The Acceptance and Understanding of Preschoolers with Special Needs by Typically Developing Peers

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THE ACCEPTANCE AND UNDERSTANDING OF PRESCHOOLERS WITH SPECIAL NEEDS BY TYPICALLY DEVELOPING PEERS

By

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A Thesis Submitted in Partial Fulfillment of the Requirements for a Degree with Honors (Psychology)

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ABSTRACT

The purpose of this study was to examine the relationship between enrollment in an inclusive preschool program and acceptance and understanding of children with special needs by typically developing peers. Data were collected through questionnaires completed by parents of children attending a private inclusive preschool (n = 6) and a university-based preschool program (n = 5), and interviews with children at these schools. The objective of the interviews was to explore typically developing children’s understanding of specific disabilities (i.e. physical, hearing, vision, Down’s syndrome, and autism) and their general acceptance of children with special needs. The goal of the study was to explore the potential benefits of educating typically developing children and children with special needs together. The hypothesis was that typically developing children at the private inclusive preschool would be more accepting and have a better understanding of physical and developmental special needs compared to the children at the university-based preschool program. Although the pattern of results was consistent with predictions, group differences were not statistically significant. Limitations of the present study are discussed, and directions for future research are suggested.
# TABLE OF CONTENTS

I. Introduction .................................................................................................................. 1
   A. The Effect of Inclusion on Children with Special Needs .................................... 4
   B. The Effect of Inclusion on Children without Special Needs ............................. 5
   C. The Present Study .................................................................................................. 9

II. Method .......................................................................................................................... 10
   A. Participants ............................................................................................................ 10
   B. Settings ............................................................................................................... 11
   C. Measures ............................................................................................................. 12
   D. Procedures .......................................................................................................... 13

III. Results ......................................................................................................................... 14

IV. Discussion .................................................................................................................. 16
   A. Limitations ......................................................................................................... 17
   B. Summary and Conclusion ................................................................................... 21
   C. Suggestions for Further Research ....................................................................... 22

References ....................................................................................................................... 23

Appendix A: Consent Form ............................................................................................. 26
Appendix B: Inclusive Preschool Questionnaire ............................................................... 29
Appendix C: University-Based Preschool Questionnaire ................................................ 31
Appendix D: Photographs ............................................................................................... 33
Appendix E: Descriptors ................................................................................................ 36
Appendix F: Interview Questions ................................................................................... 37
Appendix G: Pictorial Interview Response Cues ............................................................. 38
Appendix H: Means of Competency Scores and Peer Acceptance Scores ................. 39
Appendix I: Correlation Matrix ...................................................................................... 40
INTRODUCTION

Since the 1990s, there has been a movement to fully include young children with special needs in early childhood programs with typically developing peers. This change was influenced by a realization that “The segregation of a child with disabilities is in itself a powerful social act that may negatively affect the child’s social and educational future” (Peck, 1993, p. 3). Changing attitudes about the best way to educate children with special needs led to a push for more inclusive classrooms. Because of education legislation in the 1990s, there is now legal, social, and financial support for children with special needs to be educated in the “least restrictive setting,” so they are often educated alongside typically developing peers (Diamond, 1996). When successful, inclusive schooling in early childhood benefits children with special needs as well as their typically developing peers (Beckman, Capell, Horn, Leiber, Sandall, Wolfber, 1998; Carlson, Helmstetter, & Peck, 1992; Carpenter, 1995; Guralnick, 1990; Jenkins, Odom, & Speltz, 1989).

In 2009, the Division for Early Childhood and the National Association for the Education of Young Children released a joint statement where they defined early childhood inclusion as follows:

Early childhood inclusion embodies the values, policies, and practices that support the right of every infant and young child and his or her family, regardless of ability, to participate in a broad range of activities and contexts as full members of families, communities, and society. The desired results of inclusive experiences for children with and without disabilities and their families include a sense of belonging and membership, positive social relationships and friendships, and development and learning to reach their full potential. The defining features of inclusion that can be used to identify high quality early childhood programs and services are access, participation, and supports (p. 2).
Due to this change in education philosophy and legislation, typically developing children now have a much greater likelihood of engaging in play and learning opportunities in school with their peers who have special needs. In a 1993 survey, Wolery and his colleagues found that 54% of the responding schools met the criteria for inclusion and 75% of the responding schools had at least one child enrolled with a disability. There is no doubt that these numbers have since increased and continue to do so. Children’s early experiences in the classroom with peers who have special needs may be crucial in the development of greater acceptance of special needs and the capabilities of those with special needs (Carlson, Helmstetter, & Peck, 1992; Triandis, 1971).

The purpose of the present study was to examine the relationship between enrollment in an inclusive school program and acceptance and understanding of children with special needs by typically developing peers and to explore the benefits of regular contact between typically developing children and children with special needs. This introduction reviews the research on the benefits of successful inclusion for children with special needs as well as for their typically developing peers.

All through life, but especially in the early years, children are developing attitudes about experiences and the people they encounter. Although these attitudes develop and evolve throughout life, early experiences provide a framework for how people feel about categories of people and things. Mental representations of certain types of people are formed to help children and adults simplify and understand their environment and they are critical in the formation of general beliefs about others (Triandis, 1971). Children’s early experiences with peers with special needs will impact their lifelong beliefs about people with special needs and their understanding of what people with specific special
needs are capable of (Diamond & Hestenes, 1997). Having frequent experiences with children who have special needs may help young children develop a more accurate understanding of those with special needs. When teachers and caregivers foster positive social interactions between children with and without special needs, typically developing children are more likely to have a more positive attitude about people with special needs.

