literacy skills into shared reading sessions after completing a

series of three three-hour modules with coaching. In addition, librarians feel that the

content and format of the training contributed to their overall practice as a storytime

leader.

Parents of children with disabilities who participated in this study indicated that they utilize the library at different rates, but all indicate that the primary purpose is social interaction with peers. Parents would return to storytime if they felt that their child enjoyed the experience, but challenging behavior was a factor that kept parents from attending for two of the participants. Parents in the study reported utilizing some of the print awareness strategies modeled by the librarians (e.g., title, author, turn the page) at home. Two of the parents interviewed who were ELL indicated that the visual supports in the sessions were helpful in learning English.

Implications

This study builds on the growing research base that seeks to gain a better understanding of the impact of preschool storytime on the early literacy development of all children, specifically those with disabilities. Children's librarians are poised to play an important role in contributing to the development of school readiness skills, which in turn impact the future programming provided to children with disabilities in kindergarten. In addition, public libraries are committed to offer programming that will meaningfully serve the community in which they are situated. The UDL framework applied to children's programming in the public library has potential to create equitable learning environments that can facilitate early literacy skills for all children. While some libraries are developing separate programming for children with autism (e.g., book clubs and sensory storytimes), providing training to children's librarians on how to incorporate UDL tools and strategies can make traditional programming accessible to all. While demographic data on the attendance of the storytime sessions observed were not

collected, the large number of children and their families who are ELL was evident. Informal conversations with several of these families who attended regularly revealed that the public library storytimes were a context for learning English for both parents and their children. It is interesting to note that two of the International Storytime providers (Russian and Hindu) adapted the visual schedules with support from study participants, for use in their own storytime sessions.

Of significance in this study are the things that were observed to be easiest for librarians to incorporate into their programs. Visual schedules and visually-supported songboards were easily applied by all four of the participants (400% increase over baseline in their use pre and post-training). Tools to support behavior, a perceived barrier to participation by the children's librarians in the pre-knowledge and skills survey and identified by two parents during the interviews as a potential cause to avoid storytime only increased by 50% over baseline for the four participants. Two comments related to behavior from librarians indicate that parents are "primarily responsible" for managing behavior during storytime and that the library seeks to have all patrons "feel welcome" and not directly correct children's behavior while parents are present to do so. Further examination of the use of behavioral supports in informal learning environments such as the library is warranted.

While not focused specifically on the content of preschool storytime, there was a wide range of approaches to engagement with books during storytime. Children's librarians in the study provided many opportunities for children to engage in songs and movement activities to promote overall language and cognitive development, and were a

foundational part of the routines established in their library programs. Fewer

opportunities were observed focused on early literacy skills such as print conventions,

letter knowledge and explicit phonological awareness activities (16-33% change pre to

post training). For children at risk for early literacy lags in school, these explicit,

supported models of instruction can provide the needed dosage to develop school

readiness.

A critical finding in this study is the difficulty recruiting families with children

who have complex physical and/or communication needs to participate. The literacy

challenges of this population of children are widely documented and additional

opportunities to engage meaningfully with text is critical (Koppenhaver, Hendix, &

Williams, 2007). The presence of children who have more complex needs also offers

opportunities for public librarians to learn how to create more differentiated supports for

children who require them. Additional research to investigate barriers to attendance for

this low-incidence population is needed. Using the theoretical framework suggested by

Kaeding et al. (2017), the Inclusive Library Model can be helpful in determining

strategies related to marketing and extending partnerships with agencies who serve this

population with a goal of serving more children with extensive support needs and their

families.

Recommendations

The implementation of research designs that incorporate quasi-experimental or

experimental design in public library settings holds promise for gaining a better

understanding of how library programming can contribute to better outcomes for

individuals served in the community. Research that examines how the content and

delivery of preschool storytime contributes to early literacy development for children has

potential to develop additional avenues of support for a wide range of learners and their

families. Future research that expands upon the important work of Project VIEWS

(Campana et al., 2016) to include children with disabilities will give researchers and

practitioners a better understanding of how we can mobilize the opportunities provided

by the public library to improve school readiness outcomes for children with diverse

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Appendices

Appendix A: Pre/Post Knowledge, Skills and Experience Survey for Children's Librarians on Accessibility of Preschool Storytime

1. How long have you been implementing storytime in your library? (at this library or at another?)

   _____

2. How was your primary training for storytime sessions received?

   a. College Coursework

   b. Observation/On the job training

   c. Workshops/professional development

   d. Independent reading/research

   e. None received

3. How often do you have children with disabilities attend your storytime?

   a. Never

   b. Seldom

   c. Occasionally

   d. Every session

   e. I am unsure

4. Provide one example of an adaptation you made for a child attending your storytime session.

   _____

5. What is Universal Design for Learning?

   _____

6. Describe your process for choosing books for your storytime session.

   _____

   _____

7. What are some supports for including a child who has complex communication

   needs into your storytime?

