

12-2018

# Access to Children's Books Featuring Characters with Disabilities

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Access to Children's Books Featuring Characters with Disabilities

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Science in Human Environmental Sciences

by

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December 2018  
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This thesis is approved for recommendation to the Graduate Council.

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## **Abstract**

Shared reading and access to print have been linked to improved outcomes for young children and linked to socio-economic status (e.g Neuman, 1999; Zucker, Cabell, Justice, Pentimonti & Kaderavek, 2013). As a community, we know very little about the access to books that the diverse population of preschool age children from Northwest Arkansas have. Moreover, we know very little about the type of books available to them. This study seeks to understand how many children's books are in select preschools of varying socioeconomic status within Northwest Arkansas that service those with and without disabilities. More pointedly, within the children's book representation, how many books portray characters with disabilities? Select preschools of varying socioeconomic status were selected in Northwest Arkansas, and the number of books in the classroom were documented. Next, each book was categorized as a "Disability Book" or a "General Book", depending on its characters and content. Results indicate that there is a much higher percentage of General Books than Disability Books overall in select preschool classrooms, and that general education, high socioeconomic centers contain more books on average. Finally, results indicate that centers serving children with exceptionalities have a slightly higher percentage of books including characters with disabilities than general centers. These results suggest a need for increased children's books in early childhood settings that reflect all individuals that are being taught, including those with disabilities. Children's books are important in teaching non-tangible values such as empathy, kindness and compassion through which all children, both typically developing and disabled can benefit from.

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## **Chapter I: Introduction**

A child's cognitive development is instrumental to their learning. As evident through Bronfenbrenner's ecological systems theory, "human development unfolds in a nested set of systems, involving cultural, social, economic and political elements, not merely psychological ones. These systems and their interactions can nurture or stifle optimal development." ("Urie Bronfenbrenner", n.d., para 3). According to Jaeger (2016), Bronfenbrenner's theory is critical to literacy learning because it "increases the likelihood that literacy development will be understood as occurring at the site of transaction between cognitive processes and social practices" (p.1). Essentially, social practices and the child's environment influence how and when a child learns to read.

Cognitive development is fostered in children in many different ways. Among other things, books are essential for learning and cognitive development in cultures in which literacy is emphasized. Research has suggested that reading books increases a child's phonological awareness ability (Blachman, 2000). Phonological awareness can be established through both reading to the child and the child reading individually. This is important because phonological awareness, the ability to hear and manipulate the most basic sounds in a language, is also a precursor to greater reading success (Vasconcelos, 2017). Reading books has also been shown to cultivate critical thinking skills. By helping children think critically, adults lay the foundation for children to make judgments, solve problems, think creatively, empathize with others and communicate effectively—skills needed for not only literacy but lifelong success (Greenberg & Weitzman, 2014). Books also boost vocabulary skills (Duff, Tomblin & Catts, 2015). Vocabulary skills are strongly related to a variety of academic, vocational and social outcomes

(Dollinger, Matyja & Huber, 2008; Gertner, Rice & Hadley, 1994; Rohde & Thompson, 2007). Finally, books convey information about the world around us (Stockar, 2006).

The number of books that children have access to also makes a difference in their learning. However, children do not have equal access to books. Neuman and Celano's (2001) study of four neighborhoods, in which two were middle class and two were low socioeconomic status, revealed vast differences in access to materials between them. Children in middle income neighborhoods had multiple opportunities in which to observe, use, and purchase books whereas those in low income neighborhoods had very few opportunities. Furthermore, access to other forms of print were often unavailable in low income neighborhoods where school libraries were often closed and public libraries were only open for brief hours in the day. Finally, Neuman and Celano (2001) found that middle class day cares featured quality books for children in their care whereas, in low income neighborhoods, as average of only one or two books were available. Of those books, they tended to be of mediocre or poor quality.

This can lead to one clear trend, which is high and low income areas have a disparity in access to the amount of books. As a result of the lack of disparity within low income areas, children living in low income areas may be more likely to miss out on the stimulating interaction around books and stories, particularly read-alouds (Family and Community Engagement Research Compendium, 2018). According to the National Center for Education Statistics (NCES) in 1999, "only 53% of children ages three to five were read to daily by a family member. Children in families with incomes below the poverty line are less likely to be read to aloud everyday than are children in families with incomes at or above poverty" (p.1).

In addition, the content and characters within a book are also important. The content of the book reinforces a theme or quality that is being taught through the characters. As Moss

(2005) states, “content area literacy is a cognitive and social practice involving the ability and desire to read, comprehend, critique and write about multiple forms of print. [These] multiple forms of print include textbooks, novels, magazines, Internet materials and other sociotechnical sign systems conveying information, emotional content, and ideas to be considered from a critical stance” (p.47). The characters of the book are important because the choices, thoughts, words, actions and consequences can help to reinforce the theme of the book. As Roser, Martinez, Fuhrken and McDonald (2007) state “characters in children’s books can help to guide readers through stories, contributing to deepened understanding of plot and themes” (p.1). In turn, the theme of books can help us to interpret situations in life whether it is a lesson or a concept that needs to be learned. Characters in stories help the reader to see how people in everyday situations might react to their circumstances and experiences. By relating to the character, the reader internalizes the message of the book and can use it in future life experiences.

Clearly, researchers have established the importance of books for learning, and have revealed the particular importance of specific content and characters, as well as availability. However, in a world as diverse as ours, it is also important to understand the representation of those with disabilities in children’s books. According to the World Health Organization (2016), disability is defined as “an umbrella term, covering impairments, activity limitations, and participation restrictions. An impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. Thus disability is a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she live” (para. 1). Research



indicates that disabilities are a growing part of society. According to Newacheck, Halfon and Budetti (1986), “Data on childhood disability suggest that the proportion of children experiencing disability is steadily increasing, regardless of the definition used. In 1980, 3.8% of U.S. children had health-related limitations of activity” (p. 70). Houtrow, Larson, Olson, Newacheck and Halfon, (2014) support the previous statement by finding that 30 years later, 7.9% of children had an activity limitation.

As mainstream education becomes more prevalent, acceptance becomes more important. Laws have been put in to place to help foster inclusion among those with and without disabilities. According to the U.S. Department of Education, “The Individuals with Disabilities Education Act (IDEA) is a law ensuring services to children with disabilities throughout the nation. IDEA governs how states and public agencies provide early intervention, special education and related services to more than 6.5 million eligible infants, toddlers, children and youth with disabilities” (U.S. Department of Education, 2004, para. 1). Setting the stage for IDEA, which was enacted in 1975, is Section 504 of the Rehabilitation Act of 1973. The purpose of this act is “to prohibit discrimination on the basis of disability in programs and activities, public and private that receive financial assistance” (“A Comparison of ADA, IDEA, and Section 504”, n.d., para.3). In terms of education, “an appropriate education means an education comparable to that provided to students without disabilities. This may be defined as regular or special education services. Students can receive related services under Section 504 even if they are not provided any special education. Section 504 does require development of a plan, although this written document is not mandated. The Individualized Education Program (IEP) of IDEA may be used for the Section 504 written plan. Many experts recommend that a group of persons knowledgeable about the students convene and specify the agreed-upon services” (“A

Comparison of ADA, IDEA, and Section 504”, n.d., para. 9). As if to reinforce this, the United States Department of Education report written by Planty et al. (2009) states that “nearly seven million students with disabilities attend public school in the United States, representing more than 13% of the student population” (p.20). Children’s books should celebrate the power of all children and show them working, playing, and succeeding in spite of their abilities. Researchers have suggested that using fictional books that include characters with disabilities can teach children about disabilities (Andrews, 1998; Blaska & Lynch, 1998; Favazza & Odom, 1997). A recent review of the existent literature revealed that few similar studies of children’s books included characters with disabilities, and no current studies. Thus, indicating the need for research in this area.

By shining a light on children with disabilities, the general population is given a unique viewpoint into how children with disabilities learn and understand concepts. Children with disabilities often face obstacles that are unique from the general population. This can be anything from a learning disability, a physical disability, being deaf and hard of hearing to an autism diagnosis. For example, Xie, Potmesil and Peters, (2014) found that “children who are deaf and hard of hearing [D/H/H] face challenges and difficulties in communicating, initiating/entering, and maintain interactions with hearing peers” (p.1). The challenges and difficulties in communicating, initiating/entering and maintaining interactions can lead to difficulty in mainstream classrooms among peers, both with disabilities and without. According to the Gallaudet Research Institute report of 2006, “Although there is comparatively little information on this subgroup of students, 44% of DHH students nationally spend more than 16 hours a week in classrooms with hearing students” (p. 10). This is important because it reinforces the notion that these children are just as capable as those without disabilities.