For inclusion to be successful, it is crucial that teachers and caregivers foster positive and productive attitudes about children with special needs (Bricker, 1995). Successful inclusion means that children are given opportunities to develop in all critical areas while communication, understanding, and acceptance are encouraged and facilitated between children with and without special needs by teachers and caregivers (Bricker, 1995). There needs to be opportunity for free choices in peer interaction so that children have a chance to build relationships with peers. Class structure must allow for special interventions to occur in a naturalistic environment so that children with special needs have an immediate opportunity to generalize new social skills in the classroom by practicing them with peers (Bishop, Brown, & McEvoy, 1991; Craig-Unkefer, Fre, Johnson, & Odom, 1999). It is also crucial that caregivers in an inclusive setting are effectively and sufficiently trained, and that there is open communication between the caregivers allowing for successful implementation and maintenance of inclusive programs (Beckman et al., 2004; Hewett, 1999). Because of the focus on integration of children of all abilities in inclusive schools, typically developing children in an inclusive program, where special needs children spend most of the day in the classroom with the rest of their peers, may develop a better understanding and acceptance of children with
special needs when compared to children in schools where children with special needs spend only part of the day in the classroom.

**The Effect of Inclusion on Children with Special Needs**

Research has shown that successful early childhood inclusion benefits children with special needs as well as typically developing children (Carlson, Helmstetter, & Peck, 1992; Freeman, Swim, & Vakil, 2003; Griffin & Rafferty, 2005; Hibbert & Sprinthall, 1995). Children with special needs benefit by being fully integrated as a member of the school community, and by seeing age-typical play behaviors modeled by typically developing peers. Children with special needs learn from their typically developing peers in an inclusive setting through modeling and imitation. In an interview conducted by Hewett for her 1999 study, an early childhood special education teacher stated that the children with special needs had “. . . fifty other teachers because each of the kids are in some way teaching” (p. 541). Hewett observed over the course of the study that children with less advanced skills frequently observed peers participating in class activities and saw them receiving praise for participating, which encouraged the children with special needs to imitate what they saw their typically developing classmates doing (1999).

There are more opportunities for children with special needs to practice newly learned social skills with peers in an inclusive setting (Beckman et al., 2004; Diamond & Hestenes, 1996). During a critical time for language development, establishing relationships gives children a venue to practice social, linguistic, and cognitive abilities (Denning, Jamison, & Stanton-Chapman, 2010). Inclusion allows for explicit social skills training in the classroom between children with special needs who may be less
competent and typically developing children who have a higher skill level and can model appropriate behavior. Research has shown that the levels of social play and appropriate interactions are higher for children with special needs in inclusive settings compared to special-purpose settings (Beckman et al., 2004; Bricker & Lamorey, 1993). Guralnick and Froom (1988) found that children with special needs in inclusive settings participated in more constructive play and had more positive peer interactions than children with special needs in segregated classrooms. Integrated settings bring about improved social competence for young children with special needs, resulting in greater development of language and communication skills, pro-social behaviors, and cognitive skills (Hewett, 1999).

Diamond et al. (1998) also found that there was more interaction between typically developing children and children with special needs, and this predicted peer acceptance of children with special needs. Children were interviewed using an adaptation of the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1984; adapted by Diamond & Hestenes 1994). They were also asked about their willingness to play with hypothetical children with special needs, and observed to see how often children engaged in interactions with typically developing peers and peers with special needs. It was found that there was no difference in social acceptance ratings of hypothetical children with and without special needs. Children said they were equally willing to play with peers with and without special needs, and this matched the observations where children did frequently choose to play with peers who had special needs. The children who expressed more willingness to play
with hypothetical children with special needs were more likely to interact with children with special needs in classroom observations.

The Effect of Inclusion on Children without Special Needs

Developmental gains, participation in classroom activities, and formation of friendships are about the same for typically developing children in inclusive settings and in regular settings (Buysse et al., 2011). In addition, typically developing children who experience an inclusive classroom may benefit by developing more empathy and responsiveness. Diamond and Hestenes (1996) identified many benefits of inclusive schooling for typically developing preschoolers related to their acceptance of children with special needs and responsiveness to those needs. Children completed open-ended interviews and gave competency ratings to describe their ideas of physical and sensory disabilities as well as Down’s syndrome. It was found that, compared to children in schools where special education classes were self-contained, typically developing children in inclusive preschools were more aware of others’ needs and more responsive to those needs. These children were also more accepting of diversity in others, and more likely to say that they could be friends with children with special needs children in photos. However, while the children were aware of the effects of physical disability on motor performance, they were less aware of the consequences of other special needs. Beckman et al. (2004) found, similarly, that typically developing children enrolled in inclusive settings tend to develop greater sensitivity to individual differences in other children.

In a later study, Diamond and Hestenes (1997) investigated what children in inclusive versus regular preschools thought of the competency of children with special
needs using modified dolls and a scale of competency ratings devised by Harter and Pike (1984). In the interviews the children were asked to rate the competency of children with various disabilities (visual impairment, hearing impairment, and motor impairment) on tasks involving motor, visual, and hearing skills as well as on social acceptance. It was found that both age and enrollment in an inclusive classroom contributed to accuracy of children’s ideas about people with disabilities (Carpenter, Diamond, Hestenes, & Innes, 1997). Diamond and Huang also found that enrollment in an inclusive program may have a positive affect on the attitudes of typically developing children towards people with special needs (2005).