   _____

   _____

8. What is your understanding of the law as it relates to serving individuals with

   disabilities at the library?

   _____

   _____

9. Do you feel that the **majority** of children with disabilities who attend your

   storytimes:

   Please select all that apply:

   a. Are able to participate well with the other children in the group

   b. Do not have a meaningful experience during storytime

   c. Interact socially with the group, but do not seem interested in the activities

   d. Do not interact socially with the group, but enjoy the activities

   e. I am unsure

   f. N/A: I do not have children with disabilities attending storytime at this

      time

10. How often do parents of children with disabilities who attend your storytime ask

    for suggestions to help their child better participate?

    a. Frequently

    b. Occasionally

    c. Rarely

    d. Never

    e. N/A: I do not have children with disabilities attend storytime at this time

11. How comfortable and confident do you feel when engaging with

    parents/caregivers of children with disabilities?

    a. Very

    b. Somewhat

    c. Not very

12. Which of the following do you find are the 3 most challenging barriers to

    meaningful participation during storytime for children with disabilities?

    Please choose 3:

    a. Seating issues (either mobility or proximity to other children)

    b. Understanding the books

    c. Behavior

    d. Following directions

    e. Sensory disabilities (i.e., hearing, vision)

    f. Sensory differences (e.g., hypersensitivity to sounds, light)

    g. Communication

    h. Other: _____

13. Which of the following do you feel would best describe your ability to support

    children with disabilities who attend your storytime sessions?

    a. I am confident in my ability

    b. I am fairly confident in my ability

    c. I am unsure of how to support children with disabilities in my storytime

14. Please rate how strongly you agree or disagree with the following statements using the following scale:

1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree

"I believe that children with disabilities who attend storytime should..."

_____ Attend a separate program that meets their unique needs

_____ Be included in regularly offered storytime programs if they can

participate

_____ Be included in regularly offered storytime regardless of their ability to

participate

15. In your opinion please rate how strongly you agree or disagree with the following statement:

1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree

"Learning to read and write for children with disabilities is..."

_____ Not as important as other skills like making friends or learning to take

care of themselves

_____ More important than other skills

_____ Equally as important

16. Have you or any other of the staff at the library in which you work been provided with training in any of the following areas?

   Please select ALL that apply:

   a. Disability awareness

   b. Multiple Intelligences Theory

   c. Universal design

   d. Universal design for learning

   e. None that I am aware of

17. Has your library (as a whole) undertaken any of the following to understand the characteristics and needs of children with disabilities and their families within your library's community?

   Please select ALL that apply:

   a. Identified the makeup of children with special needs in your community (ages, disabilities, ethnicity etc.

   b. Identified children with special needs and their families in the community

   c. Surveyed parents of children with disabilities what they want/need by asking them

   d. Developed connections with organizations that work with children with special needs in your community.

   e. Not to my knowledge

   f. None of the above

   g. Other: _____

18. Has your library's executive management or board of directors created a specific

   policy or vision statement that addresses access for children with disabilities?

   a. Yes.

   b. No

   c. I am unsure

19. What are some topics you would like to learn more about to support children with

   disabilities in your storytime sessions?

   Please indicate all that apply:

   a. Disability-specific information

   b. Behavior management

   c. How to adapt books

   d. How to support parents with literacy learning at home

   e. How to choose books for maximum engagement

   f. How to develop routines to support a diverse group of children

   g. Incorporating technology

   h. Adaptive Technology (AT)/Augmentative and Assistive Communication

      (AAC)