Despite all of this, we don't know if children's book content and characters vary across SES and if the population of the children within the schools reflects the abilities of children including those with disabilities. To address this gap, the current study examines how books placed within select preschool classrooms throughout Northwest Arkansas that service children with and without disabilities are portrayed.

## **Chapter II: Literature Review**

### *Cognitive Development*

Cognitive development is defined as “attention and perception, language and all intellectual activities such as learning, thinking, memory and problem solving” (Graziano, 2002, p. 72). The cognitive domain of development has been the topic of countless studies about all ages of children from infants to adolescents. Notable among these are studies by Jean Piaget, known as the Father of Cognitive Development, and also works by Urie Bronfenbrenner, who co-founded the Head Start Program in 1965 and developed his groundbreaking theory of Ecological Systems in 1979 (Lang, 2005). “Cognitive development proceeds rapidly in tandem with the brain’s growth and the child’s experience in the environment” (Graziano, 2002, p. 72). “Young children learn at an amazing rate as they literally grow their brains from an approximate one pound structure at birth to a three pound organ by adolescence” (Nevills, 2011, p. 4). This is important because as your brain grows and expands, it allows for the retainment of new information. However, certain functions do need to be learned. This is evident through typical motor and sensory functions. According to Epstein (2001), “this means that the functioning of those augmented networks is dependent on modifications by a combination of inputs from experience and instruction” (p.1). Hence learning is encompassed by both instruction and experience. Your brain needs to develop biologically and yet also be able to retain new information. Despite this knowledge however, the exact relationship between brain development and cognitive development is largely unknown.

### *Developmental Theories*

Two of the more well known and supported developmental theories that are associated with cognitive development are Jean Piaget and Urie Bronfenbrenner’s theories. Within Piaget’s

cognitive development theory, he argues that “cognitive development is a process that occurs due to biological maturation and interaction with the environment” (McLeod, 2018, para.1). Piaget’s cognitive theory is composed of three main parts: schemas, adaption process and the four stages of cognitive development. The four stages are sensorimotor, preoperational, concrete operational, and formal operational (Lightfoot, Cole & Cole, 2013, p. 278). During Piaget’s time as a biologist in the beginning of his career, he was interested in the biological influences on how humans come to know something. Piaget was interested in how an organism adapts to its environment, which he called intelligence. Behavior and thus adaption to the environment is controlled through mental organizations called schemata that the individual uses to represent the world and designate action. This adaption is driven by a biological drive to balance between schemes and the environment, also known as equilibrium. “Piaget hypothesized that infants are born with schema operating at birth that he called reflexes. In humans, the infant uses these reflexes to adapt to the environments and these reflexes are quickly replaced with constructed schemata” (Huitt & Hummel, 2003, para. 5). The two processes used by individuals in its attempt to adapt are called assimilation and accommodation. “Assimilation is the process of using or transforming the environment so that it can be placed in preexisting cognitive structures. Accommodation is the process of changing cognitive structures in order to accept something from the environment” (Huitt & Hummel, 2003, para. 7). Piaget essentially argued that biological development drives the movement from one cognitive stage to the next until all four stages have been reached.

Bronfenbrenner’s studies have further increased our knowledge of cognitive development. Bronfenbrenner’s Ecological Systems Theory has long been applied to the study of children’s development. The primary focus of the Ecological Systems Theory is the influence of

the different types of environment on human development (Bronfenbrenner, 1979). The interrelationship of different processes that make up the five systems surrounding an individual (microsystems, mesosystems, exosystems, macrosystems and chronosystems) shape psychological development through each systems' roles, norms, rules and ultimately an individual's environment. Systems such as families and schools most immediately and directly impact a child's development which can lead to either a strong or weak link between all three components within the system. Families and schools greatly impact not only the child but each other resulting in a network between the three that constantly influence the other. This theory helps us understand why we may behave differently when we compare how behavior takes place in the presence of our family and our behavior when we are at work or in school. In the current study, the environment surrounding the children, in this case, preschool centers, influences the books that are available.

According to Greenspan and Wieder (1998), "the physical component is the concrete part of the experience. The emotional component is the part that makes the experience meaningful" (p. 111). Emotional coding of our experiences in life guides all our learning, including environmental interactions. This is supported by both Piaget and Bronfenbrenner in different contexts regarding literacy. Piaget focuses on literacy in the context of constructivism and "the child being an active learner in seeking and constructing meaning and in seeking communication with others. Children learning language produce hypotheses and test them with the speaker in the environments. They try to combine sounds and words in different situations" (Ensar, 2014, p. 35-36). This reinforces the idea that children are active participants in their environment in this instance, learning to read and thereby, gaining knowledge and understanding of the world around them. Bronfenbrenner's emphasis on the many interconnected contexts of

which the children are a part is important here as well; learning to read in both the home and school environment contribute and build upon one another, rather than being separate entities. For instance, if a child is read to at home then the knowledge that is being learned can be brought to the school environment and vice versa. In these ways, learning can be fostered through reading books, both silently by yourself and out loud with parents, peers or teachers to name a few.

### *Books and Reading*

Books are essential for learning and cognitive development. Research has established that reading books increases a child's phonological awareness ability (Blachman, 2000). According to Stahl and Murray (1994), phonological awareness is "an awareness of sounds in spoken (not written) words that is revealed by such abilities as rhyming, matching initial constants, and counting the number of phonemes in spoken words" (p.222). This is important as it is a precursor to greater reading success (Vasconcelos, 2017). In a study by MacLean, Bryant and Bradley (1987), it was found that children's knowledge of nursery rhymes at age three strongly predicted their later development of more abstract phonological knowledge and more importantly, their early reading ability. Furthermore, in a study done by Blachman (1984), that further supports phonological awareness, found that "language analysis skills and rapid naming ability have both been found to be related to early reading success" (p.610). This is important as it contributes to laying the foundations of effective reading.

Through reading, books have also been shown to cultivate critical thinking skills. Critical thinking skills are the foundation in which children make judgements, solve problems, thinking creatively, empathize with others and communicate effectively—skills needed for not only literacy but lifelong success (Greenberg & Weitzman, 2014). To reinforce the importance of

critical thinking skills, Leicester and Taylor (2010) argue that, “critical thinking can be thought of as a toolbox of skills which enable children to think more deeply and clearly about what they believe and about what they should do. Such thinking will help them to be better informed and less open to biased persuasion, to prejudice and to irrational behavior or belief” (p. 2). Books foster critical thinking skills by giving children opportunities to ask open ended questions of characters that would in turn lead to opportunities in real life to practice critical thinking skills. Vocabulary skills are also boosted through reading books (Duff, Tomblin & Catts, 2015). Vocabulary skills are essential in any interaction whether social, academic, or vocational (Dollinger, Matyja & Huber, 2008; Gertner, Rice & Hadley, 1994; Rohde & Thompson, 2007). Effective interaction with people from academic, social and vocational aspects require a knowledge of functioning vocabulary. Reading books contributes to this through the process of understanding and questioning what you are reading.

### *Literacy Content and Characters*

Books are also beneficial in that they are a powerful way to convey information about the world around us (Stockar, 2006). Content and characters within a book contribute greatly to conveying this information. The content of a book can reinforce both the theme and the messages of a book. Theme is difficult to define but according to Bremond, Landy and Pavel (1995), theme is “not an expression: although the theme is sometimes formulated explicitly, more usually it emerges implicitly, without corresponding to any specific expression in the text” (p. 11). The messages of books are specific example of that theme in action. Put together, the content of the book encompasses both the message and theme of the book.

The characters found within a book are important because the decisions they make can help to reinforce the theme of the book. According to Jose, a participant in the study by Roser,



Martinez, Fuhkren and McDonald (2007), a character is an actor in the story; “We consider character as player—whose decisions, actions, desires, and dilemmas shape plot, and just might invite readers to think deeply about ethics, moral choices, and codes (contributing to the underlying themes of narratives)” (p.548). To reinforce this point, Emery (1996) maintained that characters beliefs, desires, feelings, and thoughts are “the glue that holds the story together” (p.534). Norton, Norton and McClure (2003) observed that “characterization is one of the most powerful of the literary elements” (p.82). Luken (1999) argued that the closer a character is to the story’s conflict, the more important it is to understand that character. In essence, both content and characters can be applied to real life situations that children would have learned from reading a certain book.