It was apparent in interview responses that children in inclusive classrooms did not view people with special needs as something to be avoided, suggesting that their overall experiences and interactions with special needs children were positive. These children were also being taught, as part of the philosophy of inclusion, that everyone is different and everyone contributes. Although the extent of the impact inclusive schooling has on the formation of attitudes and ideas about disabilities is unclear, it is reasonable to suggest that experiences in inclusive classrooms may be critical in the development of children’s understanding and attitudes about people with disabilities (Bricker, 1995). Consistent with interviews with the children, their parents identified sensitivity to the needs of others as the most significant benefit of inclusive schooling for their typically developing children (Diamond & Hestenes, 1996).

In addition to the emotional sensitivity and responsiveness displayed by the typically developing children studied by Diamond and Hestenes, these children had a fairly accurate understanding of the implications of having a disability for various tasks.
They were able to accurately rate children in pictures with physical disabilities as less competent on tasks involving motor skills, and the ratings given by children who were in inclusive schooling were more accurate than the ratings given by the comparison group.

Carpenter et al. (1997) conducted a study to examine the relationship between enrollment in an inclusive preschool and children’s ideas about people with special needs. Children were asked about immediate and long-term consequences of various special needs in two separate interviews. Children were shown dolls modified with adaptive equipment to represent a child with a physical disability, with vision impairment, and with no adaptive equipment to represent a typically developing child. The dolls were described by the interviewer as they were presented to the child. The questions asked during the interviews were about vision, hearing, motor skills, and social acceptance. The researchers found significant links between inclusion and understanding of the special needs. Children enrolled in an inclusive preschool had more accurate understanding of the long-term consequences of special needs compared to children in a regular preschool setting. The children from the inclusive school also gave significantly higher ratings of acceptance to the dolls representing children with special needs compared to children from the regular preschool.

In a study of preschool inclusion by Brown et al. (1999), a time-sampling procedure was used during a systematic observation of child interactions with typically developing peers, peers with special needs, and adults in an inclusive preschool classroom. It was found that although the children with special needs had more adult support and fewer interactions with other children when compared to typically
developing peers, they participated in similar activities and were meaningfully engaged in classroom activities. When compared with typically developing peers, they participated in the same amount of child-initiated and adult-initiated activities in the classroom. In a later study by Brown et al. (2006), acceptance and rejection of preschoolers with special needs by typically developing peers was examined in a mixed-method study at an inclusive preschool. It was found that while a significant number (about 28%) of children with special needs were accepted according to the study’s criteria, about the same percentage of children with special needs were rejected. They found that rejection was associated with a delay in language skills and inability to communicate well, and aggression.

**The Present Study**

Although research is available about how enrollment in an inclusive school influences the accuracy of children’s ideas about disabilities, most of this research focuses on disabilities that are easily represented by modifying dolls to have adaptive equipment (Carpenter, Diamond, Hestenes, & Innes, 1997; Diamond & Hestenes, 1997; Harter & Pike 1984). There is a lack of research on peer understanding and acceptance of children with special needs such as Down’s syndrome or autism that cannot be easily represented with modified dolls. Much of the research is done by asking children open-ended questions about dolls with adaptive equipment (such as hearing aides or wheelchairs) or pictures of children with various special needs. The children’s answers are then categorized and analyzed.

The present study has many similarities to the work by Diamond and Hestenes (1996). However, modifications to the methodology were made in an attempt to make
the stimuli more understandable to the children and to expand the range of special needs examined. Photographs of children unknown by the participating children were used instead of modified dolls, and simple verbal descriptions of the target children were presented to make certain characteristics of the child with special needs more salient. In addition, photos and descriptions of children with Down’s syndrome and children engaging in a repetitive behavior to represent autism were included. The ability to understand a particular special need depends on each individual child’s social and cognitive abilities, and it is difficult to know exactly when this understanding develops (Diamond & Hestenes, 1997). Although preschool children are sensitive to cues associated with physical disabilities, like adaptive equipment, it is believed that special needs that do not require adaptive equipment are not recognized by children until the middle elementary school years (Diamond & Hestenes, 1997). This study examines understanding and acceptance of children with special needs (that do and do not require adaptive equipment) by typically developing peers.

Frequent interactions with peers who have special needs will likely lead to the development of a greater understanding of particular disabilities and to the development of more positive attitudes about people with special needs (Diamond & Hestenes, 1997). Therefore, it is reasonable to surmise that compared to children who do not have experience with children with special needs, typically developing children in an inclusive preschool will have a more accurate understanding of the capabilities of children with special needs. It is also hypothesized that typically developing children in an inclusive preschool will be more accepting of children with special needs than those who have more limited experiences with children with special needs.
METHOD

Participants

Participants were recruited from two early childhood education programs serving children aged two to six years. These schools included one university-based preschool and one private inclusive preschool, located in small towns in Maine. Consent forms describing the study (see Appendix A) were sent home with all the children aged three, four, and five years who did not have a special need requiring an Individual Education Plan. Of the children eligible to participate in this study, 40% from the private inclusive program were given permission to participate, 31.8% from the university-based program were given permission to participate, and 34.4% of all eligible children from both schools were given permission to participate in this study.

