

Disabilities In Children's Literature

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By

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Abstract

Do young children notice disabilities in children's literature? That is the question posed and answered by this research. Three stories, each containing a character with a different disability, were read to preschool, kindergarten, and first grade children. The students were asked questions about the characters and the stories. The children noticed a character that used a wheelchair and one who was deaf, however, they did not take notice of a character with Down syndrome. Clearly, young children are able to notice disabilities that have more physical indicators than disabilities that are only cognitive in nature..

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Do young children notice disabilities in children's literature? That is the question posed and answered by this research. Between one third and one half of children with disabilities are enrolled in child care or preschool that include typically developing peers (Diamond & Huang, 2005) Three stories, each containing a character with a different disability, were read to forty five children in preschool, kindergarten, and first grade. In small groups, students were asked questions about the characters and stories. This paper begins with a literature review of current research regarding children's perceptions of disabilities and how disabilities are portrayed in children's literature.

Literature Review

In the U.S. it is becoming more common for preschoolers with disabilities to be in early childhood programs with typically developing children. In 2001, the U.S. Department of Education reported that more than fifty percent of preschool age children (three to five year olds) with disabilities receive education and intervention in school programs designed for typically developing children.

Diamond (2001) suggested that children in an inclusive preschool program that have positive experiences foster the development of affirmative attitudes towards people with disabilities both during school and later years. However, negative experiences while in an inclusive program can lead to the development of narrow-mindedness about people with disabilities.

Diamond and Huang (2005) examined preschool children's awareness of disabilities and found that children at this age most often notice disability that

affect a person's motor or language abilities. The majority of preschoolers studied recognized children with disability equipment as having a disability in photographs. None of the forty six children, when shown a picture of a child with Down syndrome recognized them as having a disability. Children are more likely to recognize disabilities if there is a physical indicator, or if the individual uses adaptive equipment.

Dyson (2005) studied 43 boys and 34 girls, all ages five to six years old, using an open-ended questionnaire. When children were asked to tell the researcher everything he/she knew about people with disabilities, 45% of the children answered they did not know anything, the children that did answer, defined a disability as a physical problem or the need for help doing things. When asked if they liked children with special needs or disabilities, the majority of children answered positively.

Dugan, Eppinger, Herrmann, Sipsas- Herrmann, Pyburn, and Roberts' (1996) overall findings suggest that students' rejection of a student with a disability depends on four main variables, the context or situation, the child's disability, the gender of the child (girls seem to be more understanding than boys), and age of the children.

According to Lewis, (1993) ages five to twelve are when children's knowledge about others develops rapidly. Physical characteristics are very noticeable to children under the age of seven, which means they would be more likely to notice disabilities with physical indicators, such as a wheelchair or

crutches. Since first graders are usually approximately seven years of age, this would help explain some of the results found in the research. This will be evident in findings discussed later.

Hazzard's (1983) research found that gender has an effect on attitude. Girls usually give people with disabilities a more positive evaluation than boys. This study did not clarify if the gender differences are related to social cues or due to gender differences in degree of acceptance.

Nowicki (2007) studied children's beliefs about learning and physical difficulties. She interviewed 24 boys and 26 girls between 4 and 6 years old and 22 boys and 28 girls between 8 and 11 years old. The study found that older children were able to give some information about the cause of learning difficulties and physical difficulties; however they seemed to put all physical difficulties into one category rather than differentiate them. Older children also tended to feel that learning difficulties could be overcome with effort, but physical disabilities were beyond the person's control. Almost two-thirds of the younger children did not have any information about the causes of learning or physical difficulties. Fifty percent of younger children believed that learning difficulties could be changed over time, and slightly fewer held the same belief about physical difficulties.

Siperstein, Bak, and Gottlieb (2001) conducted a study with sixth grade students. The results indicated that students reacted more positively to normal-looking, capable children with disabilities than to students who look different and

are incapable. The students' attitudes were affected by the appearance of the child with a disability. If the children looked normal and if they could do things for themselves, the sixth grade students reacted more positively than if the child looked abnormal and appeared they would need help doing things.

Nowiki (2005) found that all children, regardless of age or gender, chose the child without disabilities to play with. However if they had to choose a child with a disability, they preferred the child with an intellectual disability over a child with a physical disability.