Furthermore, information about the world surrounding us can be conveyed through books with just text and books with both pictures and texts. Words and images have a dynamic interaction with each other and at the preschool age, it can be useful to have both. Supporting this argument, in *Children’s Picture Books*, “Fabulous artwork can be admired, but if the words don’t interact with the pictures in interesting ways, the book as a whole will not be a success. On the other hand, written text may be superb but if the pictures are bland the overall effect will be mediocre” (Salisbury, Styles, Alemagna, Smy, & Riveros, 2012, p. 89). Preschool age children learn best through books with both pictures and words; University of California Cooperative Extension supports this by stating “this type of book is especially appropriate for young children because the colorful and clear illustrations and artwork support a simple story line. The illustrations often provide additional information not covered in the text” (Types of Books, 2018, para. 2).

*Literacy and Disability.* A user of a typical public library will often notice that books rarely represent disabled people constructively. Rather, disabled people are portrayed as almost other worldly. For mainstreaming to be more successful, it is important that characters with disabilities are realistically featured in children's books. As we move forward, disabilities are becoming more prevalent in society. To reinforce this, the United States Department of Education report stated that "nearly seven million students with disabilities attend public school in the United States, representing more than 13% of the student population" (Planty, et al., 2009, p. 144). Incorporating books that feature characters with disabilities can lead to a classroom full of more empathetic children. According to Hoffman's (1987) study, he argued that "the child's emerging capacity to understand the distinction between self and other and the growing awareness that other individuals have internal states and feelings independent from one's own, lay the foundation for higher levels of empathic responding. Thus the circumstances that will elicit empathetic emotional arousal are believed to change and broaden with the child's increasing experiences and cognitive growth" (p.50-51). Children's books should celebrate the power of all children and show them working, playing and succeeding in spite of their abilities. Researchers have suggested that using fictional books that include characters with disabilities can teach children about disabilities (Andrews, 1998; Blaska & Lynch, 1998; Favazza & Odom, 1997). This can lead to more empathetic children who grow up to become empathetic adults.

#### *Socioeconomic Status and Literacy*

The number of books that children have access to makes a difference in their learning. According to the National Institute of Child Health and Human Development, only 25% of 3 to 5 year old children from low-income families had 10 or more books at home, whereas almost 50% of children from more affluent households did (Bradley et al. 2001). Furthermore, children from

lower SES families may have limited opportunities to go to zoos, children's museums, high-quality libraries and well-designed parks, all of which spur new vocabulary and growth (Pogash, 2016, Neuman & Celano, 2001). For example, in Neuman and Celano's study in 2001, the study showcased two neighborhoods of middle class status and two of low socioeconomic status and realized there were differences in access to materials between them. Children in middle income neighborhoods had multiple opportunities in which to observe, use and purchase books whereas those in low income neighborhoods had fewer opportunities. High and low income areas have a disparity in the amount and type of books that are available to children. "Sixty-one percent of low-income families have no age-appropriate books in their home" (Reading Literacy in the United States, 1996). In a study done by Hart and Risley in 1995, 42 families representing 3 socioeconomic groups (welfare, working class, professional) were studied beginning when children were 7 months old till 3 years of age. The researchers visited the homes for one hour a month for 2.5 years. During each visit, the researcher tape-recorded and transcribed by hand any conversations and actions taking place in front of the child. The results concluded that "children from low-income homes heard 30 million fewer words by the time they were 3 years old, resulting in vocabularies less than 50% the size of their upper-income peers. In contrast, the greater number of words children heard before age 3, the greater their IQs and success in school. The average 5 year old from a middle-income recognizes 22 letters of the alphabet while an average 5 year old from a low-income home recognizes only 9. A child from a low-income family enters kindergarten with a listening vocabulary of 3000 words, compared to 20,000 for their middle income peers."

In a follow up study by the same authors Hart and Risley (2003) used the same data set as the study in 1995 and found "in the first four years after birth, the average child from a

professional family receives 560,000 more instances of encouraging feedback than discouraging feedback; a working-class child receives merely 100,000 more encouragements than discouragements; a welfare child receives 125,000 more discouragements than encouragements” (p. 9). In yet another study by Barnett, Carolan, Fitzgerarld and Squires (2012), “low-income children lag 12-14 months behind the norms of their middle class peers in both language development and pre-reading skills” (p. 177). This is disheartening because as the years progress, it is becoming increasingly more evident that literacy plays a vital role in upward mobility in all aspects including education, social status and monetary income. Low income children have to work much harder than middle income children due to the lack of literacy materials. This is important because it reinforces the argument that the more access to books children have, the richer their environment which can lead to better chances of success.

To summarize, cognitive development is essential for learning in all aspects, including literacy. Cognitive development theory has been largely influenced by Piaget, directly, and Bronfenbrenner indirectly through the environmental influences that affect all aspects a child’s learning, including emotions. As discussed previously, books increase phonological awareness, critical thinking, vocabulary skills and convey information about the world around us. Furthermore, the content reinforces the theme and message of a book while the decisions a character makes reinforces the theme of the book. Books that include characters with disabilities are not portrayed realistically. This is an issue because disabilities are becoming more prevalent in society and books need to reflect this growing diversity to help foster a sense of inclusion. It is important that the books that are available to children are reflective of a realistic society. Finally, socioeconomic status plays a part in the number of books that is available to children. Lower

income socio-economic areas do not have as many resources readily available to them as higher socio-economic areas.

### ***Research Objectives***

To address this research gap, this study addresses the following aims:

- 1.) How many books are available to preschool children in sampled center-based care in Northwest Arkansas? Of these, how many are “Disability Books” and how many are “General Books”?
- 2.) How does the number of total books offered vary among centers that are designed to serve children with disabilities, children from backgrounds of poverty and more privileged, typically developing children?
- 3.) Across Northwest Arkansas, what percentage/proportion of books include characters with disabilities within select centers and their classrooms?
- 4.) Does the percentage of books that include characters with disabilities vary among centers that are designed to serve children with disabilities, children from backgrounds of poverty, and more privileged, typically developing children?

## Chapter III: Methods

### *Site Selection and Setting*

Data were obtained from a purposive sample collected from seven select pre-schools with a total of 19 classrooms who serve families with a range of socioeconomic levels located in the Northwest Arkansas Region. Socioeconomic status is defined as “an indicator of social class based on factors such as income, education, and occupation” (Lightfoot, Cole & Cole, 2013, p.G-9). This study centered around the number of children’s books that focused on disabilities found within preschool classrooms.

### *Participants*

Within the seven select preschool centers, the schools varied along the two dimensions of serving children with disabilities or serving typically developing children. Of the centers, three served mostly children with disabilities and four serve children with typical development. In addition, four of the centers were on the low socioeconomic scale whereas three of the centers were on the higher end of the socioeconomic scale. For the purpose of this study, the following abbreviations are used in conjunction with the appropriate center to describe the locations that contributed to data collection.

- Exceptionalities =E
- Typically Developing=T
- Low Income=L
- High Income=H

The seven centers are listed below, along with their abbreviation indicting whether they serve a low or high income demographic and typically developing children or those with exceptionalities (Table 1). Further descriptions relating to accreditation, and funding are included as well.

Table 1

*Centers, Abbreviations and Descriptions*

Center	Abbreviation	Description
1	E.L.	CARF Accredited (Commission on Accreditation of Rehabilitation Facilities)
2	T.L.	Head Start Program Works with children ages 3-4 years old Federal government provides 80% of funding; remaining 20% comes from in-kind contributions
3	E.L.	Accreditations: Arkansas Foundation for Medical Care (AFMC) Arkansas Child Care Licensing Arkansas Department of Health Better Beginnings, Level 3 Child Health Management Services (CHMS) Developmental Disability Services (DDS) CARF Accredited in 2009
4	E.L.	Special Education Preschool Program Modified Curriculum
5	T.H.	Quality Accredited Arkansas Better Beginnings Program, Level 3 Faith-based Parent's Day Out Program, Preschool and Kindergarten

Table 1

*Centers, Abbreviations and Descriptions Cont'd*

Center	Abbreviation	Description
6	T.H.	NAEYC Accredited State University Lab School
7	T.H.	Advanced Corporation Accreditation Middle States Corporate Accreditation International Association for Continuing Education and Training Council for Professional Recognition Franchise, Private for Profit

*Procedure*

A letter was submitted via email to the principal or administrator of each center chosen for permission to conduct the research (see Appendix B). Upon approval, the researcher scheduled a day and time in which to go to approved location and collect data. Participants were informed that it was voluntary and that there was no penalty for discontinuation at any time. Participants were provided with an incentive for the completion of the study. The center's principals or administrators were given a \$25 gift card to be applied towards books that include children with disabilities for their pre-school classrooms.