The participants in this study were 11 preschool children (three females and eight males) without individual education plans between the ages of 38 months and 65 months (M = 48.27 months). Six participants were from the private inclusive preschool (mean age = 53.5 months) and five were from the university-based program (mean age = 42 months). Six children were three to four years of age, three children were four to five years of age, and two children were five to six years of age. Children recruited from the university-based program were in a single classroom of 18 to 19 children, none of whom was identified as having a special need requiring an Individual Education Plan. Children recruited from the private inclusive program were in a single classroom of 15 children at a time (not all of the children attended every day), including ten children with a special need requiring an Individual Education Plan. Of the participating children, none of the children from the university-based program had regular contact with a child with a
special need, and two of the children at the private inclusive program had regular contact with a child with a special need outside of preschool. Both children had an older sibling with autism, and one also had regular contact with family friends with various developmental disabilities including Down’s syndrome and a family member with agenesis of the corpus collosum.

Settings

The university-based program consisted of one classroom where none of the children had special needs requiring an Individual Education Plan, but one child who had sound processing difficulties wore isolation headphones throughout the day.

The inclusive preschool was one class that included typically developing children (52.4%) and children with special needs requiring Individual Education Plans (47.6%). Children with special needs included one child with Down’s syndrome, six children with autism of varying severity, and three children with speech difficulties. Children with special needs were enrolled for 17.5 to 30 hours per week with intervention and therapy services integrated into classroom activities or occurring in a workspace outside the classroom for five to fifteen hours per week. The classroom was organized for child-directed activities and individual goals were embedded in classroom routines and group activities. The children with special needs were removed from the class for discrete trial instruction for five to ten hours per week, and they were also removed for speech and language therapy and occupational therapy for three to five hours each week. All of the children were included in most group activities. There was no specific intervention intended to develop children’s awareness of special needs, but social interactions were
sometimes facilitated by teachers to encourage effective communication between children with and without special needs.

**Measures**

The measures included a demographic questionnaire and an assessment of children’s evaluations of the cognitive, physical, and social competence of children with various special needs.

*Demographic questionnaire.* This measure included questions on basic information about the child who was to be interviewed and his or her family, such as the child’s age, gender, time spent in preschool, number and ages of siblings, education level of parents, and experience with people with special needs outside of the classroom (see Appendix B and Appendix C).

*Competence measure.* In this assessment, children were shown a series of pictures of children with various disabilities, and each picture was accompanied by a verbal description of the child (see Appendix E). The children in the pictures were the same gender as the participant. One photo showed a child with a wheelchair to represent a physical special need, one with a cane to represent blindness, and one with a hearing aid to represent deafness. Other photos were of children with Down’s syndrome, children lining up toys to represent autism, and a photo of a child who appeared to be typically developing. The special need of each child in the photographs was described as the photo was presented (See Appendix E). The children were then asked to answer several questions about the physical, cognitive, and social competency of each child in the photos (see Appendix F). These questions were similar to those used by Harter and Pike (1984) in their study of a scale of competence and acceptance for young children. To answer the
questions, children chose one of three responses by repeating one of the choices and touching a corresponding drawing of a face (see Appendix G). The possible responses were that the pictured child was very good at the task (smiling face, given a score of 3), kind of good at the task (neutral face, given a score of 2), or not good at the task (frowning face, given a score of 1).

**Procedures**

Parental consent was first obtained for all participating children. One parent of each participating child filled out the demographic questionnaire with a combination of both multiple-choice and open-ended questions (see Appendix B and Appendix C). Each child participated in one interview session lasting about fifteen minutes with the researcher. They were presented with photos and verbal descriptions of children with various special needs and asked to rate the competence of each child. The children from the university-based program were interviewed in a small room away from the classroom, and the children from the private inclusive program were interviewed in a cubicle in a room away from the classroom. The photos were presented in a random order.

**RESULTS**

First, demographic data were examined. Results revealed that the average age of the children in the university-based preschool was 42 months, and the average age at the inclusive preschool was 53.5 months. Children in the university-based preschool had an average of 1.5 siblings, with an average age of 2.42 years, while children in the inclusive preschool had an average of 1.83 siblings, with an average age of 9.18 years. The education level of the parents of the children in the university-based program was on average between a BS or BA and a master’s degree, whereas average parental education
for children in the inclusive preschool was some college or vocational school. Finally, none of the children in the university-based preschool had experience with people with special needs outside of the classroom, while two of the children from the inclusive preschool had extensive experience outside the school setting with people who have special needs. Specifically, both of these children live with a child who has special needs.

To investigate the hypothesis that typically developing children at the private inclusive preschool would be more accepting and have a better understanding of physical and developmental special needs compared to the children at the university-based preschool program, a series of chi-square analyses was conducted. First, the children’s scores were organized into three categories. The questions that targeted children’s knowledge of cognitive competency were added together, and the same was done for the questions that targeted knowledge of physical competency and peer acceptance. Averages of those scores were found for each school and compared (see Appendix H). Several of the averages were consistent with the hypothesis, although none of the differences was statistically significant. Compared to children from the university-based preschool program, children from the inclusive school gave higher average scores for the cognitive competence of the child in the wheelchair, the blind child, the deaf child, and the typically developing child, as well as higher average scores for the physical competency of the blind child, the deaf child, and the typically developing child. Higher peer acceptance averages were given to the blind child, the deaf child, the child with Down’s syndrome, and the typically developing child by the children at the inclusive school. When the children were asked how much they wanted to play with the
hypothetical child, the children at the inclusive school gave higher scores on average for every hypothetical child compared to the scores given by the children at the university-based program (see Appendix H).