   i. Other: _____

20. Your preferred method of learning new content is:

    a. Online workshops or classes

    b. In person workshops or classes

    c. Reading independently

    d. Coaching

    e. Peer group collaboration

Appendix B: Preschool Storytime Accessibility Observation Tool

Observer: _____ Librarian: _____

Date: _____ Start Time: _____ End Time: _____

UDL Principles Observed	Support Present Examples	Child's Use of Support	Notes
Visual Schedule	☐ Predictable sequence and structure presented and used		
Visual supports for expectations	☐ Social story		
	☐ Anchor chart/song		
	☐ Seating squares		
	☐ Other: _____		
Tools to support behavior	☐ First/Then Prompts		
	☐ Fidgets		
	☐ Lap pads		
	☐ Tools for engagement during books		
	☐ Other: _____		
Supports for Early Literacy Skills	☐ Choice boards		
	☐ Embedded picture mnemonics		
	☐ Symbols for sequencing/narrative skills		
	☐ Explicit, supported instruction with multiple opportunities to respond		
	☐ Books are age/interest appropriate with repetitive lines for maximum engagement		
	☐ Other: _____		
Supports for Communi-cation	☐ Core boards, story-specific vocabulary		
	☐ Opportunities for engagement with peers		
	☐ Use of assistive technology		
	☐ Other: _____		
Culturally-relevant instruction	☐ Provide appropriate wait time		
	☐ Encourage responses from all children in the group		
	☐ Choice of materials books		
	☐ Other: _____		

This checklist was developed using portions of the work The Universal Design for Learning Checklist for Early Childhood Environments by Center on Technology and Disability (CAST, 2018).

Key for Child's Use of Support:

      2 points: uses the support independently

      1 point: uses the support with prompts

      0 points to indicate no response to support.

Appendix C: Social Validity Measure

Social Validity Measure

1. This professional development incorporated opportunities to collaborate with other professionals.

    O————————O————————O————————O————————O
    Strongly   Agree   Neutral   Disagree   Strongly disagree
    agree

2. This professional development offered tools and strategies that are feasible to implement in my current library setting.

    O————————O————————O————————O————————O
    Strongly   Agree   Neutral   Disagree   Strongly disagree
    agree

3. This professional development provided meaningful opportunities to practice newly introduced skills and strategies.

    O————————O————————O————————O————————O
    Strongly   Agree   Neutral   Disagree   Strongly disagree
    agree

4. This professional development contributed to my understanding of how to make library storytimes more inclusive for all children.

    O————————O————————O————————O————————O
    Strongly   Agree   Neutral   Disagree   Strongly disagree
    agree

5. This professional development contributes to my overall practice as a storytime leader.

    O————————O————————O————————O————————O
    Strongly   Agree   Neutral   Disagree   Strongly disagree
    agree

Appendix D: Librarian Permission

Librarian Permission

The Portland State University
Consent to Participate in Research
Impact of Professional Development on Accessible Preschool Storytime

Introduction
You are being asked to participate in a research study that is being done by Melissa Pebly
who is the Principal Investigator Dr. Sheldon Loman, Faculty Adviser, from the
Department of Special Education, at Portland State University in Portland, Oregon. This
research is studying the Impact of Professional Development for Children's Librarians on
the Accessibility of Early Literacy Content in Preschool Storytime.

You are being asked to participate in this study because you are in the role of storytime
implementer in a public library.

This form will explain the research study, and will also explain the possible risks as well
as the possible benefits to you. We encourage you to talk with your family and friends
before you decide to take part in this research study. If you have any questions, please ask
one of the study investigators.

What will happen if I decide to participate?
If you agree to participate, the following things will happen:
- You will be observed during a preschool storytime session.
- You will be asked to attend three professional development sessions.
- You will be provided with tools and strategies to make your storytime more
  accessible.
- You will be provided with coaching after each professional development session.
- You will take a pre and post survey describing your knowledge, skills and
  experiences with children with disabilities.
- You will provide information about the usefulness of the professional
  development.

The experimental portion of this study is related to your implementation of the tools and
strategies provided in the training. An observer will be collecting data on your sessions.

How long will I be in this study?
This study will take approximately three months.
Participation in this study will take a total of 15 hours over a period of four months.

What are the risks or side effects of being in this study?

There are risks of stress, emotional distress, inconvenience and possible loss of privacy and confidentiality associated with participating in a research study.
For more information about risks and discomforts, ask the investigator.

What are the benefits to being in this study?
Benefits include gaining knowledge, skills and experience with children who have disabilities in preschool storytime. You will also have opportunities to collaborate with other professionals and develop relationships with parents that can inform your library practice.

How will my information be kept confidential?
We will take measures to protect the security of all your personal information, but we cannot guarantee confidentiality of all study data.

Data will be kept on a locked computer on a private google drive.