The data collection protocol took place as follows: upon entering the classroom, the researcher was led to where the books are located. The researcher first counted the number of books total in the classroom. Next, the researcher scanned each book to determine whether it included any characters with disabilities. Any books that included such a character was



categorized as “Disability Books”. Books that did not have characters with disabilities were categorized as “General Books”. When trying to determine which disabilities were represented in the book, the book typically had pictures and an explanation of which specific disability was discussed. If there were any books in storage, typically in a closet or cabinet in the classroom, the researcher made note of those as well. The title, author, ISBN and what exact type of disability was included.

### *Data Analysis*

For data analysis, the book collection data set was initially entered into Excel and separated by appropriate schools. Upon completion, the answers were coded into SPSS version 24 in order to allow for the necessary analyses. Fisher’s Exact Test was used to test the research question because this test was the most appropriate due to the small frequency sizes of less than 5. The Fisher’s Test exactly calculates the *p-value* rather than providing only an asymptotic approximation (“Fisher Procedure demonstrated with an example”, n.d.) The *p-value* or calculated probability is defined as “the probability that the data would be at least as extreme as those observed, if the null hypothesis were true” (Hung, 2016, para. 5). In regards to this study, this statistical test was chosen because there was a very low percentage of Disability Books which reinforces the findings of small frequency sizes. The vast differences in number of books between General and Disability Books created a need for a test that took into account small sample sizes.

To address research question one, the mean and standard deviation were applied to describe how demographics of the total books and within the total books, General Books and Disability Books were distributed across sampled centers.

To address research question two, two tables were used to represent the information about the average books in classrooms. The first table calculated the average books per classroom based upon centers serving children with special needs (SPED) and general centers (Non-SPED). The second table calculated the average number of books per classroom within the general centers. Within the general centers, the low income socioeconomic status and high income socioeconomic status were compared.

To address research question three, the percentage of books available to children on the topic of disabilities by centers as a whole was calculated. 98 percent of books found were General Books and only 2 percent were found to be Disability Books. The second percentage calculation was as centers within special education and general divided up by classrooms as well as recording the number of books total in each classroom.

To address research question four, the percentage of books that include characters with disabilities among the special education centers and general centers was calculated. An independent samples t-test was used to determine if there was a difference in disability books by school type and also by socioeconomic status. In addition, a Fisher's Test was conducted to explore the differences of percentage of disability books within school types and socioeconomic status.

## Chapter IV: Results

### *Research Questions and Results*

- 1.) How many books are available to preschool children in sampled center-based care in Northwest Arkansas? Of these, how many are “Disability Books” and how many are “General Books”?

In total, 19 classrooms were surveyed across 7 schools. The total number of books combined across all classrooms was 1518. Of these, 1,489 were categorized as “General Books”, meaning that they do not include a character with a disability. The remaining 29 were “Disability Books”, indicating that these books featured a character with disability.

Table 2

### *Book Demographics*

	<u><i>n</i></u>	<u><i>M</i></u>	<u><i>SD</i></u>
Total Books	1518		
Type of books in classroom			
General Books	1489	78.37	88.32
Disability Books	29	1.53	1.50

The number of general books per classroom in those sampled ranged from 19 to 359, while the number of books featuring those with disabilities ranged from 0 to 4 in the classrooms sampled (Table 2).

- 2.) How does the number of total books offered vary among centers that are designed to serve children with disabilities, children from backgrounds of poverty and more privileged, typically developing children?

There are variations in the number of classrooms per center resulting in each center's respective amount of classrooms being grouped together to reflect the corresponding center. For instance, center 1 has 2 classrooms, center 2 has 3 classrooms, center 3 has 3 classrooms, center 4 has 1 classroom, centers 5 and 6 each have 4 classrooms and center 7 has 2 classrooms. As seen in Table 3, the average books per classroom were slightly higher in SPED centers at a combined average of 69.5 as opposed to the Non SPED centers at 66.85.

Table 3

*Books per Classroom across Sampled SPED and Non SPED Centers*

Average Books per Classroom	
<b>SPED</b>	
Center 1 (E.L.)	34.5
Center 3 (E.L.)	155
Center 4 (E.L.)	19
Average	69.5
<b>Non SPED</b>	
Center 2 (T.L.)	33.67
Center 5 (T.H.)	138.5
Center 6 (T.H.)	45.25
Center 7 (T.H.)	50
Average	66.85

It is important to consider the differences between centers that serve low and high income socioeconomic status within the general education centers because socioeconomic status influences a variety of things, not the least of which is funding, which impacts how many books a center obtains. The variation in number of books from classroom to classroom affects how each

center’s average books per classroom is reported as a whole. Table 4 reports findings that the average number of books per classroom was greater in high socioeconomic status centers as opposed to low socioeconomic centers. It is important to note that because of the very high number of books ( $n=359$ ) one of the classrooms in the high socioeconomic status center greatly impacted the average the number of books.

Table 4

*Distribution of Books per Classroom across Low versus High Socioeconomic Status within General Education Centers*

Average Books per Classroom	
<b>Low SES</b>	
Center 2 (T.L.)	33.67
Average	33.67
<b>High SES</b>	
Center 5 (T.H.)	138.5
Center 6 (T.H.)	45.25
Center 7 (T.H.)	50
Average	77.92

3.) Across Northwest Arkansas, what percentage/proportion of books include characters with disabilities within select centers and their classrooms?

As seen in Table 5, the results report a substantial difference in each center’s combined classrooms. For instance, in the classrooms at center 5 (T.H.), only 4 out of the 554 total books available to children across classrooms were disability books which translates into 0.72 percent. Center 2 (T.L.) had only 10 out of 101 books representing characters with disabilities which results in a percentage of 9.90 percent. The highest percentage of disability books was found at

center 4 (E.L.) with 3 out of 19 books available at 15.8 percent. Center 3 (E.L.) and center 7 (T.H.) having similar percentages with center 3 (E.L.) having 5 out of 465 books including those with disabilities (0.72 percent) and center 7 (T.H.) had 1 out of 100 translating into 1.00 percent. Center 6 (T.H.) had 6 out of 181 books featuring those with disabilities (3.30 percent), while center 1 (E.L.) did not have a single disability book available to children (0.00 percent). Together, these findings suggest that there is not a big percentage of books that focus on characters with disabilities overall, a point which the researcher takes up in the discussion below.

Table 5

*Percentage of Disability Books across Sampled Classrooms*

Center	General Books	Disability Books	% of Total (each center's classroom combined)
Center 1 (E.L.)	69	0	0.00%
Center 2 (T.L.)	101	10	9.90%
Center 3 (E.L.)	465	5	1.07%
Center 4 (E.L.)	19	3	15.8%
Center 5 (T.H.)	554	4	0.72%
Center 6 (T.H.)	181	6	3.30%
Center 7 (T.H.)	100	1	1.00%
Total	1489	29	1.95%

Table 6 demonstrates that within the centers focused on Special Education, center 1 (E.L.) does not have a single Disability Book available to children. Center 3 (E.L.) has one classroom that featured 1 out of 45 characters with disabilities, 3 out of 254 books in the second classroom and 1 out of 166 books in the third classroom that include characters with disabilities and center 4 (E.L.) has 3 out of 19 Disability Books. Within general education centers, center 2 (T.L.) has 3

out of 39 books that include characters with disabilities in the first classroom, 3 out of 28 in the second classroom and 4 out of 34 in the third classroom. At center 5 (T.H.), classroom one has 4 out of 30 books including those with disabilities, and none in the other 3 classrooms. Within center 6 (T.H.), the first classroom has 2 out of 43 books that include those with disabilities; the second classroom has 0 out of 46 books, the third classroom has 1 out of 40 and the fourth classroom has 3 out of 52 books. Center 7 (T.H.) has 1 out of 58 books including those with disabilities in the first classroom and none in the second classroom. Results suggest that Non-SPED classrooms have a higher percentage of books that include those with disabilities than do SPED classrooms.