Some of the average comparisons were incongruent with the hypothesis, although again these differences were not statistically significant. For example, children at the inclusive school gave higher physical competency ratings to the child in the wheelchair compared to the ratings from the university-based program, and higher cognitive competency ratings to the hypothetical children with Down’s syndrome and autism. The children at the inclusive school gave lower peer acceptance scores on average for the child in the wheelchair and the child with autism compared to the average scores from the university-based preschool.

Bivariate correlation analyses were conducted to determine whether there were significant relationships between scores given and preschool attended, age of participant, gender of participant, number of siblings the participant had, birth rank of the participant among siblings, months enrolled in the current preschool, education level of the participants’ parents, or whether or not a specific reason was given for choosing inclusion (see Appendix I). Significant relationships were found between the participants’ length of enrollment and their rating of the physical competency of the child in a wheelchair ($r = -.64, p < 0.05$), and between the participants’ age and their rating of the physical competency of the typically developing child ($r = .65, p < 0.05$). There was also a significant link between parents defining a specific reason for their child attending an inclusive school and their child’s cognitive competency rating of the blind child ($r = .71, p < 0.05$), but the peer acceptance rating for the child with autism was lower for the
children whose parents gave a specific reason for choosing inclusion \((r = -0.84, p < 0.01)\).

Finally, having contact with people with special needs outside of school was significantly and positively correlated with cognitive competence scores for the blind child \((r = .8, p < 0.01)\), peer acceptance scores for the blind child \((r = .79, p < 0.01)\), and willingness to play with the typically developing child \((r = .64, p < 0.05)\).

**DISCUSSION**

The purpose of this study was to examine the relationship between enrollment in an inclusive school program and acceptance and understanding of children with special needs by their typically developing peers. Overall, the results of this study were not consistent with the hypothesis that typically developing children at the private inclusive preschool would be significantly more accepting and have a better understanding of physical and developmental special needs compared to the children at the university-based preschool program. However, the correlation between age and physical competency ratings of the child in a wheelchair and the typically developing child were consistent with Harter and Pike’s finding that older children have more accurate understanding of the competency of children with various special needs (1997). Overall, there was a pattern in which the children from the inclusive school were more accepting of all types of children. This could be because they have greater empathy due to their school environment. However, it could also be that they come from more empathetic families to begin with—-their parents may promote empathy in their children at home and may have chosen for them to attend a school where they could have more experience with children with special needs because empathy for all types of people is an important family value.
Most likely due to the considerable limitations of this study, the results were inconsistent with results of similar studies that found that typically developing children who attended an inclusive preschool had higher acceptance ratings of children with special needs (Brown et al., 2006; Diamond & Hestenes, 1996) and better understanding of the competency of people with special needs (Carpenter et al., 1997, Diamond & Hestenes 1997).

**Limitations**

This study had a number of limitations. First, the children were not randomly assigned to the private inclusive preschool or the university-based preschool. Many of the parents of children at the inclusive preschool cited reasons for enrolling their children in an inclusive school that reflected a desire for their children to learn to interact well with people who have special needs. It is likely that these parents talk about special needs with their children outside of school. Also, two of the children attending the inclusive school had siblings with a developmental disorder, which probably has a major impact on their understanding and acceptance of children with special needs.

A second major limitation was the small sample size. Both of the schools from which participants were recruited had fewer than 20 children enrolled, and nearly half (47.6%) of the children enrolled in the private inclusive preschool had a special need that required an Individual Education Plan. Eight of the participants were boys and only three were girls, which makes it difficult to make inferences about differences in acceptance and understanding based on gender.

The average age of the participants at the university-based preschool was 11.5 months younger than the average age at the private inclusive preschool. At the private
inclusive program there was one three-year-old participant, three four-year-old participants, and two five-year-old participants. All five of the participants from the university-based program were three years old. It was much more difficult to keep the three-year-olds from both schools on task in comparison to the older children, and since the children at the university-based program were so young, they were less focused on the interview task.

There were noteworthy differences in the demographics of the participants’ families. The average age of the participants’ siblings at the private inclusive preschool was 9.18 years, so most of them were younger siblings and may have had empathetic behavior modeled for them frequently by siblings as well as their parents. The average age of the participants’ siblings at the university-based preschool, on the other hand, was 2.42 years, so most participants from this school were older siblings and did not have the same experience to observe the behavior of an older child like the children at the private inclusive program. Another demographic difference was in education level of the participants’ parents. The parents of the children at the university-based program were more educated than the parents at the private inclusive preschool. All parents from the university-based program had at least a BS or BA and many of them had master’s degrees. At the private inclusive preschool, most parents had some college or had gone to vocational school.