Information contained in your study records is used by study staff and, in some cases it will be shared with the sponsor of the study. The Portland State University Institutional Review Board (IRB) that oversees human subject research and/or other entities may be permitted to access your records, and there may be times when we are required by law to share your information. It is the investigator's legal obligation to report child abuse, child neglect, elder abuse, harm to self or others or any life-threatening situation to the appropriate authorities, and; therefore, your confidentiality will not be maintained.

Your name will not be used in any published reports about this study.

Will I be paid for taking part in this study? No
Can I stop being in the study once I begin? Yes

Your participation in this study is completely voluntary. You have the right to choose not to participate or to withdraw your participation at any point in this study without penalty or loss of benefits to which you are otherwise entitled.

Whom can I call with questions or complaints about this study?
If you have any questions, concerns or complaints at any time about the research study Melissa Pebly, or his/her associates will be glad to answer them at 503-805-4430.

Whom can I call with questions about my rights as a research participant?
If you have questions regarding your rights as a research participant, you may call the PSU Office for Research Integrity at (503) 725-2227 or 1(877) 480-4400. The ORI is the office that supports the PSU Institutional Review Board (IRB). The IRB is a group of people from PSU and the community who provide independent oversight of safety and ethical issues related to research involving human participants. For more information,

you may also access the IRB website at
https://sites.google.com/a/pdx.edu/research/integrity.

CONSENT

You are making a decision whether to participate in this study. Your signature below indicates that you have read the information provided (or the information was read to you). By signing this consent form, you are not waiving any of your legal rights as a research participant.

You have had an opportunity to ask questions and all questions have been answered to your satisfaction. By signing this consent form, you agree to participate in this study. A copy of this consent form will be provided to you.

_____ _____ _____
 Name of Adult Subject (print)   Signature of Adult Subject   Date

INVESTIGATOR SIGNATURE

This research study has been explained to the participant and all of his/her questions have been answered. The participant understands the information described in this consent form and freely consents to participate.

_____
Name of Investigator/ Research Team Member (type or print)

_____ _____
(Signature of Investigator/ Research Team Member)   Date

Appendix E: Parent Participant Permission

Parent Participant Permission

The Portland State University
Consent to Participate in Research
Impact of Professional Development on Accessible Preschool Storytime

Introduction
You are being asked to participate in a research study that is being done by Melissa Pebly
who is the Principal Investigator Dr. Sheldon Loman, Faculty Adviser, from the
Department of Special Education, at Portland State University in Portland, Oregon. This
research is studying the Impact of Professional Development for Children's Librarians on
the Accessibility of Early Literacy Content in Preschool Storytime.

You are being asked to participate in this study because you are a parent of a child
participating in the study.

This form will explain the research study, and will also explain the possible risks as well
as the possible benefits to you. We encourage you to talk with your family and friends
before you decide to take part in this research study. If you have any questions, please ask
one of the study investigators.

What will happen if I decide to participate?
If you agree to participate, the following things will happen:
- You will be asked to participate in a pre and post study interview detailing your
  experience with your child attending Preschool Storytime.

How long will I be in this study?
This study will take approximately three months.
Participation in this study will take 1 hour over a period of four months.

What are the benefits to being in this study?
Benefits include improved storytime experience for your child, learning tools and
strategies to support your child's early literacy skills.

How will my information be kept confidential?
We will take measures to protect the security of all your personal information, but we
cannot guarantee confidentiality of all study data.

Data will be kept on a locked computer on a private google drive.

**Information contained in your study records is used by study staff and, in some
cases it will be shared with the sponsor of the study. The Portland State University**

Institutional Review Board (IRB) that oversees human subject research and/or other entities may be permitted to access your records, and there may be times when we are required by law to share your information. It is the investigator's legal obligation to report child abuse, child neglect, elder abuse, harm to self or others or any life-threatening situation to the appropriate authorities, and; therefore, your confidentiality will not be maintained.

Your name will not be used in any published reports about this study.

Will I be paid for taking part in this study? No
Can I stop being in the study once I begin? Yes

Your participation in this study is completely voluntary. You have the right to choose not to participate or to withdraw your participation at any point in this study without penalty or loss of benefits to which you are otherwise entitled.

Whom can I call with questions or complaints about this study?
If you have any questions, concerns or complaints at any time about the research study Melissa Pebly, or his/her associates will be glad to answer them at 503-805-4430.