Table 6

*Percentage of Disability Books by Sampled Classrooms*

Centers	Number of Books in Each Classroom	Percentage of Disability Books by Classroom
<b>SPED</b>		
Center 1 (E.L.)		
Classroom 1	34	0.00%
Classroom 2	35	0.00%
Center 3 (E.L.)		
Classroom 1	46	2.22%
Classroom 2	257	1.18%
Classroom 3	167	0.60%
Center 4 (E.L.)		
Classroom 1	22	15.8%
<b>Non SPED</b>		
Center 2 (T.L.)		
Classroom 1	42	7.69%
Classroom 2	31	10.71%
Classroom 3	38	11.76%
Center 5 (T.H.)		
Classroom 1	34	13.33%
Classroom 2	80	0.00%
Classroom 3	359	0.00%
Classroom 4	85	0.00%
Center 6 (T.H.)		
Classroom 1	45	4.65%
Classroom 2	46	0.00%
Classroom 3	41	2.50%



Table 6

*Percentage of Disability Books by Sampled Classrooms Cont'd*

Centers	Number of Books In Each Classroom	Percentage of Disability Books by Classroom
Classroom 4	55	5.76%
Center 7 (T.H.)		
Classroom 1	59	1.72%
Classroom 2	42	0.00%

4.) Does the percentage of books that include characters with disabilities vary among centers that are designed to serve children with disabilities, children from backgrounds of poverty, and more privileged, typically developing children?

Within Northwest Arkansas’s selected preschools, books that include characters with disabilities are different in each respective area and therefore, each center. Table 7 displays results suggesting that centers serving children with exceptionalities have a slightly higher percentage (5.63%) of books including characters with disabilities than general centers (3.80%). However, within Non-SPED, centers that are designed to serve low-SES children have a higher percentage of books that include characters with disabilities at 9.9 percent as opposed to 1.77 percent in high SES centers.

To test if there was a difference in number of disability books by school type, an independent samples t-test was used. Results revealed that there were no significant difference in the number of books by general schools ( $M = 1.61$ ;  $SD = 1.61$ ) and special education schools ( $M = 1.33$ ;  $SD = 1.37$ ;  $t(17) = 0.72$ , *ns.*). The researcher also tested if there were differences in disability books by SES using an independent samples t-test. There were no significant

differences by high ( $M = 1.10$ ;  $SD = 1.45$ ) or low SES ( $M = 2.00$ ;  $SD = 1.50$ ) in disability books ( $t(17) = 1.33$ , *ns.*).

Table 7

*Percentage of Variability of Disability Books Across Centers*

Center Type	Number of Disability Books	Percent of Disability Books Across All Centers	Low SES	High SES
<b>SPED</b>				
Center 1 (E.L.)	0	0.00%	---	
Center 3 (E.L.)	5	1.10%	---	
Center 4 (E.L.)	3	15.8%	---	
Average and SD per SPED Centers		Average= 5.63% SD=8.82%		
<b>NON SPED</b>				
Center 2 (T.L.)	10	9.90%	Low	
Center 5 (T.H.)	4	1.00%		High
Center 6 (T.H.)	6	3.30%		High
Center 7 (T.H.)	1	1.00%		High
Average and SD per Non SPED Centers		Average of Low SES=9.90% SD=7.00%		
		Average of High SES=1.77% SD=1.33%		
Total Average of Non SPED Centers		Average=3.80% SD=4.21%		

Note: All SPED Centers are low SES so not reported again

However, the above table does not reveal whether these differences are statistically significant. Fisher’s Exact Test was used to test the research question because this test was the most appropriate due to the small frequency sizes of less than 5. The Fisher’s Test exactly calculates the *p-value* rather than providing only an asymptotic approximation (“Fisher Procedure demonstrated with an example”, n.d.)

Table 8 display results of a Fisher’s Exact Test in which  $p = 0.003$ . This means that the  $p$ -value is smaller than 0.05 therefore, results suggest that there may be a relationship between school type and socioeconomic status.

Table 8

*Results of a Fisher’s Exact Test of Differences of Percentage of Disability Books within School Type and Socioeconomic Status*

		School Type			
		General Schools	Special Education Schools	Total	
SES	Low SES	N	3	6	9
		% within SES	33.3%	66.7%	100.0%
		% within School Type	23.1%	100.0%	47.4%
	High SES	N	10	0	10
		% within SES	100.0%	0.0%	100.0%
		% within School Type	76.9%	0.0%	52.6%
Total		N	13	6	19
		% within SES	68.4%	31.6%	100.0%
		% within School Type	100.0%	100.0%	100.0%
		Type			

Overall, the results of this study indicate many answers regarding children’s books including those with disabilities within select preschool centers of Northwest Arkansas. The top three results indicate that there is a much higher percentage of General Books than Disability Books overall in select preschool classrooms, and that general education, high socioeconomic centers contain more books. Finally, results indicate that centers serving children with exceptionalities have a slightly higher percentage of books including characters with disabilities than general centers. The researcher discusses these findings further in Chapter 5.

## Chapter V: Discussion

The current study sought to better understand the relationship between preschools serving children from diverse backgrounds and with diverse abilities and the portrayal of children's books that include characters with disabilities within their classrooms.

The major findings of the study are that:

- (a) there is a much higher percentage of General Books than Disability Books overall in select preschool classrooms;
- (b) the average number of books is greater in general education, high SES centers;  
and
- (c) special education centers have a slightly higher percentage of Disability Books than general centers.

Thus findings from this study indicate that there is a much higher percentage of General Books than Disability Books overall in select preschool classrooms. This finding is disheartening given that IDEA, the law to mainstream children as young as three years of age was enacted in 1975, more than forty years ago (U.S. Department of Education, 2010). Clearly and disappointingly, the available literature for children has probably not changed accordingly, given the paucity found in the current study. The percent of books about characters including those with disabilities in the centers range from 0-16. It is difficult to understand centers without any books of characters including those with disabilities, although 16% might be a decent start.

It is disappointing that disability featured books are less available than general books, especially given the increase in young children with disabilities throughout the country. Reasons for this could include that there is not a large amount of books including characters with disabilities being produced because publishing companies could be unaware of the dire need for

more books including characters with disabilities to foster awareness and inclusion beginning at young ages. Moreover, within a school context, teachers could not be aware of what Disability Books are out there because they could be focused on just those that concentrate on their curriculum and lesson plans in an effort to meet state requirements or the theme that children are currently exploring. In addition, unless teachers have a student with a disability in their classroom, they might not even think to incorporate the books into the classroom library unless for a specific time period of a related lesson being taught. Moving forward, incorporating children's books that include those with disabilities is a step, albeit not a big one, in a positive direction towards creating a more empathetic environment between children with special needs and those without. Although published a decade ago, work by Prater and Dyches may be of some use here. They reported at the time that literature for children and youth depicts increasingly positive attitudes towards people with disabilities (2008). Earlier, Gervay (2004) reported that literature in the past 10 years "on the whole, portrays characters with disabilities as independent, equal and socially active" (para. 2). Unfortunately, the current study indicates that this literature is not making its way to preschool classrooms.

The second major finding of the study suggests that within general education centers of high versus low socioeconomic status, the average number of books per classroom was greater in the high socioeconomic centers. This finding is consistent with other studies. Previous studies have demonstrated that socioeconomic status (SES) is a powerful predictor of children's early reading development (Bradley & Corywn, 2002; Kieffer, 2010; Nueman & Celano, 2001). According to Kieffer (2012), "understanding the relevance of children's SES to later reading comprehension is particularly critical because students from low SES backgrounds may be put at elevated risk for reading difficulties" (p. 1728). Similarly, Buckingham and colleagues find that

“children from disadvantaged families are less likely to have experiences that encourage the development of fundamental skills of reading acquisition, such as phonological awareness, vocabulary, and oral language” (Buckingham, Beaman & Wheldall, 2014, p. 428). When it comes to areas of low socioeconomic status, the school systems in low-SES communities are often under resourced, negatively affecting students’ academic progress and outcomes (Aikens & Barbarin, 2008). Furthermore, research indicates that children from low-SES households and communities develop academic skills slower than children from higher SES groups (Morgan, Farkas, Hillemeier, & Maczuga, 2009). Lower SES centers do not typically have the monetary funds necessary to keep a steady stream of children’s books such as the centers of high SES levels are able to do. It is also likely that the number of books in these children’s homes is lower thus impacting their development (Reading Literacy in the United States, 1996; Hart & Risley, 1995; Hart & Risley, 2003; Shannon, 2014).

Moreover, the results suggest that special education centers have a slightly higher percentage of books that include characters with disabilities than general education centers. Young children’s positive perceptions and attitudes about children with disabilities facilitate positive peer relationships (Diamond & Hong, 2010; Diamond & Tu, 2009). Although, not surprising, it is discouraging that general schools have a lower percentage of these types of books. As indicated in the review of literature (Moss, 2005; Roser, Fuhrken & McDonald, 2007), characters and content of children’s books are important because they can help foster inclusivity in the classroom in any setting, not just ones with mainstream children.