Another limitation was a difference in the comfort level during the interviews at the private inclusive preschool compared to the university-based preschool. I have worked at an Education Technician at the private inclusive preschool for about two years, part-time during the university school year and full-time during the summer and
university vacations. I have been there regularly since before many of the enrolled children attended, so they were relaxed during the interviews and I also had some background insight as to how to help each child maintain focus. At the university-based preschool I spent about five hours with the children as a group before I began the interviews, so although they recognized me they knew me far less than the children at the other preschool. This may have affected the responses the children gave.

The difference in each interviewing environment was also a limiting factor. At the university-based preschool, university students frequently visit to do experiments with the children for their own learning purposes. The room where I interviewed the children was away from the classroom in a quiet area. The rooms had only a table and chairs in them so distractions were very limited. The children often go there with a university student to do different tasks so that the student can learn about child development, so the children are familiar with the setting and the situation. At the private inclusive preschool, interviews were done in a workspace away from the classroom, but near other workspaces where children with special needs were receiving one-to-one interventions. There were many people around and a lot of background noise. The workspaces I interviewed the children in are typically used for one-to-one instruction with children who have special needs. Since all the children I interviewed were typically developing, they had been to that part of the school infrequently. There were also many toys and games around that are used as reinforcers during one-to-one instruction, and for some of the children I interviewed these were a major distraction.

Another limitation is that one of the children at the university-based preschool used noise-canceling headphones throughout the day because of a hearing impairment
that made it difficult for him to attend to relevant auditory stimulus in settings with ambient noise. Only one child explicitly associated his classmate with the photo of the hearing impaired child during the interview, but it is possible that other children made a connection between the noise-canceling headphones that their classmate used and the hearing aides shown in one of the photos during the interview. Ideally, the comparison school would not have had any children who used any kind of adaptive equipment.

A final and critical limitation is that pictures and brief descriptions were used to describe special needs that have a wide array of symptoms and behaviors associated with them. Although characteristic attributes and behaviors were described as the pictures were presented it is impossible to precisely show or describe any special need in this way, especially special needs that have subtle (if any) physical qualities like Down’s syndrome and autism.

**SUMMARY AND CONCLUSION**

The purpose of this study was to examine the relationship between enrollment in an inclusive school program and acceptance and understanding of children with special needs by their typically developing peers. Data were collected through questionnaires completed by parents of children attending a private inclusive preschool and a university-based preschool program, and interviews with children at these schools. The objective of the interviews was to determine typically developing children’s understanding of specific disabilities and their general acceptance of children with special needs. The goal of the study was to explore the benefits of educating typically developing children and children with special needs together. The hypothesis was that typically developing children at the private inclusive preschool would be more accepting and have a better understanding of
physical and developmental special needs compared to the children at the university-based preschool program. Although no significant relationships were found between inclusive school enrollment and understanding and acceptance of children with special needs, there was a pattern observed in which children from the inclusive school appeared more accepting of children with special needs. In addition, significant relationships were found between the participants’ length of enrollment and their rating of the physical competency of a hypothetical child in a wheelchair, and between the participants’ age and their rating of the physical competency of a hypothetical typically developing child.

Suggestions for Further Research

This study was designed to examine the relationship between enrollment in an inclusive preschool and the acceptance and understanding of preschoolers with special needs. Further research with a significantly larger sample would allow for a better examination of the relationships between children’s enrollment in an inclusive program and the acceptance and accuracy of their understanding of children with special needs. It would also be beneficial to study the influence of typically developing children’s experiences with people with special needs outside of school and how that experience affects their awareness of special needs and attitudes about people with special needs.

In future studies, it would be beneficial to match the participants at each school by age, gender, parental education level, and rank in birth order. There were substantial differences in the ages, parental education, and average sibling age among the two schools’ participants, and boys were more represented than girls. These are all factors that could impact a child’s understanding of empathy for others. It would also be helpful
to interview the children from both schools in a room that was similar and that had few
distractions to keep the interviews as similar as possible across schools.

Finally, results of a similar study may be more valid if the interviewer had the
same kind of relationship with the children at each school. Since I have worked at the
private inclusive school most of the children there were familiar with me and I knew
them well. I only spent about six hours at the university-based school before I started
interviewing children there, so although my presence was familiar most of them were
somewhat anxious during the interviews. I was most comfortable interviewing the
children at the inclusive preschool, and they were more comfortable talking with me.
The comfort level of the children certainly could have influenced their responses in the
interviews.
REFERENCES


APPENDIX A: Consent Form

Informed Consent for Parents

You and your child are invited to participate in a research project being conducted by Kelsey Fahey, an undergraduate student in the Department of Psychology at the University of Maine, advised by Cynthia Erdley, a faculty member in the Department of Psychology. The purpose of the research is to examine the relationship between enrollment in an inclusive program and acceptance and understanding of children with special needs.

What will you be asked to do? If you decide to participate, you will be asked to fill out a questionnaire, which I will provide and collect when completed. The questionnaire will ask for basic information about your child and your family (like the age and gender of your child, whether or not your child has siblings, how long the child has attended school, whether or not your child has contact with family members who have special needs, and so on). The questionnaire will take approximately ten minutes to complete.

What will your child be asked to do? If you and your child agree to participate, your child will be asked to complete an interview with me, Kelsey Fahey. In the interview, I will ask your child questions about children in photos, like “Do you think this person is good at running?” or “Do you think this person has a lot of friends?” I will then ask your child how much they would like to play with the child in the photo. If your child does not wish to answer any of the questions during the interview, she/he may say so and I will move on to the next question. The interview will take place at your child’s school, and no one else but your child and I will be present unless your child asks for
someone else to be there. The interview will be tape-recorded and notes will be taken, but no one will be identified by name on the tape or notes.

