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Abstract

This study looks at how children with and without disabilities interact with each other. Findings show that attention may need to be paid to the encouragement of initiating interactions and to helping young children without disabilities understand and respond to children who have very high support needs.

Keywords: Pre-school age, Friendship

Inclusion of Preschoolers with Profound Disabilities: An Analysis of Children's Interactions

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The purpose of this study was to explore the nature of spontaneous peer interactions in a full-inclusion preschool. Three children with profound disabilities were observed for a total of 480 min each in indoor and outdoor supervised play. Three children without disabilities were observed under the same conditions for comparison purposes. Results of the study showed variation in the behavior of the children with disabilities, also showed that the children with disabilities had many opportunities to participate in peer social interactions and engaged in interactions comparable in length to those of their peers without disabilities. Findings also indicate that particular attention may need to be paid to the encouragement of initiating interactions and to helping young children without disabilities understand and respond to the idiosyncratic behaviors of peers with profound disabilities.

DESCRIPTORS: early childhood, early intervention, integration, least restrictive environment, mainstreaming, multiple handicaps, peers without handicaps, play, preschoolers

Over a decade of research has demonstrated that carefully planned integrated early education programs result in increased learning opportunities for preschoolers with disabilities and in positive developmental and educational outcomes for young children without disabilities (Guralnick, 1990; McLean & Hanline, 1990; Odom & McEvoy, 1988). A large portion of this research has focused on the measurement of social interactions between children with and without disabilities. This study of social interactions is vital because a basic level of interaction is necessary for children to benefit from the processes of observational learning, social reinforcement, attitude change, and friendship formation (Guralnick, 1981). Studies of social interactions in mainstreamed preschools indicate that children with disabilities tend to be isolated from their peers without disabilities if interactions are left to chance. That is, children without disabilities communicate with other such children more often than they communicate with peers with disabili-

ties (Faight, Balleweg, Crow, & van den Pol, 1983; Field, Roseman, DeStafano, & Koewler, 1981, 1982), choose other such children as playmates and friends more often than they choose children with disabilities (Guralnick, 1980; Peterson, 1982; Peterson & Haralick, 1977; Strain, 1984), and prefer to sit next to peers without disabilities in group activities (Cavallaro & Porter, 1980). Although the effectiveness of a variety of methods to promote social interactions in mainstreamed settings has been demonstrated (McEvoy, Odom, & McConnell, 1992), early descriptive studies provided evidence that the physical integration of preschoolers with disabilities did not necessarily result in their social integration.

None of these preschool integration studies reported including children with profound disabilities. Although the preschool integration research has provided no evidence that a child with a particular type or level of disability is better suited for an integrated preschool setting (Strain, 1990), and the values surrounding the full inclusion of individuals with severe disabilities have been well articulated (Meyer, Peck, & Brown, 1991), young children with profound disabilities typically are not integrated into early education settings (Thompson et al., 1991). Because so few young children with profound disabilities attend community early education programs, little is known about the social interaction patterns of these children when they are fully included in regular early education environments.

The purpose of the current study was to explore the nature of peer social interactions in a preschool program that fully included children with profound disabilities. Specific questions asked were:

- What behaviors occur within spontaneous social interactions between children with and without disabilities?
- Who initiates and terminates the interactions?
- How long do the interactions last?
- What is the reciprocal nature of specific behaviors within the interactions?
- How often do spontaneous social interactions occur?

Methods

Participants

Three children with disabilities and three children without disabilities participated in the study. The latter children—Brian (chronological age [CA] = 59 months), Reuben (CA = 57 months), and Latoya (CA = 46 months)—were currently attending the preschool program and had also attended the program during the previous year. They were selected for participation during the first week of the 8-week summer program by their teachers because they were “typical” in their social interactions and overall development and were of the same sex and similar in age to the children with disabilities.