These results suggest a need for increased children's books in early childhood settings that reflect all individuals including those with disabilities. “Children’s literature offering authentic representations of disability can help student with and without disabilities begin to see

meaningful similarities between themselves and others” (Ostrosky, Mouzourou, Dorsey, Favazza & Leboeuf., 2015). “It is vitally important to consider who is represented, who is underrepresented, who is misrepresented, and who is ignored in literature. When books painting diverse and accurate portraits of the incredible range of ability and disability are not available to students, we must question what we are teaching them about who is valued and what is important” (Pennell, Wollak & Koppenhaver, 2018). Children’s books are important in teaching non-tangible values such as empathy, kindness and compassion through which all children, both typically developing and disabled can benefit.

### *Limitations*

There are several limitations to this initial study that should be addressed. One limitation is that only books within one geographical area were examined. Different geographical locations might result in different findings. Furthermore, the books examined were the ones that children had access to at the time of data collection and do not represent all the books available for use. Additionally, the researcher did not have access to formal measures of socioeconomic status levels for the schools that participated. Rather, judgement of socioeconomic level was based on publically available factors including the tuition charged, funding streams, enrollment requirements that target a specific socioeconomic population, availability of a sliding scale, and whether a center accepts tuition or is non-tuition based.

Moreover, the study was limited to the amount and types of children’s books within the disability spectrum can be a limitation because there are mass quantities of book genres available. Yet, this study just focuses on those portraying characters with disabilities. The role the disabled character is holding within a book can also be a limiting factor. To obtain effective result data the disabled character would have to hold a variety of roles to allow for validity of

which character roles are more effective. In addition, when doing the literature review, the researcher found there was not much information about how the content and characters of books is important to learning.

### *Implications*

At the root of any literacy based research, it has been established that “learning to read is affected by the foundation skills of phonological processing, print awareness and oral language” (Neuman & Dickinson, 2003, p.12). According to Whitehurst & Lonigan (1998), “children with more of these skills profit more from reading instruction, learn to read sooner and read better than do children with less of these skills” (p. 850). Regardless of the type of book present, phonological awareness is an important foundational skill of reading.

First and foremost, all involved in early childhood education including parents, educators, principals, and advocates, as well as the general public need to better embrace inclusion and diversity if we are to become a better world. The behavior must move from talking to action to better affect change. After all, it has been over 40 years since IDEA was enacted and the lack of books including characters with disabilities reflects reality.

This study also suggests the need for future research in order to address a number of questions. For example: would the addition of children’s books geared towards those with disabilities foster an increased sense of self-acceptance? Do disabled children that live in low socioeconomic areas feel included? Is the addition of children with disabilities within mainstream media and entertainment such as comic books or reader digests an effective way to increase inclusion of the disabled among their peers? Is there a need for change within places that serve people with disabilities in terms of the kind of books provided?



Taking these questions into consideration, it is important to have reading material portraying disabilities in an inclusive manner. As Alam (2016) asserted, “We need books that proclaim the territory of childhood belongs to all children” (p. 8), yet children with disabilities may be one of the most underrepresented and inadequately portrayed groups in children's literature (Blaska, 2004; Dyches, Prater, & Jenson, 2006). It is also important to break up the lessons into smaller increments to prevent stagnation and help the child feel accomplished regularly throughout the learning process. Based on this study, a major recommendation is that more books including characters with disabilities are featured in the classrooms, even when resources are limited. A reasonable goal would be that the percent of books including characters with disabilities in classrooms is the same as the percentage of the children in the United States with disabilities. Local school districts personnel as well as policymakers could help with this initiative, including legislation similar to IDEA and Section 504 of the Rehabilitation Act.

#### *Future Research*

Given the lack of research on this topic, the current study should be replicated. Future studies should also examine the relationship between teachers' beliefs about books in general, and in particular, books with themes about disabilities. Additional studies should be conducted to investigate the relationship between geographic regions. Moreover, conducting a similar study in just one particular socioeconomic status and how that varies between schools, neighborhoods, or areas of population in that socioeconomic status is recommended. Furthermore, teacher's beliefs on books with disabilities in their classroom and how it influences students in their respective class could be studied. In addition, parent's beliefs about children with disabilities and the inclusion of books about them in the home environment could be conducted. Children themselves could also be studied to discern their beliefs about books including characters with

disabilities. This topic could also be extended to toys. For example, toy sets with characters in wheelchairs, hearing aids, cochlear implants, crutches, and braces such as Little Tikes Wheelchair and Ramp are recommended.



*Figure 2. Little Tikes Wheelchair and Ramp*

As classroom environments become more diverse, it is important to create a space that is warm, inviting and accepting, especially for children with disabilities. Children, parents and teachers participate in collective and individual book reading. The messages that books contain can be more impactful than adults can fathom. Increasing the number of books that feature characters with disabilities provides examples and a way to figure out the true voices of children, both typical developing and children with special needs.

### *Conclusion*

The importance of reading is difficult to overstate as reading impacts all those involved in a literacy focused culture. Cognitive development shapes a child's capacity for literacy before children themselves can read words. This is done by having others read to them and facilitate discussion about what was just read. Furthermore, reading books helps cultivate many necessary life skills such as critical thinking, problem solving, and effective communication. Books help us understand the world we live in.

The number of books a child is exposed to is also of paramount importance in literacy focused cultures. In high and low income socioeconomic regions, there is a great disparity in the amount of books available. As studies have shown, the less that a child is exposed to literacy wise, the less prepared they are for academic achievement. Within this, the content and characters of a book are important. They are important because they contribute to effectively emphasize how a child could or could not react to a particular real life situations. Moreover, books that include characters with disabilities can help teach children, both with and without disabilities, to interact effectively and appropriately between peers. A much greater effort is needed to adequately represent children with exceptionalities in early childhood classrooms.

## References

- A Comparison of ADA, IDEA, and Section 504. (n.d.). Retrieved from <https://dredf.org/legal-advocacy/laws/a-comparison-of-ada-idea-and-section-504/>
- Aikens, N. L., & Barbarin, O. (2008). Socioeconomic differences in reading trajectories: The contribution of family, neighborhood, and school contexts. *Journal of Educational Psychology, 100*(2), 235-251. <http://dx.doi.org/10.1037/0022-0663.100.2.235>
- Alam, R. (2016). We don't only need more diverse books. We need more books like *The Snowy Day* [Web log post]. Retrieved from [http://www.slate.com/blogs/nightlight/2016/08/02/ezra\\_jack\\_keats\\_the\\_snowy\\_day\\_is\\_a\\_model\\_for\\_treating\\_black\\_characters\\_in.html](http://www.slate.com/blogs/nightlight/2016/08/02/ezra_jack_keats_the_snowy_day_is_a_model_for_treating_black_characters_in.html)
- Andrews, S. E. (1998). Using inclusion literature to promote positive attitudes toward disabilities. *Journal of Adolescent & Adult Literacy, 41*(6), 420-426.
- Barnett, W.S., Carolan, M.E., Fitzgerald, J., & Squires, J.H. (2012). *The state of preschool 2012: State preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research. Retrieved from <https://nieer.org/wp-content/uploads/2016/08/yearbook2012.pdf>
- Blachman, B.A. (1984). Relationship of Rapid Naming Ability and Language Analysis Skills to Kindergarten and First-Grade Reading Achievement. *Journal of Educational Psychology, 76*(4), 610-622. Doi: <https://dx.doi.org/10.1037/0022-0663.76.4.610>
- Blachman, B.A. (2000). Phonological Awareness. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of Reading Research*. New York: Longman.
- Blaska, J.K. (2004). Children's literature that includes characters with disabilities or illnesses. *Disability Studies Quarterly, 24*(1), article 866. <https://doi.org/10.18061/dsq.v24i1.866>
- Blaska, J.K., & Lynch, E. C. (1998) Is everyone included: Using children's literature to facilitate the understanding of disabilities. *Young Children, 53*(2), 36-38.
- Bradley, R.H., Corwyn, R.F., McAdoo, H.P. & Coll, C. (2001). The home environments of children in the United States. Part I: Variations by age, ethnicity, and poverty status. *Child Dev. 72* (6), 1844-67. Retrieved from <http://www.jstor.org/stable/3654382>
- Bradley R. H., Corwyn R. F. (2002). Socioeconomic status and child development. *Annu. Rev. Psychol. 53* 371–399. [10.1146/annurev.psych.53.100901.135233](https://doi.org/10.1146/annurev.psych.53.100901.135233)
- Bremond, C. Landy, J. & Pavel, T. (1995). *Thematics: New Approaches*. Albany, NY: State University of New York Press.
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Buckingham, J., Beaman, R. & Wheldall, K. (2014). Why poor children are more likely to become poor readers: The early years. *Educational Review, 66*(4), 428-446. Doi: [10.1080/00131911.2013.795129](https://doi.org/10.1080/00131911.2013.795129)