**Risks to the parent:** Potential risks to participants are very minor. You may feel uncomfortable answering questions on the questionnaire, but you can skip any questions you don’t want to answer.

**Risks to your child:** Potential risks to child participants are also very minor. Your child may feel uncomfortable answering questions during the interview, but he/she can skip any questions they don’t want to answer.

**Benefits:** There will be no direct benefit to you or your child; however, benefits of the research may include a better understanding of the benefits of social interactions associated with inclusion.

**Confidentiality:** Your name and your child’s name will not be on any of the documents. A code number will be used to protect your identity. The key linking names and identification numbers will be stored in my advisor’s office and will be destroyed after data analysis is complete, by May 1st, 2013. The data (i.e., parent questionnaires, transcripts) with ID numbers will be kept indefinitely in a locked filing cabinet in my home, although the cassette recordings of the interviews will be destroyed after data analysis is complete, by May 1st, 2013. Data will only be seen by my faculty advisor, Cynthia Erdley, and me. Your name, your child’s name, or other identifying information will not be reported in any publications. Results will be described only in summary format (e.g., average scores for boys vs. girls).

**Voluntary:** Participation is voluntary. If you choose to take part in this study, you may skip any questions you do not wish to answer. If you give consent for your
child to participate in this study, he/she may skip any questions he or she does not wish to answer.

**Contact Information:** If you have any questions about this study, please contact me by e-mail at kelsey.fahey@maine.edu or by phone at (207) 319-2261. You can also contact my faculty advisor on this study, Cynthia Erdley, by e-mail at cynthia.erdley@maine.edu or by phone at (207) 581-2040. If you have any questions about your rights as a research participant, please contact Gayle Jones, Assistant to the University of Maine’s Protection of Human Subjects Review Board, at (207) 581-1498 or by e-mail at gayle.jones@umit.maine.edu.

Your signature below indicates that you have read and understand the above information. You will receive a copy of this form.

________________________________________  _______________________
Signature                                        Date
APPENDIX B: Inclusive Preschool Questionnaire

Parent Questionnaire

ID #:__________________________

Please answer the following questions about your child who is attending (inclusive preschool).

1. What is your child’s sex?  
   M  F

2. What is your child’s date of birth?  
   ___/___/_____

3. How many siblings does your child have?  
   _____

   If your child has siblings, please list their ages below:

   __________________________________________________________

4. How long has your child attended (inclusive preschool)?

5. Did your child attend a childcare program or a different preschool before attending (inclusive preschool)?  
   Y / N

6. Does your child have any contact outside of school with children or adults who have special needs?  
   Y / N

   If yes, please explain the relationship your child has with this person (no names, please—use categories such as friend, relative, neighbor, etc.) and the nature of this person’s special need below. Please state whether this person is a child or adult:
7. What is your highest level of education, and what is the highest level of education of your child’s other parent?

Parent 1 (Choose One):

- [ ] Below 12th grade
- [ ] High school diploma
- [ ] Some college
- [ ] Vocational school
- [ ] BS / BA
- [ ] Master’s
- [ ] PhD or other professional degree

Parent 2 (Choose One):

- [ ] Below 12th grade
- [ ] High school diploma
- [ ] Some college
- [ ] Vocational school
- [ ] BS / BA
- [ ] Master’s
- [ ] PhD or other professional degree

8. What is your reason for enrolling your child in an inclusive preschool program (if any)?
Parent Questionnaire

ID #: _____________________

Please answer the following questions about your child who is attending (university-based) Preschool.

1. What is your child’s sex? M  F

2. What is your child’s date of birth? _____/_____/_______

3. How many siblings does your child have? ______

If your child has siblings, please list their ages below:

________________________________________________________

4. How long has your child attended (university-based) preschool?

5. Did your child attend a childcare program or a different preschool before attending (university-based) preschool? Y / N

6. Does your child have any contact with children or adults who have special needs? Y / N

If yes, please explain the relationship your child has with this person (no names, please—use categories such as friend, relative, neighbor, etc.) and the nature of this person’s special need below. Please state whether this person is a child or adult:
7. What is your highest level of education, and what is the highest level of education of your child’s other parent?

Parent 1 (Choose One):

_____ Below 12th grade
_____ High school diploma
_____ Some college
_____ Vocational school
_____ BS / BA
_____ Master’s
_____ PhD or other professional degree

Parent 2 (Choose One):

_____ Below 12th grade
_____ High school diploma
_____ Some college
_____ Vocational school
_____ BS / BA
_____ Master’s
_____ PhD or other professional degree
APPENDIX D: Photographs
APPENDIX E: Descriptors

All descriptors will begin with “Let me tell you about this boy/girl . . .”

**Motor disability:** “…he/she is using a wheelchair because he/she can’t walk.”

**Blindness:** “…he/she is using a cane because he/she can’t see.”

**Deafness:** “…he/she is using a hearing aid because he/she can’t hear well.”

**Down’s syndrome:** “…he/she is small, doesn’t talk very much, and doesn’t always listen to the teachers. Sometimes he/she runs away from the teachers, but he/she smiles a lot.”

**Autism:** “…he/she likes to play by him/herself and likes to do the same things over and over. Sometimes he/she falls on the floor and cries a lot.”