All three children with disabilities were identified by local school systems as having profound mental disabilities. The author knew the children with disabilities and their families and recruited them for participation in the summer program. In addition to a profound mental disability, Jerek (CA = 58 months) was diagnosed as having cerebral palsy and seizures. He initiated and responded to social interactions through eye contact, smiles, and occasional vocalizations. He was able to hold his head in midline for approximately 10 s when seated and supported at the chest or when lying prone on a wedge. He was able to reach toward objects, but unable to grasp them. During the academic year, Jerek attended a self-contained preschool classroom located on a regular elementary school campus. He attended the summer program because summer services were not available through his school district.

Crystal (CA = 45 months) had Rett syndrome, seizures, and hypotonia. She engaged in repetitive hand behaviors and often shook her head, squealed, and gazed intently at peers. She was able to support herself in a walker and sit independently for several minutes and was learning to make choices through eye gaze and/or gestures. During the previous year, Crystal had attended a mainstreamed preschool. She attended the summer program because a mainstreamed setting was not available to her during the summer.

Robin (CA = 60 months) had dual sensory impairments (his only visual ability is light perception, and he has profound hearing loss in the right ear and moderate loss in the left ear) and a history of extreme abuse and neglect. He usually responded to familiar adults, but infrequently responded to unfamiliar adults and peers. He walked independently, but often dropped to the ground and/or walked on his toes. He mouthed objects frequently and engaged in eye poking and head slapping. He was able to vocalize several sounds, but did not use the sounds consistently to communicate. He had attended a segregated school the previous year. His foster parents were negotiating an integrated placement with the school system and chose placement in the

summer program as a transition to a permanent integrated placement.

Setting

The research took place at an 8-week full-inclusion summer program conducted at the Educational Research Center for Child Development (a year-round preschool) located on the campus of Florida State University. The preschool, accredited by the National Association for the Education of Young Children, implemented a developmentally appropriate play-based curriculum. Classrooms were arranged into centers, including areas for sociodramatic play, quiet time (books and manipulatives), art and other fluid material activities, block and microdramatic play, and science and computer activities. The outdoor learning area provided for sand and water play, sociodramatic play, climbing, and swinging daily. A different picnic table activity (e.g., telephones, message pads, and pencils; woodworking; macaroni necklaces) and varying outdoor equipment (e.g., large balls, wading pools) were also available outdoors each day.

Although the center provided a full-day program, at the request of their parents, the children with disabilities attended from 9:00 a.m. until 12:30 p.m. During this time, they participated in 45 min of teacher-supported outdoor play, 60 min of teacher-supported indoor play, 30 min of group activities (such as reading books on the floor or dancing to music), 15 min for snack, and 30 min for lunch. The remaining 30 min were occupied with transitions, toileting, and washing.

The preschool served 46 children in two classrooms. Twenty-one children ages 2;6 to approximately 3;6 (years; months) attended one classroom; 25 children from approximately age 3;7 until the age of eligibility for kindergarten attended the other classroom. Jerek and Robin attended the class for older children, along with Brian and Reuben. Crystal attended the classroom for younger children with Latoya. (This classroom also enrolled a child identified as having language delays and behavioral challenges.) The preschool maintained ratios of age, sex, and ethnic background that reflected national demographics. Children of university faculty, staff, and students as well as children from the community attended the program.

Teachers held a baccalaureate degree in Early Childhood Education or Child Development and had experience teaching. Two teachers and two paraprofessionals staffed each class. One master's degree student in Early Childhood Special Education (as a preservice practicum experience) was added to each class for each child with disabilities. Vision, speech/language, and feeding consultations were available. The staff participated in 2 hr of in-service training prior to integration and in weekly consultation with the author during the 8-week program. Parents of children with disabilities visited with