Whom can I call with questions about my rights as a research participant?
If you have questions regarding your rights as a research participant, you may call the PSU Office for Research Integrity at (503) 725-2227 or 1(877) 480-4400. The ORI is the office that supports the PSU Institutional Review Board (IRB). The IRB is a group of people from PSU and the community who provide independent oversight of safety and ethical issues related to research involving human participants. For more information, you may also access the IRB website at https://sites.google.com/a/pdx.edu/research/integrity.

CONSENT

You are making a decision whether to participate in this study. Your signature below indicates that you have read the information provided (or the information was read to you). By signing this consent form, you are not waiving any of your legal rights as a research participant.

You have had an opportunity to ask questions and all questions have been answered to your satisfaction. By signing this consent form, you agree to participate in this study. A copy of this consent form will be provided to you.

_____   _____ _____
Name of Adult Subject (print)   Signature of Adult Subject   Date

INVESTIGATOR SIGNATURE

This research study has been explained to the participant and all of his/her questions have been answered. The participant understands the information described in this consent form and freely consents to participate.

_____

Name of Investigator/ Research Team Member (type or print)

_____ _____

(Signature of Investigator/ Research Team Member)   Date

Appendix F: Training Materials

Training Materials – Module 1

Module 1: Accessibility of Storytime for
Students with Diverse Learning Needs

Melissa Pebly
Portland State University
College of Education
Department of Special Education
February 2019

Agenda

- Welcome and Introductions
- Purpose and history of our study
- Understanding the learning needs of children with disabilities
- Introduction to the Principles of Universal Design for Learning
- Next steps

Portland State UNIVERSITY

Introductions

- What is your favorite children's book and why?
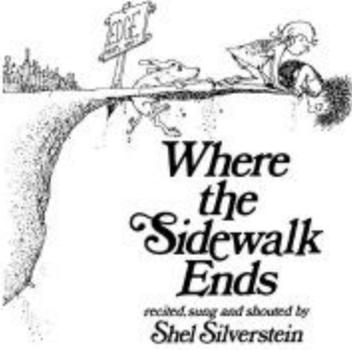
Where the Sidewalk Ends
recited, sung and shouted by
Shel Silverstein

Portland State UNIVERSITY

Our objectives today

- To become familiar with the purpose of our work together
- To become familiar with how storytime can impact educational outcomes for children with disabilities and diverse learning needs
- To become familiar with the principles of Universal Design for Learning
- To become familiar with initial strategies to support children with disabilities in storytime
- To plan our next steps in our work together

Portland State

Significance of the Problem

- Children with disabilities present significant and persistent lags in skills foundational to reading and writing upon entry to kindergarten

- Presence or absence of school readiness skills at kindergarten impact teacher perceptions of ability that lead to placement decisions

- Children entering kindergarten with little or no early literacy skills will often be placed in self-contained classrooms where equitable opportunities to learn to read and write are diminished

Ruper, A., Diamond, S. & Gaffney, J. (2011). Teachers' perspectives on literacy instruction for students with severe disabilities who use augmentative and alternative communication. *Research and Practice for Students with Severe Disabilities, 36,* 100-111.

Portland State

Preschool storytime: A support for all children

- Every Child Ready to Read (ECRR)initiative focused on supporting parents and caregivers in promoting early literacy

- Effectiveness of the program most significant for families of low-socioeconomic status, teen parents and bilingual and multilingual families

- Children with disabilities have not been included in the discussion

Preschool storytime as an equalizer

- Project VIEWS (Valuable Initiatives in Early Learning that Work Successfully) funded by an IMLS grant evaluated whether including specific early literacy content in preschool storytime impacts literacy behaviors of children
- Strong correlation between the early literacy content and literacy behaviors of children
- Campana, K., Mills, E., Capps, J., Dresang, E., Carlyle, A., Metoyer, C., Kotrla, B. (2016). Early literacy in library storytimes: A study of measures of effectiveness. *The Library Quarterly, 86*(4), 369-388. doi:10.1086/688028

More research in the library

- Project VIEWS 2: Follow-up study was one of the first to measure the impact of an intervention (i.e., professional development for librarians) on the content of storytime and its impact on the literacy behaviors of the participants

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Some survey data on children's librarians

- Kaeding et al (2017) surveyed 18 librarians who indicated a lack of training in the principles of UDL (only 17%)
- Discrepancies exist in attitudes about inclusive versus segregated programming for children with disabilities
- Survey of 67 school librarians would rate their knowledge on effective teaching practices a "C" or "D" (Allen & Hughes-Hassell, 2010)

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Review of the research: Survey data: What do the families say?