- Diamond, K. E., & Tu, H. (2009). Relations between classroom context, physical disability and preschool children's inclusion decision. *Journal of Applied Developmental Psychology*, 30(2), 75–81.
- Diamond, K. E., & Hong, S. (2010). Young children's decisions to include peers with physical disabilities in play. *Journal of Early Intervention*, 32(3), 163–177.
- Dollinger S. J., Matyja A. M., & Huber J. L. (2008). Which factors best account for academic success: Those which college students can control or those they cannot? *Journal of Research in Personality*, 42(4), 872–885.
- Duff, D., Tomblin, J.B., & Catts, H. (2015). The Influence of Reading on Vocabulary Growth: A Case for a Matthew Effect. *Journal of Speech, Language and Hearing Research* 58(3), 853-864. Doi: 10.1044/2015\_JSLHR-L-13-0310
- Dyches, T., Prater, M.A., & Jenson, J.(2006). Portrayal of disabilities in Caldecott books. *Teaching Exceptional Children Plus*, 2(5). Retrieved from <http://hdl.lib.byu.edu/1877/3468>
- Emery, D.W. (1996). Helping readers comprehend stories from the characters' perspectives. *The Reading Teacher*, 49 (7), 534-541.
- Ensar, F. (2014). How Children Construct Literacy: Piagetian Perspective. *International Journal of Secondary Education*, 2(2), 34-39. Doi: 10.11648/j.ijsedu.20140202.12
- Epstein, H. (2001). *An Outline of the Role of Brain in Human Cognitive Development*. Cambridge: Elsevier Publishers.
- Family and Community Engagement Research Compendium. (2018). *Access to Books* Retrieved from <http://teacher.scholastic.com/products/face/pdf/research-compedium/access-to-books.pdf>
- Fisher Procedure Demonstrated with an Example (n.d.) Retrieved from [http://www.stat.purdue.edu/~tqin/system101/method/method\\_fisher\\_sas.htm](http://www.stat.purdue.edu/~tqin/system101/method/method_fisher_sas.htm)
- Favazza, P.C., & Odom, S. I. (1997). Promoting positive attitudes of kindergarten-age children toward people with disabilities. *Exceptional Children*, 63(3), 405-418.
- Gallaudet Research Institute (2006). Regional and national summary report of data from the 2006-2007 Annual Survey of Deaf and Hard of Hearing Children and Youth. (GRI Gallaudet University, Washington, DC).
- Gertner B. L., Rice M. L., & Hadley P. A. (1994). Influence of communicative competence on peer preferences in a preschool classroom. *Journal of Speech and Hearing Research*, 37(4), 913. Retrieved from <http://0-search.ebscohost.com.library.uark.edu/login.aspx?direct=true&db=cms&AN=9408252177&site=ehost-live&scope=site>
- Gervay, S. (2004). Butterflies: Youth literature as a powerful tool in understanding disability. *Disability Studies Quarterly*, 24(1) [www.dsqsds.org](http://www.dsqsds.org).913–923.

- Graziano, A. M. (2002). *Developmental disabilities: Introduction to a diverse field*. Boston: Allyn and Bacon.
- Greenberg, J. & Weitzman, E. (2014). *I'm Ready! How to Prepare Your Child for Reading Success*. Toronto: Hanen Early Language Program.
- Greenspan, S. & Wieder, S. (1998). *The Child with Special Needs*. Reading, MA: Addison-Wesley
- Hart, B. & Risley, T. R. (1995). *Meaningful Differences in the Everyday Experiences of Young American Children*. Baltimore, MD: Brookes Publishing Company.
- Hart, B. & Risley, T.R. (2003). The Early Catastrophe: The 30 Million Word Gap by Age 3. *American Educator*, 27(1), 4-9. Retrieved from <https://www.aft.org/sites/default/files/periodicals/TheEarlyCatastrophe.pdf>
- Hoffman, M. L. (1987). The contribution of empathy to justice and moral judgment. In N. Eisenberg & J. Strayer (Eds.), *Cambridge studies in social and emotional development. Empathy and its development* (pp. 47-80). New York, NY: Cambridge University Press.
- Houtrow A. J., Larson K., Olson L. M., Newacheck P. W., & Halfon N. (2014). Changing trends of childhood disability, 2001-2011. *Pediatrics*, 134(3), 530–538. Retrieved from <http://pediatrics.aappublications.org/content/pediatrics/early/2014/08/12/peds.2014-0594.full.pdf>
- Huitt, W., & Hummel, J. (2003). Piaget's theory of cognitive development. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved from <http://www.edpsycinteractive.org/topics/cognition/piaget.html>
- Hung, T. (2016). *Key to statistical result interpretation: P-value in plain English*. Retrieved from <https://www.students4bestevidence.net/p-value-in-plain-english-2/>
- Jaeger, E. L. (2016). Negotiating Complexity: A Bioecological Systems Perspective on Literacy Development. *Human Development*, 59(4), 163-187. Retrieved from <https://www.karger.com/Article/Abstract/448743#>
- Kieffer M. J. (2010). Socioeconomic status, English proficiency, and late-emerging reading difficulties. *Educational Research*, 39(6), 484–486. doi: 10.3102/0013189X10378400
- Kieffer M. J. (2012). Before and after third grade: longitudinal evidence for the shifting role of socioeconomic status in reading growth. *Reading and Writing*, 25(7), 1725–1746. doi:10.1007/s11145-011-9339-2
- Lang, S.S. (2005, September). Urie Bronfenbrenner, father of Head Start program and pre-eminent 'human ecologist,' dies at age 88. *Cornell Chronicle*. Retrieved from <http://news.cornell.edu/stories/2005/09/head-start-founder-urie-bronfenbrenner-dies-88>
- Leicester, M., & Taylor, D. (2010). *Critical thinking across the curriculum: developing critical thinking skills, literacy and philosophy in the primary classroom*. Retrieved from <https://0-ebookcentral-proquest-com.library.uark.edu>

- Lightfoot, C., Cole, M., & Cole, S. (2013). *The development of children* (7<sup>th</sup> ed). New York, NY: Worth Publishers
- Lukens, R.J. (1999). *A critical handbook of children's literature* (6<sup>th</sup> ed). New York: Longman
- Maclean, M., Bryant, P., & Bradley, L. (1987). Rhymes, nursery rhymes, and reading in early childhood. *Merrill-Palmer Quarterly*, 33(3), 255–281.
- McLeod, S. (2018, June 6). *Jean Piaget's Theory of Cognitive Development*. Retrieved from <https://www.simplypsychology.org/piaget.html>
- Morgan, P. L., Farkas, G., Hillemeier, M. M., & Maczuga, S. (2009). Risk factors for learning-related behavior problems at 24 months of age: Population-based estimates. *Journal of Abnormal Child Psychology*, 37(3), 401-413. doi:10.1007/s10802-008-9279-8
- Moss, B. (2005). Making a case and a place for effective content area literacy instruction in the elementary grades. *Reading Teacher*, 59(1), 46-55. doi:10.1598/RT.59.1.5s
- NCES -Facts about Children's Literature.U.S. Department of Education, National Center for Education Statistics, from <http://www.nea.org/grants/facts-about-childrens-literacy.html>
- Neuman, S.B. (1999). Books make a difference: A study of access to literacy. *Reading Research Quarterly*, 34(3), 286-301.
- Neuman, S. & Celano, D. (2001). Access to Print in Low-Income and Middle-Income Communities: An Ecological Study of Four Neighborhoods. *Reading Research Quarterly* 36(1), 8-26.
- Neuman, S., & Dickinson, D. (2003). *Handbook of Early Literacy Research, (Vol.1)*. New York: Guilford Press.
- Nevills, P. (2011). *Build the Brain for Reading, Grades 4-12*. California: Corwin Publishers.
- Newacheck P. W., Halfon N, & Budetti, P. P. (1986). Prevalence of activity limiting chronic conditions among children based on household interviews. *Journal of Chronic Diseases*, 39(2), 63–71.
- Norton, D.E., Norton, S.E., & McClure, A. (2003). *Through the eyes of a child: An introduction to children's literature* (6th ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.
- Ostrosky, M.M., Mouzourou, C., Dorsey, E.A., Favazza, P.C., & Leboeuf, L.M. (2015). Pick a book, any book: Using children's books to support positive attitudes toward peers with disabilities. *Young Exceptional Children*, 18(1), 30-43. doi: <https://doi.org/10.1177/1096250613512666>
- Pennell A.E., Wollak B., & Koppenhaver D.A. (2018). Respectful Representations of Disability in Picture Books. *The Reading Teacher*, 71(4), 411–419. doi: 10.1002/trtr.1632
- Planty, M., Hussar, W., Snyder, T., Kena, G. KewalRamani, A., Kemp, J., Bianco, K., Dinkes, R., Ferguson, K., Livingston, A., & Nachazel, T. (2009). *The Condition of Education 2009*. Retrieved from <https://nces.ed.gov/pubs2009/2009081.pdf>