Table 1
Definitions of Social Behaviors Observed

Behavior	Definition
Initiation	<p>Social behaviors that started an interaction; a social behavior directed to a peer that had not been preceded by a behavior from the peer in the previous 3 s</p> <p>Movements that caused a child's head, arms, or feet to come in contact with another child or to come in contact with the toy that was being used by another child; included communicative gestures, such as waving or extending the arms toward another child</p> <p>Vocalizations directed toward another child that may or may not have accompanied motor-gestural responses</p>
Response	<p>Social behaviors emitted within 3 s following another child's social behavior</p>
Positive behavior	<p>Movements used for initiation or response that indicated positive, cooperative, and accepting behavior; hug, kiss, hand-holding, light touch, wave, sharing toys, pointing, smile, mutual focus on an object</p> <p>Vocalizations used for initiation or response that indicated positive, cooperative, and accepting behavior; saying another child's name, asking another child a question; vocalizations excluding angry shouts, cries, whines</p>
Negative behavior	<p>Movements used for initiation or response that indicated negative, hostile, rejecting behavior; hit, pinch, kick, butt with head, nonplaying push or pull, grabbing toys, destroying another child's construction</p> <p>Vocalizations used for initiation or response that indicated negative, hostile, rejecting behavior; angry shouts, whines, screams, name-calling</p>
Termination behavior	<p>Behaviors that indicated the ending of an interaction; behaviors preceded by a social behavior of another child within 3 s; walk away, turn away, adult interruption, child directed behaviors toward adult; two consecutive "no response" behaviors</p>

Behaviors did not differ as a function of the indoor and outdoor setting. Therefore, data collected in the two settings were combined for a total of 96 five-minute observation periods per target child. With the exception of the data collected for normative comparison purposes, all interactions occurred between children with and without disabilities. No interactions including only children with disabilities were observed, although there were opportunities for such interactions to occur. Tables 2, 3, and 4 summarize the data regarding interactions involving the children with disabilities. Table 5 presents information about the children without disabilities.

As shown in Table 2, the mean number of interactions per 5-minute observation period varied among the children with disabilities, but the mean number and range of interactive behaviors per interaction was approximately the same for the three. The majority of interactions for the children with disabilities were initiated by peers without disabilities, and Crystal, Robin, and Jerek were engaged in interactions over 95%, 79%, and 92% of the observation periods, respectively. Table 3 shows that children with disabilities responded to positive initiations by children without disabilities 47.73% of the time. Within ongoing interactions, children with disabilities positively responded to peers without disabilities over half (59.45%) of the time.

Table 4 shows that, when children with disabilities positively initiated interactions, less than half (35.78%) were followed by a positive response from peers. However, within the context of ongoing interactions, the positive responses of children with disabilities were followed by positive responses from peers over half (55.03%) of the time. All of Crystal's and Jerek's and 83.33% of Robin's "no responses" were followed by continued attempts at interaction by peers. When peers without disabilities ended an interaction, the termination occurred immediately after a positive response by the child with disabilities a mean of 34.75% of the time, after negative response 40.74% of the time, and after "no response" 5.97% of the time.

Because the behaviors of Brian, Reuben, and Latoya were very similar, they are reported together in Tables 2 and 5. Although they engaged in substantially more interactions than did the children with disabilities (Table 2), the mean number of behaviors per interaction was only slightly higher than for the children with disabilities. Data also show that they responded to positive initiations at a higher rate (58.46%) than did the children with disabilities (47.73%). However, the percentage of positive responses to positive responses within ongoing interactions was comparable for all the children in the study (i.e., 59.45% and 56.79% for children with and without disabilities, respectively).

Tables 4 and 5 show that, when children without

their children before the program began. During the first day of the summer program, the children with disabilities were introduced to the children without disabilities as new classmates.

Highly structured interventions to promote social interactions between children with and without disabilities were not implemented, because a major emphasis of the center's curriculum was to promote social interactions among all children. Play activities were planned and the environment arranged to promote interactions. For example, a tire swing hung horizontally and a porch swing allowed children to interact while swinging in small groups, and easels placed side by side encouraged interactions during painting. Activities often involved a group effort (such as each child helping decorate a window with a paint handprint or making piñatas in small groups), and large group activities required interactions among children (e.g., "sharing time" that involved children showing friends a favorite item from home or moving to music with a partner). The daily schedule provided large blocks of time for play, thereby allowing ample time for social interactions among the children.