Van Acker and Valenti (1989) analyzed twenty studies and discovered that across all the studies, results confirmed that typically developing children did not prefer to play with children if they had a disability.

Nowiki and Sandieson (2002) found evidence that children's attitudes towards people with disabilities were often negatively biased. Children's attitudes are in need of improvement. There is also a need for research into the development of intervention programs that will help improve children's attitudes and understanding toward individuals with disabilities.

"The philosophy is that when students understand differences they are less fearful and more likely to develop friendships and accept students who may look, act, and learn differently" (McGinnis, 2006, p. 28)

A study completed by Tamm and Prellwitz (1999) found different results than Nowiki, Sandieson, VanAcker and Valenti (2006). Tamm and Prellwitz (1999) found that most children had positive attitudes towards a child using a

wheelchair. They include the child using a wheelchair in games and other activities. They also thought the child using a wheelchair would have many friends and a high level of confidence. On the other hand, the children also realized that a child using a wheelchair would have complications in both playing and the environment.

Smith and Williams (2001) found different results from other studies. They found children had a positive understanding of the abilities of children with different types of disabilities. The children included in Smith and Williams's research seemed to be more sensitive to the limitations involved with physical disabilities. These children also had an understanding of the effects of emotional and behavioral impairments on social interactions.

Popp and Fu (1981) studied children ages three to five and results indicated these students understand that orthopedic impairments may cause physical limitations. Younger children see the physical impairment as less limiting than older children. The younger children chose the child with braces or using a wheelchair more often than the older children.

The research that was reviewed demonstrates that younger children under seven notice physical differences. However, they have no understanding of what causes physical or learning disabilities. Research also demonstrates that almost half of the children questioned between four and six believed that learning difficulties and physical disabilities can change over time.

Disabilities in Literature

Carithers (2000) also points out children's literature with multicultural characters as well as characters with disabilities can be used to introduce concepts of similarity and differences as well as many different disabilities and cultures to young students. The characters give children understanding through pictures and words, including life experiences the children might be able to relate to.

Prater and Dyches (2005) state children's books that include characters with disabilities can be an especially helpful tool in teaching students about disabilities. They included a list of recommended books with disabilities, giving the title, author, and publisher, awards won by the book, the year it was published, and a brief summary of the plot. Prater and Dyches' review of books published between 1999 and 2003 examined the portrayal of characters with disabilities in children's literature and compared them to results from their earlier book review. The book selection was based on three criteria, the main or supporting character must have a developmental disability, the story must be fiction, and it must have been published between 1999 and 2003.

The results of the study found that of the 34 books reviewed, eleven were picture books and twenty three were chapter books. The study deemed the portrayal of the character positive if the author focused on emphasizing the strengths not weaknesses of the character with a disability, made sure to enhance positive contributions in society, showed the characters acting on their

own choices, and showed the character with relationships. Of the 36 character found in this study, 26 were portrayed as positive.

Children notice peers with disabilities that have physical indicators more often than peers who only have cognitive or emotional disabilities. Children understand that people with physical disabilities will have limitations, however they feel that cognitive disabilities can be overcome by hard work. Younger children said they liked their peers even if a peer had a disability however their attitude changed depending on the type of interactions they experienced with people with disabilities. Girls tend to have a more positive attitude than boys. Literature including characters with disabilities help teach children about people with disabilities, although these characters need to be portrayed accurately and positively.

The questions addressed in the present study were, do children take special notice of a character with a disability? and what kind of disabilities do children notice?

The hypothesis was that children would notice the physical disabilities but still be interested in the characters in the story. However, the less noticeable (visible) disabilities such as Down syndrome and hearing impairments would be less noticed by younger children. It was also hypothesized the older children might notice more differences than the younger children.

Method

The purpose of this study was to analyze how students perceive characters with disabilities in picture books. The research questions included Did the children take special notice of the character with a disability? What kind of disabilities did children notice? Is the character the children noticed portrayed positively or negatively?

Materials

With these questions in mind, the first step was to find books that included a character with a disability. Three different books were chosen each portraying a different disability. *Arnie and the New Kid* by Nancy Carlson is about a cat in elementary school that is in a wheelchair. *Moses Goes to A Concert* by Isaac Millman, details a trip to a concert with a class of deaf students. *We'll Paint the Octopus Red* by Stephanie Stuve-Bodeen is about a little girl whose brother has Down Syndrome.