- Pogash, C. (2016). In San Jose, poor find doors to library closed. *New York Times*, p.A13. Retrieved from [https://www.nytimes.com/2016/03/31/us/in-san-jose-poor-find-doors-to-library-closed.html?\\_r=1](https://www.nytimes.com/2016/03/31/us/in-san-jose-poor-find-doors-to-library-closed.html?_r=1)
- Prater, M. A., & Dyches, T. T. (2008). *Teaching about disabilities through children's literature*. Westport, CT: Libraries Unlimited.
- Reading Literacy in the United States: Findings from the IEA Reading Literacy Study. (1996) U.S. Department of Education, National Center for Education Statistics, from <https://nces.ed.gov/pubs/web/96258.asp>
- Rohde T. E., & Thompson L. A. (2007). Predicting academic achievement with cognitive ability. *Intelligence*, 35(1), 83–92.
- Roser, N., Martinez, M., Fuhkren, C., & McDonald, K. (2007). Characters as guides to meaning. *The Reading Teacher*, 60(6), 548-559 Doi: <https://doi.org/10.1598/RT.60.6.5>
- Salisbury, M., Styles, M., Alemagna, B., Smy, P., Riveros, I., Laurence King Publishing, & Studio Ten and a Half,. (2012). *Children's picturebooks: The art of visual storytelling*. London: UK: Laurence King Publishing
- Stahl, S. A., & Murray, B. A. (1994). Defining phonological awareness and its relationship to early reading. *Journal of Educational Psychology*, 86(2), 221–234. <https://doi-org.library.uark.edu/10.1037/0022-0663.86.2.221>
- Stockar, D. (2006). *The Importance of Literacy and Books in Children's Development: Intellectual, Affective and Social Dimensions*. Retrieved from <http://www.ibby.org/awards-activities/activities/ibby-yamada-fund/ibby-yamada-2006-rwanda/the-importance-of-literacy-and-books-in-childrens-development/>
- Types of Books to Read to Young Children (2018). Retrieved from <https://ucanr.edu/sites/ReadytoSucceed/TypesofBooks/>
- Urie Bronfenbrenner. (n.d.). Retrieved from <https://www.bctr.cornell.edu/about-us/urie-bronfenbrenner/>
- U.S. Department of Education. (2004). *Building the Legacy: IDEA 2004*. [Website] Retrieved from <http://idea.ed.gov/explorer>
- U.S. Department of Education. (2010). Thirty-five Years of Progress in Educating Children With Disabilities Through IDEA. Retrieved from <http://www2.ed.gov/about/offices/list/osers/idea35/history/idea-35-history.pdf>
- Vasconcelos, K. (2017, February 07). Phonemic Awareness as a Predictor of Reading Success. Retrieved from <https://www.scilearn.com/blog/phonemic-awareness-foundational-reading-skills>
- Whitehurst, G., & Lonigan, C. (1998). Child development and emergent literacy. *Child Development*, 69(3), 848-872. doi: <https://doi.org/10.1111/j.1467-8624.1998.tb06247.x>
- World Health Organization. *Disabilities*. (2016, March 08). Retrieved from <http://www.searo.who.int/topics/disabilities/en/>



- Xie, Y., Potmesil, M., & Peters, B. (2014). Children who are deaf or hard of hearing in inclusive educational settings: A literature review on interactions with peers. *Journal of Deaf Studies and Deaf Education, 19*(4), 423-437. Doi: 10.1093/deafed/enu017
- Zucker, T., Cabell, S., Justice, L., Pentimonti, J & Kadervaek, J. (2013). The role of frequent, interactive prekindergarten shared reading in the longitudinal development of language and literacy skills. *Developmental Psychology, 49*(8), 1425-1439. doi: 10.1037/a0030347

## Appendices

### Appendix A: Research Compliance Protocol Approval Letter



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**To:** Jacquelyn Elisabeth Thompson  
BELL 4188

**From:** Douglas James Adams, Chair  
IRB Committee

**Date:** 04/20/2018

**Action:** **Exemption Granted**

**Action Date:** 04/20/2018

**Protocol #:** 1803110043

**Study Title:** Access to Print for Disabled Children of Poverty: Differential Access to Children's Books and Disabilities.

The above-referenced protocol has been determined to be exempt.

If you wish to make any modifications in the approved protocol that may affect the level of risk to your participants, you must seek approval prior to implementing those changes. All modifications must provide sufficient detail to assess the impact of the change.

If you have any questions or need any assistance from the IRB, please contact the IRB Coordinator at 109 MLKG Building, 5-2208, or [irb@uark.edu](mailto:irb@uark.edu).

cc: Laura Kathleen Matters Herold, Investigator

## **Appendix B: Permission to Conduct Research Sent to Principals or Administrators of Schools**

March 14, 2018

[School Address]

Re: Data Collection for Masters' Thesis

To Whom It May Concern:

My name Jacquelyn Thompson and I am a graduate student at the University of Arkansas. I am currently pursuing my thesis called "Access to Print for Disabled Children of Poverty: Differential Access to Children's Books and Disabilities." Within this, I am exploring the link between children's books and their reflection of disabilities to the places that serve those with disabilities across socioeconomic regions of Northwest Arkansas.

Shared reading and access to print have been linked to improved outcomes for young children and linked to socio-economic status (e.g., Zucker, Cabell, Justic, Pentimonti & Kaderavek, 2013; Neuman, 1999). As a community, we know very little about the access to books that diverse children from NWA have. Moreover, we know very little about the types and quality of books available to them. This is problematic, given the importance of a books features and content to children's development of cultural competency and citizenship skills.

To tackle this issue, I would like to learn more about which books are in classrooms and libraries in Northwest Arkansas.

As a result, I am hoping I might be able to visit your classrooms at your facility in [school location] to record children's books available in your school. Furthermore, I would like to survey the teachers of select classrooms from the book collection about their beliefs about children's books. After collecting the data, I would store it on a secure University of Arkansas drive as well as a filing cabinet in a locked room.

Sincerely,

Jacquelyn Thompson  
University of Arkansas  
School of Human Environmental Science  
987 West Maple  
Fayetteville, AR 72701

### Appendix C: Title and ISBN of All Disability Books Recorded

Title	ISBN
I Know Jesus Loves Me	978-0-8249-5553-3
Someone Special, Just Like You	978-0-8050-0481-6
We Can Do It!	1-887734-34-1
Boy	978-1-61067-739-4
My First Book of Sign Language	0-8167-4033-X
I Accept You As You Are!	0-439-62811-3
About Handicaps	0-8027-6174-7
Andy and His Yellow Frisbee	0-933149-83-2
Arnie and the New Kid	0-14-050945-3
Simple Signs	0-670-86282-7
Que bien es ser yo mismo!	978-0-7641-3585-9
Luna and the Big Blur	978-4338-0399-4
Shhh... A book about Hearing	978-1-4048-6541-9
Someone Special Like You	978-0-8050-4268-9
Sesame Street Sign Language	0-394-84212-X
The Only True Incredible Me!	0-89900-819-4
What Do Wheels Do All Day?	978-0-545-26502-7
Sign Language ABC	0-394-87516-8
We Love to Share	978-0-545-80267-3
Happy in Our Skin	978-1-338-16016-1
Hello Goodbye Dog	978-1-338-27462-2

<b>TITLE</b>	<b>ISBN</b>
Friends in the Park	1-56288-347-X
What Does It Mean to be Kind?	978-1-338-08817-5
Children Just Like Me	0-7894-0201-7
Friends at School	0-590-97313-4