In addition to capitalizing on the ongoing curriculum structure, which promoted interactions among all children, interactions between children with and without disabilities were encouraged within the context of ongoing play activities by:

1. Placing and positioning the children with disabilities to encourage participation in activities (e.g., seating Crystal in the sand area when peers were engaged in sand play or assisting Robin to locate the trampoline when peers were using it).
2. Prompting and reinforcing appropriate social interactions (e.g., "Can Jerek have a taste of the soup you are cooking?" or "Robin likes to pet the bunny. Can he join you?").
3. Modeling appropriate interaction behavior (e.g., offering Crystal a choice between two musical instruments at music time).
4. Interpreting the behavior of the children with disabilities as meaningful (e.g., "When Jerek makes that sound, he's talking to you.").
5. Answering questions of children without disabilities about the children with disabilities as they arose.

Data Collection Procedures

Data were collected Monday through Thursday of the last 4 weeks of the 8-week summer program, for a total of 16 days. Each child was observed 15 min each day indoors during center time and 15 min during outdoor play (240 min indoors and 240 min outdoors). Observations were divided into 5-min intervals, and children were observed according to a predetermined random schedule. That is, one child was observed for 5 min, then another child for 5 min, and so forth until

each child had been observed for 15 min in each setting. Adults were asked to not prompt or reinforce interactions during times of data collection. During each 5-min observation period, each behavior in a spontaneous peer social interaction involving the target child was recorded. Coding began with the first behavior of an interaction and ended with the behavior that terminated the interaction, allowing for the coding of initiation-response interaction chains of behavior and for the coding of more than one interaction per observation period.

Positive and negative social behaviors that served to initiate an interaction, terminate an interaction, or respond to the behavior of another child within an ongoing interaction were recorded. The definitions of these behaviors were adapted from the work of Odom and Strain (1986) and Strain and Timm (1974) and are provided in Table 1. In cases in which interactions were terminated by two consecutive "no responses," the first "no response" was considered to be the termination behavior in that interaction. The two consecutive "no responses" were required to determine that the interaction was ended because many "no response" behaviors were followed by continued attempts to engage the child who had not responded.

Idiosyncratic communicative behaviors were added to the definitions provided in Table 1 when appropriate. These behaviors were identified through discussions with the child's parents and teacher from the previous year and through observations during the first 4 weeks of the summer program. For example, Crystal responded to others by squealing, closing her eyes, and/or shaking her head; Robin often terminated an interaction by hitting his head with his hand; and Jerek would fall asleep to terminate an interaction.

Interobserver Reliability

Videotapes of play interactions that occurred during the first and second weeks of the program were used to train special education graduate student observers. After prestudy agreement between the observers averaged 95% (range 86-98%) for coding of 12 five-minute periods of videotaped interactions for three consecutive training sessions, observers coded live interactions daily during the third and fourth weeks of the program. Agreement at this point was 90% (range 84-98%). During the study, agreement measures were taken by having the two observers simultaneously but independently record behaviors. Reliability data were gathered on a random 30% of the observations for each child. Agreement averaged 89% (range 82-100%). Interobserver agreement was determined by one-to-one correspondence of the occurrence of behaviors within each interaction and calculated by dividing the number of agreements by the number of disagreements plus agreements and multiplying by 100.

Table 2
Descriptive Summary of Social Interactions in 96 Five-Minute Observation Periods

	Crystal	Robin	Jerek	Nondisabled
Number of interactions	332	224	498	1088
Mean number of interactions per 5-min period	3.58 (range 0-8)	0.62 (range 0-7)	5.06 (range 0-9)	10.75 (range 2-17)
Mean number of interactive behaviors per interaction	3.01 (range 2-11)	3.35 (range 2-11)	2.94 (range 2-10)	3.68 (range 2-13)
Mean number of peers with whom target child interacted per 5-min period	5 (range 1-7)	2 (range 1-3)	4 (range 2-5)	4 (range 1-6)
Interactions initiated by children without disabilities	264 (79.52%)	212 (94.64%)	338 (67.87%)	—
Five-minute periods without interactions	4 (4.17%)	20 (20.83%)	7 (7.29%)	0
Ratio of positive (I ⁺ and R ⁺) to negative (I ⁻ and R ⁻) behaviors	30:1	4:1	4.6:1	20:1

Table 3
Responses of Children with Disabilities to Behavior of Their Nondisabled Peers^a