Setting

The school was located in a rural Appalachian town. The school consisted of mostly middle to upper middle socio –economic class families.

Participants

Three different age groups were included for participation: preschool, kindergarten, and first grade in order to survey a range of developmental levels. All of the students attended the same school. The students in the preschool

class were in the in a half-day afternoon preschool program. The kindergarten and first grade attended a full-day program.

There was an average of 15 students at each level. The preschool group had 11 students, 6 boys and 5 girls. Their ages ranged from 4 to 5 years old. The kindergarten class had 15 students, 7 boys and 8 girls with ages ranging from 5 to 6 years old. The first grade class had 19 students, 8 girls and 11 boys..

Procedures

After parental consent was obtained, 45 children participated in this study. The books were read to the children and then the children were asked questions about the characters and the story. Their responses were recorded by writing down their verbal answers. The data was then analyzed and used to draw the conclusions that will be presented later

While the stories were read to the students and the questions were asked, they were seating in a whole class group on the rug, where they typically sit during daily story time. Students were asked questions in a group and answers were provided in a discussion format so all responses were recorded together. The research was conducted in each classroom during their normal story time.

The students were read the three stories on two different occasions approximately a week apart. During the first visit, the students were told that they would be read a story, and then asked some questions about the stories. The researcher first read the story of *Arnie and The New Kid*. On the second visit, the students were read two stories, *We'll Paint the Octopus Red*, and *Moses*

Goes to A Concert. The researcher asked the same questions as before after each story. Each classroom was visited on the same day.

Instruments

The questions asked about each book were along the same lines but tailored to each story. The questions for each story are outlined below

- Questions for "*Arnie and the New Kid*":
 - What did you notice about Phillip?
 - What did you notice about Arnie?
 - What happened in the story?
 - Did you like the story?
 - Would you be friends with Phillip?
 - Would you be friends with Arnie?
 - What would you do with Phillip?
 - What would you do with Arnie?
- Questions for "*We'll paint the Octopus Red*":
 - What did you notice about Isaac?
 - What happened in the story?
 - Did you like the story?
 - Would you be friends with Isaac?
 - What are some things you would do with Isaac?
- Questions for "*Moses Goes to A Concert s*":
 - What did you notice about Moses?

- What happened in the story?
- Did you like the story?
- Would you be friends with Moses?
- What would you do with Moses?

These questions were chosen to determine if the students noticed the main character had a disability or if they only noticed other characteristics about the character, such as hair color. The children were asked what happened in the story to determine if they followed the plot and if they factored the disability in to the character's actions and the events of the story. They were asked if they would like to be friends with the character to establish if they felt the character was portrayed positively or negatively. The question of what would they do with the character was asked to determine if they factored the disability into the characters' actions and everyday lives.

The students' answers were recorded separately according to story book and grade level. The questions were typed on a paper with space for answers under each question. As the students were asked the questions, their responses were written down and tally marks were made when a comment was repeated. The data was later analyzed by book and by grade. The results will be discussed in depth both by story book and grade level.

Results

Arnie And The New Kid

The first book read to the students was *Arnie and the New Kid*.

Preschool responses. The questions for this book and the preschooler's answers were as follows:

- What did you notice about Phillip?
 - That he was in a wheelchair. (n=5)
 - That he couldn't get up. (n= 2)
 - He is a dog. (n = 1)
 - He couldn't run. (n = 3)
- What did you notice about Arnie?
 - He got hurt. (n = 2)
 - He fell and broke his leg and had to have a cast put on it. (n = 1)
 - He couldn't walk like people do. (n = 1)
 - He had to use crutches. (n=2)
 - He is a cat. (n=2)
- What happened in the story?
 - Arnie fell down the stairs, twisted his arm and broke his leg. (n=1)
 - Arnie ate fast but then got hurt and ate slow. (n=4)
 - He didn't get to talk to his friends because he was slow. (n=2)
- Did you like the story?
 - All students said yes.