**Typically developing:** “…he/she is good at puzzles, likes to run, and plays with friends on the playground. He/she is also a good listener.”
APPENDIX F: Interview Questions

Questions about cognitive competence:

“Do you think he/she is good at puzzles?”

“Do you think he/she is good at counting?”

“Do you think he/she knows the ABCs?”

Questions about physical competence:

“Do you think he/she is good at climbing?”

“Do you think he/she is good at running?”

“Do you think he/she is good at jumping?”

Questions about peer acceptance:

“Do you think he/she has a lot of friends?”

“Do you think he/she has friends to play with on the playground?”

How much would you like to play with this child—a lot, a little, or not at all?
APPENDIX G: Pictorial Interview Response Cues
APPENDIX H: Means (and Standard Deviations) of Competency Scores and Peer Acceptance Scores

<table>
<thead>
<tr>
<th>Target Child Type</th>
<th>Inclusive (n = 6)</th>
<th>University-Based (n = 5)</th>
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</thead>
<tbody>
<tr>
<td><strong>Physical Disability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cog. Competence</td>
<td>6.67 (2.16)</td>
<td>6.40 (2.41)</td>
</tr>
<tr>
<td>Phys. Competence</td>
<td>5.67 (2.34)</td>
<td>5.00 (2.55)</td>
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<tr>
<td>Peer Acceptance</td>
<td>3.83 (1.47)</td>
<td>4.20 (1.79)</td>
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<tr>
<td>Willingness to Play</td>
<td>2.00 (0.63)</td>
<td>1.80 (0.84)</td>
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<tr>
<td><strong>Blind</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cog. Competence</td>
<td>7.00 (1.67)</td>
<td>5.00 (1.22)</td>
</tr>
<tr>
<td>Phys. Competence</td>
<td>6.17 (1.94)</td>
<td>4.00 (1.41)</td>
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<tr>
<td>Peer Acceptance</td>
<td>4.17 (1.47)</td>
<td>3.00 (1.41)</td>
</tr>
<tr>
<td>Willingness to Play</td>
<td>2.50 (0.55)</td>
<td>1.60 (0.89)</td>
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<tr>
<td><strong>Deaf</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cog. Competence</td>
<td>7.83 (1.17)</td>
<td>7.00 (2.55)</td>
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<tr>
<td>Phys. Competence</td>
<td>7.83 (1.47)</td>
<td>6.60 (2.51)</td>
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<tr>
<td>Peer Acceptance</td>
<td>4.17 (0.98)</td>
<td>4.00 (1.22)</td>
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<tr>
<td>Willingness to Play</td>
<td>2.17 (0.98)</td>
<td>1.60 (0.89)</td>
</tr>
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<td><strong>Down’s syndrome</strong></td>
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<td></td>
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<tr>
<td>Cog. Competence</td>
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<tr>
<td>Phys. Competence</td>
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</tr>
<tr>
<td>Peer Acceptance</td>
<td>3.67 (1.97)</td>
<td>3.60 (1.67)</td>
</tr>
<tr>
<td>Willingness to Play</td>
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<tr>
<td><strong>Autism</strong></td>
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<tr>
<td>Cog. Competence</td>
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<tr>
<td>Phys. Competence</td>
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</tr>
<tr>
<td>Peer Acceptance</td>
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<td>Willingness to Play</td>
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<td>1.60 (0.55)</td>
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<tr>
<td><strong>Typically Developing</strong></td>
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<tr>
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<td>Phys. Competence</td>
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<td>1.60 (0.89)</td>
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</table>

Note: Higher scores mean greater competence. The possible ranges of scores are 3-9 for cognitive competence, 3-9 for physical competence, 2-6 for peer acceptance, and 1-3 for willingness to play.
APPENDIX I: Correlation Matrix

<table>
<thead>
<tr>
<th>Physical Disability</th>
<th>Blind</th>
<th>Deaf</th>
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<tbody>
<tr>
<td></td>
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<td>P</td>
</tr>
<tr>
<td>Age</td>
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<td>-.17</td>
</tr>
<tr>
<td>Gender</td>
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<td>-.01</td>
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<tr>
<td># Siblings</td>
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<td>.07</td>
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<tr>
<td>Birth Rank</td>
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<tr>
<td>Length of Enrollment</td>
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<td>Contact outside of school</td>
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<td>-.02</td>
</tr>
<tr>
<td>Reason for choosing inclusion?</td>
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<td>-.08</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Down’s Syndrome</th>
<th>Autism</th>
<th>Typically Developing</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>P</td>
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<tr>
<td>Age</td>
<td>.4</td>
<td>.32</td>
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<tr>
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</tr>
<tr>
<td>Reason for choosing inclusion?</td>
<td>.09</td>
<td>-.02</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed)  
**Correlation is significant at the 0.01 level (2-tailed)

C = cognitive competence  
P = physical competence  
PA = peer acceptance  
W = willingness to play
Author’s Biography

Kelsey Ann Fahey was born in Schenectady, NY on April 5, 1991. She was raised in Bangor, Maine and graduated from John Bapst Memorial High School in 2009. Majoring in psychology, Kelsey has minors in child development and family relations as well as in studio art.

Upon graduation, Kelsey plans on working with preschoolers with special needs for a year, then returning to school to work on an advanced degree in educational psychology.