- Parent respondents often do not see their children as readers and writers
- Parents who bring their child to traditional storytime sessions abandon them if there is a lack of engagement or issues with behavior
- Parents do not seek out support from librarians on encouraging meaningful participation
- Limited parent voice in community library programs

Kaeding, J., Velasquez, D., Price, D.. (2017) 'Public libraries and access for children with disabilities and their families: A proposed inclusive library model' in the Journal of the Australian Library and Information Association. DOI: 10.1080/24750158.2017.1298399

Prendergast, T. (2016). Seeking early literacy for all: an investigation of children's librarians and parents of young children with disabilities' experiences at the public library. (2016). Library Trends, 65(1), 65-91.

Portland State

Our current survey...so far

- 45 respondents from across the country
- Most report on rarely or occasionally have children with disabilities attend storytime
- Most report a lack of attention to learning about children with disabilities in coursework or on-the-job training
- Almost all report an interest in inclusive programming for children with disabilities

Portland State

The purpose of our work together

- To illuminate the needs of children with disabilities and other diverse needs to meaningfully participate in preschool storytime
- To support your important work in designing storytime using the principles of Universal Design for Learning (UDL)
- To hear from the parents of children with disabilities describe their experiences attending preschool storytime

Portland State

Our demographic

- Hillsboro is the 5th largest district in Oregon and one of the most ethnically diverse
- Recruited participants from Early Childhood Intervention programs who may not have regularly used the library

Portland State

How can we meet the diverse needs of our storytime participants?

- Multiple means of engagement
  - routines

IMG 0572 5:54-6:10

What principle of UDL is this?

Steps of the routine supported by

Pick out a book

Take book to librarian

Say hello

Give your library card

Scan book

Wait for receipt

Take book

Say thank you and goodbye

Training Materials – Module 2

Portland State

Our objectives today

- Participants will become familiar with strategies to select/adapt books that will promote active engagement for children with disabilities
- Participants will become familiar with the communication needs of children with intellectual, motor, multiple disabilities and autism in order to access storytime programs
- Participants will become familiar with explicit strategies to address phonological, vocabulary, narrative, print awareness skills and early writing into preschool storytime for all children, including those with disabilities
- Participants will become familiar with strategies to manage behavior in storytime sessions

Portland State

Shared reading

- Evidence-based practice for developing early literacy skills
- Opportunities to support communication and model important concepts about print

Portland State

Preschoolers with disabilities in the library

- May come with limited communication skills
- Home literacy experiences are influenced by ability to request favorite books, interests, conflicting priorities of families

Portland State

What is autism?

Autism, or ASD, refers to a broad range of conditions characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication.

Eligibility under IDEA

Use this mnemonic

communication

social interaction

educational performance

3

What are core words?

- 50-400 of the words that make up most of what we say in typical conversation
- Modeling core in the classroom https://www.youtube.com/watch?v=B-ea6VAawVw&feature=youtu.be

How can we incorporate core words for our children in storytime?

- "want" a fidget, a turn, to sit on the carpet
- "not" to sit on the carpet
- "want" a turn, to sit by a peer
- "not" the right letter

Portland State

Using core words in shared reading

- Choose one of the books for a shared reading and choose up to six core words to model during the reading.
- Complete the core word planner to use with your book
- Practice using the core word board as you read the book

Portland State

Supporting children with communication challenges in shared reading

- Provide access to core vocabulary and model it
- Maximize opportunities for engagement
- Attribute meaning to communication attempts

Comment
Ask
Respond

Training Materials – Module 3

Module 3: Accessibility of Storytime for Students with Diverse Learning Needs

Portland State University
College of Education
Department of Special Education
April, 2019

Agenda

- Quick check-in and review
- Guest presentation, FACT Oregon, Christy Reese
- Working with parents of children with disabilities in the library
- Review
- Next steps

Portland State

Our objectives today

- Participants will discuss strategies to provide a welcoming environment for children with disabilities in the library
- Participants will discuss some of the behavior issues that are barriers to parents attendance at preschool storytime
- Participants will discuss strategies for supporting parents in facilitating early literacy development for children with disabilities
- Participants will become familiar with FACT Oregon

Portland State

What Parents Tell Us

- Behavior is a factor in keeping children with disabilities, especially autism, from attending storytime
- Things they take away from storytime...print awareness (e.g., title, author, syllabication)
- They would like some alternate seating options, some adapted books