- Would you be friends with Phillip?
 - All students said yes.
- Would you be friends with Arnie?
 - No, he was mean to Phillip. (n=4)
 - Yes, because he was nice at the end of the story.
(n=7)
- What would you do with Phillip?
 - Play with him. (n=5)
 - Play board and card games with him (n=1)
 - Help him. (n=3)
- What would you do with Arnie?
 - Help him. (n=3)
 - Play with him. (n=6)

Kindergarten responses. The questions for *Arnie and the New Kid* and the Kindergarten answers were as follows:

- What did you notice about Phillip?
 - That he was in a wheelchair. (n=3)
 - That he couldn't get up. (n= 1)
 - He is a dog. (n = 5)
 - He couldn't run. (n = 3)
 - He couldn't walk. (n=1)
- What did you notice about Arnie?

- He was making fun of Phillip. (n=2)
- He was fast but then he was slow. (n=1)
- He got hurt. (n = 2)
- He fell and broke his leg and had to have a cast put on it. (n = 3)
- He couldn't walk like normal people. (n = 1)
- He had to use crutches. (n=2)
- What happened in the story?
 - Arnie was making fun of Phillip and then he got hurt and Phillip was nice to him. (n=1)
 - Arnie fell down the stairs, twisted his arm and broke his leg. (n=1)
 - Arnie ate fast but then got hurt and ate slow. (n=4)
 - He didn't get to talk to his friends because he was slow. (n=2)
- Did you like the story?
 - All students said yes.
- Would you be friends with Phillip?
 - All students said yes.
- Would you be friends with Arnie?
 - No, he was mean to Phillip. (n=4)

- Yes, because he was nice at the end of the story.
(n=7)
- What would you do with Phillip?
 - Play with him. (n=5)
 - Play board and card games with him (n=1)
 - Help him. (n=3)
- What would you do with Arnie?
 - Help him. (n=3)
 - Play with him. (n=6)
 - Teach him to be nice all the time. (n=1)

First grade responses. The questions for *Arnie and the New Kid* and the first graders answers were as follows:

- What did you notice about Phillip?
 - That he was in a wheelchair. (n=6)
 - That he couldn't get up. (n= 1)
 - He is a dog. (n = 1)
 - He couldn't run. (n = 3)
 - He couldn't walk. (n=3)
 - He is nice. (n=1)
 - Got teased a lot. (n=1)
- What did you notice about Arnie?
 - He was making fun of Phillip. (n=1)

- He was mean. (n=2)
- He was fast but then he was slow. (n=1)
- He got hurt .(n = 2)
- He changed. (n=1)
- He fell and broke his leg and had to have a cast put on it. (n = 3)
- He couldn't walk like normal people. (n = 1)
- He had to use crutches. (n=2)
- What happened in the story?
 - Arnie was making fun of Phillip and then he got hurt and Phillip was nice to him. (n=1)
 - Arnie fell down the stairs, twisted his arm and broke his leg and had to go to the hospital. (n=2)
 - Arnie ate fast but then got hurt and ate slow. (n=4)
 - He didn't get to talk to his friends because he was slow. (n=2)
- Did you like the story?
 - All students said yes.
- Would you be friends with Phillip?
 - All students said yes.
- Would you be friends with Arnie?
 - No, he was mean to Phillip. (n=5)

- Yes, because he was nice at the end of the story.
(n=6)
- What would you do with Phillip?
 - Play board and card games with him. (n=2)
 - Play video games and watch TV. (n=4)
 - Push his wheelchair. (n=3)
 - Help him. (n=3)
- What would you do with Arnie?
 - Help him. (n=3)
 - Play with him. (n=6)
 - Teach him to be nice all the time. (n=1)

We'll Paint the Octopus Red

The second book read to the student was, *We'll Paint the Octopus Red*.

Preschool responses. The preschooler's answers are as follows:

- What did you notice about Isaac?
 - Sticks out his tongue. (n=3)
 - He wants to play kickball when he grows up. (n=1)
 - Can't walk yet. (n=1)
 - He is a baby brother. (n=3)
- What happened in the story?
 - Her daddy was sad. (n=1)
 - His eyes were red and wet. (n=1)

- She and her daddy talked about what to do with her baby brother. (n=2)
- They painted. (n=2)
- They went to a farm. (n=1)
- They went on a plane. (n=2)
- Did you like the story?
 - All the students said yes.
- Would you be friends with Isaac?
 - All students said yes.
- What would you do with Isaac?
 - Take care of him. (n=3)
 - Play with him. (n=3)
 - Eat fruit snacks with him. (n=1)
 - Play ball with him. (n=2)
 - Feed him. (n=1)
 - Paint with him. (n=1)

Kindergarten responses. The Kindergarteners answers are as follows:

- What did you notice about Isaac?
 - He is in the hospital. (n=2)
 - He is a baby. (n=3)
 - He wants to play kickball when he grows up. (n=1)
 - Can't walk yet. (n=1)

- He is a baby brother. (n=3)
- What happened in the story?
 - His eyes were red and wet. (n=1)
 - She and her daddy talked about what to do with her baby brother. (n=4)
 - They painted. (n=2)
 - They went to a farm. (n=1)
 - They went on a plane. (n=2)
- Did you like the story?
 - All the students said yes.
- Would you be friends with Isaac?
 - All students said yes.
- What would you do with Isaac?
 - Take care of him. (n=3)
 - Play with him. (n=2)
 - Eat snacks with him. (n=1)
 - Play ball with him. (n=2)
 - Feed him dinner. (n=1)
 - Put him to bed. (n=2)

First grade responses. The first graders answers are as follows:

- What did you notice about Isaac?
 - He would have to go to the doctor. (n=1)

- He could play kickball when he gets bigger. (n=1)
- Can't walk yet. (n=1)
- Might need help to walk. (n=1)
- We won't be able to do some things. (n=1)
- He would still be able to do things. (n=2)
- He is sick. (n=1)
- He has Down Syndrome. (n=1)
- He is a baby. (n=3)
- What happened in the story?
 - Her dad was sad. (n=1)
 - She and her daddy talked about what to do with her baby brother. (n=3)
 - Her baby brother got sick. (n=1)
 - They talked about painting. (n=2)
 - They talked about going to a farm. (n=1)
 - They talked about going on a plane. (n=2)
- Did you like the story?
 - All the students said yes.
- Would you be friends with Isaac?
 - All students said yes.
- What would you do with Isaac?
 - Take care of him. (n=3)

- Play with him. (n=3)
- Help him do things. (n=1)
- Eat with him. (n=1)
- Play ball with him. (n=2)
- Feed him. (n=1)
- Paint the octopus with him. (n=1)

'Moses Goes to a Concert'

The last book read to the students was *Moses Goes to A Concert*.

Preschool responses. The preschooler's answers are as follows:

- What did you notice about Moses?
 - He plays the drums. (n=2)
 - He has a big dog. (n=1)
 - He goes to school. (n=3)
 - He talks with his hands. (n=1)
- What happened in the story?
 - His class goes on the bus. (n=1)
 - They go on a trip. (n=2)
 - They hear a band. (n=1)
 - The teacher gives them balloons. (n=2)
 - They get to play on the drums and stuff. (n=3)
- Did you like the story?
 - All students said yes.

- Would you be friends with Moses?
 - All students said yes.
- What would you do with Moses?
 - Play with him. (n=4)
 - Go to the band with him. (n=1)
 - Play drums. (n=2)
 - Talk to him with my hands. (n=1)

Kindergarten responses. The Kindergartener's answers are as follows:

- What did you notice about Moses?
 - He plays the drums. (n=2)
 - He goes to school. (n=3)
 - He talks with his hands. (n=1)
 - He can't hear. (n=1)
 - He uses sign language. (n=1)
- What happened in the story?
 - His class goes on the bus. (n=1)
 - They go on a trip. (n=2)
 - They meet the lady that plays the drums. (n=1)
 - They see a band. (n=1)
 - The teacher gives them balloons. (n=2)
 - They get to play on the drums and stuff. (n=3)
 - They feel the music with the balloons. (n=1)

- Did you like the story?
 - All students said yes.
- Would you be friends with Moses?
 - All students said yes.
- What would you do with Moses?
 - Play with him. (n=4)
 - Go to the band with him. (n=1)
 - Play drums. (n=2)
 - Talk to him with my hands. (n=1)
 - Learn sign language with him. (n=1)

First grade responses. The First graders answers are as follows:

- What did you notice about Moses?
 - He plays the drums. (n=1)
 - He goes to school. (n=2)
 - He talks with his hands. (n=1)
 - He can't hear. (n=1)
 - He uses sign language. (n=1)
 - He is deaf. (n=1)
- What happened in the story?
 - His class goes on the bus. (n=1)
 - They go on a trip. (n=2)
 - They meet the lady that plays the drums. (n=1)

- They see a band. (n=1)
- The teacher gives them balloons. (n=2)
- They get to play on the drums and stuff. (n=3)
- They feel the music with the balloons. (n=1)
- Did you like the story?
 - All students said yes.
- Would you be friends with Moses?
 - All students said yes.
- What would you do with Moses?
 - Play with him. (n=4)
 - Go to the band with him. (n=1)
 - Play drums. (n=2)
 - Talk to him with my hands. (n=1)
 - Learn sign language with him. (n=1)

Results by Grade Level

The next section presents a summary of the results by grade level.

Preschool Results

The point of this research was to determine if children notice disabilities in picture books. The book *Arnie and the New Kid* has a boy in a wheelchair as one of the main characters and a boy who gets hurt and has to use crutches. When asked about what they noticed about Phillip 45% (5 out of 11 children) noticed

that he was in a wheelchair, 18% (2 out of 11) noticed that he couldn't get up, 27% (3 out of 11) noticed that he couldn't run.

When asked about Arnie, 9% (1 out of 11) mentioned that he fell and broke his leg and had to have cast put on it, 18% (2 out of 11) noticed he got hurt, 18% (2 out of 11) noticed that he had to use crutches. When asked what happened in the story 9% (1 out of 11) noticed that Arnie fell down broke his leg and hurt his arm.

We'll Paint the Octopus Red is about a little girl whose baby brother is born with Down Syndrome. She and her dad talk about what she and the baby can do. None of the preschoolers noticed that the baby had a disability.

Moses goes to a Concert, is about a child who is deaf and attends a school for the deaf. He and his class go on a field trip to a concert. None of the preschoolers noticed that he was deaf.

Kindergarten Results

Arnie and the New Kid has a boy in a wheelchair as one of the main characters and a boy who gets hurt and has to use crutches. When asked about what they noticed about Phillip 20% (3 out of 15 children) noticed that he was in a wheelchair, 6% (1 out of 15) noticed that he couldn't get up, 26% (4 out of 15) noticed that he couldn't run or walk.

When asked about Arnie, 20% (3 out of 15) mentioned that he fell and broke his leg and had to have cast put on it, 13% (2 out of 15) noticed he got hurt, 13% (2 out of 11) noticed that he had to use crutches.

When asked what happened in the story 9% (1 out of 11) noticed that Arnie fell down broke his leg and hurt his arm. 6% (1 out of 15) mentioned that he could not walk like others.

We'll Paint the Octopus Red is about a little girl whose baby brother is born with Down syndrome, she and her dad talk about what she and the baby can do. When asked about the baby brother, Isaac. 13 % (2 out of 15) mentioned he was in the hospital, but none of them noticed that he had a disability.

Moses goes to a Concert is about a child who is deaf and attends a school for the deaf. He and his class go on a field trip to a concert. When asked about Moses, 6% (1 out of 15) noticed that he talked with his hands, 6% (1 out of 15) mentioned that he couldn't hear, 6% (1 out of 15) , observed that he used sign language.

First Grade Results

Arnie and the New Kid has a boy in a wheelchair as one of the main characters and a boy who gets hurt and has to use crutches. When asked what they noticed about Phillip 31% (6 out of 19 children) noticed that he was in a wheelchair, 5% (1 out of 19) noticed that he couldn't get up, 31% (6 out of 19) noticed that he couldn't run or walk.

When asked about Arnie, 15% (3 out of 15) mentioned that he fell and broke his leg and had to have cast put on it, 10% (2 out of 19) noticed he got hurt, 11% (2 out of 19) noticed that he had to use crutches. When asked what

happened in the story 11% (2 out of 19) noticed that Arnie fell down, broke his leg, hurt his arm, and had to go to the hospital.

We'll Paint the Octopus Red is about a little girl whose baby brother is born with Down Syndrome, she and her dad talk about what she and the baby can do. When asked about the baby brother, Isaac. 5% (1 out of 19) observed that Isaac would have to go to the doctor, 5% (1 out of 19) mentioned that he had Down Syndrome.

Moses goes to a Concert is about a child who is deaf and attends a school for the deaf. He and his class go on a field trip to a concert. When asked about Moses, 5% (1 out of 19) noticed that he talked with his hands, 5% (1 out of 19) mentioned that he couldn't hear, 5% (1 out of 19) , observed that he used sign language and 5% (1 out of 19) noticed that he was deaf.

Results by Book

Following is a presentation of the results by book title.

Arnie and the New Kid

This is a summary of what the children in all grades answered to the questions. When asked about what they noticed about Phillip 31% (14 out of 45 children) noticed that he was in a wheelchair, 8% (4 out of 45) noticed that he couldn't get up, 28% (13 out of 45) noticed that he couldn't run or walk. When asked about Arnie, 15% (7 out of 45) mentioned that he fell and broke his leg and had to have cast put on it, 13% (6 out of 45) noticed he got hurt, 13% (6 out of 45) noticed that he had to use crutches. When asked what happened in

the story, 8% (4 out of 45) noticed that Arnie fell down broke his leg, hurt his arm, and had to go to the hospital.

We'll Paint the Octopus Red

This is a summary of the students in all grades answers to questions about *We'll Paint the Octopus Red*. When asked about the baby bother, Isaac, 4% (2 out of 45) noticed that Isaac was in the hospital, 2% (1 out of 45) observed that Isaac would have to go to the doctor, 2% (1 out of 45) noticed he was sick, 2% (1 out of 45) mentioned that he had Down syndrome. Very few of the children noticed that Isaac had a disability, this result could be because of the plot of the book, and might also be possible because Down Syndrome is not as noticeable as the other disabilities portrayed in the other books.

Moses goes to a Concert

This section provides a summary of the responses of all students in all grades to questions about *Moses Goes to a Concert*. When asked about Moses, 6% (3 out of 45) noticed that he talked with his hands, 4% (2 out of 45) mentioned that he couldn't hear, 4% (2 out of 45), observed that he used sign language, and 2% (1 out of 45) noticed that he was deaf.

Discussion

Preschool, kindergarten, and first grade students all noticed the characters with physical disabilities. On the other hand 5% or less of the students in all grade levels surveyed noticed Down syndrome or hearing impairments. These results support the hypothesis that children notice physical disabilities more

readily than less noticeable (visible) disabilities such as Down syndrome and hearing impairments. None of the preschool or first grade students noticed the disability of Down Syndrome or hearing impairments, while 5% of the first grade students noticed the disabilities. These figures loosely support the hypothesis that older children will notice more than younger children.

Previous research by Diamond and Huang (2005) found that preschoolers noticed the more visible disabilities as opposed to Down syndrome. Lewis (2002) also found physical characteristics are very noticeable to children under the age of seven.

While the results of this research confirmed the findings of a number of previous studies, the sample of students in this study was somewhat limited. Had the size of the sample been larger the results would possibly have been more definitive.

As with most learning, the ability to notice disabilities improves with age. Attitudes grow and develop based on the types of interactions children have with the people with disabilities. These experiences may be real-life or vicarious (in books). Prater and Dyches (2005) and also Carithers (200) have stated children's books that include characters with disabilities can be an especially helpful tool in teaching students about disabilities. Since the goal is to develop a positive attitude the characters need to be portrayed positively and accurately.

Conclusion and Recommendation

Children's attitudes towards disabilities can be influenced with planned interventions in the classroom. "The philosophy is that when students understand differences they are less fearful and more likely to develop friendships and accept students who may look, act, and learn differently" (McGinnis, 2006, p. 28) Interventions can be as simple as reading books with characters that have disabilities. This practice helps students develop awareness about disabilities and can foster positive attitudes. Therefore reading books with disabilities should be a purposeful, regular occurrence that continues over extended periods of time to have positive effect on children's attitudes.

A report by Prater (2000) found 46 books with characters with disabilities. In many books, characters with disabilities are usually portrayed as victims, in need of charity, and defined solely by their disabilities or on the other end of the spectrum as having superhuman or saint like characteristics. These portrayals do not give children an accurate understanding of people with disabilities.

There were only forty-six books found with disabilities in 2000, and many of those books did not accurately portray people with disabilities. A number of picture books with disabilities have been made available since 2000, but there are still very few compared to the astronomical number of books in print. There is a need for more books with accurate characterizations of people with disabilities.

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