Responses ^b	Percentage of time occurring			
	Crystal	Robin	Jerek	Total
Response to I ⁺				
R ⁺	39.23	44.90	55.92	47.73
R ⁻	4.62	8.16	5.92	6.05
NoR	56.15	46.94	38.16	46.22
Termination	0	0	0	0
Response to I ⁻				
R ⁺	—	100.00	—	—
R ⁻	—	0	—	—
NoR	—	0	—	—
Termination	—	0	—	—
Response to R ⁺				
R ⁺	68.25	41.67	55.47	59.45
R ⁻	1.59	20.83	0	5.04
NoR	30.16	33.33	39.06	33.19
Termination	0	4.17	5.47	2.32
Response to R ⁻				
R ⁺	—	0	—	—
R ⁻	—	0	—	—
NoR	—	100.00	—	—
Termination	—	0	—	—
Response to NoR				
R ⁺	100.00	—	100.00	—
R ⁻	0	—	0	—
NoR	0	—	0	—
Termination	0	—	0	—

^a Adult involvement in interactions not included in computations. Totals not computed if behavior-behavior pair was not possible for all three children.

^b I⁺, positive initiation; I⁻, negative initiation; R⁺, positive response; R⁻, negative response; NoR, no response; Termination, behavior that terminated an interaction; —, did not occur with this child.

disabilities interacted with other such children (compared with their behavior when interacting with children with disabilities), a higher percentage of interactions included more positive responses to initiations (58.46% compared with 35.78%), more "no responses" within ongoing interactions (12.34% compared with 9.59%), and more termination responses to "no response" (68.92% compared with 5.97%). In addition,

Table 4
Responses of Children without Disabilities to Behavior of Children with Disabilities^a

Responses ^b	Percentage of time occurring			
	Crystal	Robin	Jerek	Total
Response to I ⁺				
R ⁺	61.76	100.00	19.08	35.78
R ⁻	0	0	0	0
NoR	38.24	0	80.92	64.22
Termination	0	0	0	0
Response to I ⁻				
R ⁺	—	—	0	—
R ⁻	—	—	0	—
NoR	—	—	100.00	—
Termination	—	—	0	—
Response to R ⁺				
R ⁺	62.16	44.12	51.96	55.03
R ⁻	0	2.94	0	.63
NoR	2.70	2.94	24.02	9.59
Termination	35.14	50.00	24.02	34.75
Response to R ⁻				
R ⁺	33.33	87.50	0	59.26
R ⁻	0	0	0	0
NoR	0	0	0	0
Termination	66.67	12.50	100.00	40.74
Response to NoR				
R ⁺	100.00	83.33	100.00	94.03
R ⁻	0	0	0	0
NoR	0	0	0	0
Termination	0	16.67	0	5.97

^a Adult involvement in interactions not included in computations. Totals not computed if behavior-behavior pair was not possible for all three children.

^b I⁺, positive initiation; I⁻, negative initiation; R⁺, positive response; R⁻, negative response; NoR, no response; Termination, behavior that terminated an interaction; —, did not occur with this child.

when compared with interactions involving children with and without disabilities, the interactions involving children without disabilities included a smaller percentage of "no responses" to positive initiations (37.69% compared with 64.22%) and a smaller percentage of termination responses to responses within ongoing interactions (28.81% compared with 34.75%).

Table 5
Responses of Children without Disabilities used for
Comparison Purposes^a

Responses ^b	Percentage of time occur- ing
Response to I ⁺	
R ⁺	58.46
R ⁻	3.85
NoR	37.69
Termination	0
Response to I ⁻	
R ⁺	0
R ⁻	33.33
NoR	67.67
Termination	0
Response to R ⁺	
R ⁺	56.79
R ⁻	2.06
NoR	12.34
Termination	28.81
Response to R ⁻	
R ⁺	50.00
R ⁻	20.00
NoR	0
Termination	30.00
Response to NoR	
R ⁺	31.08
R ⁻	0
NoR	0
Termination	68.92

^a Adult involvement in interactions not included in computations.

^b I⁺, positive initiation; I⁻, negative initiation; R⁺, positive response; R⁻, negative response; NoR, no response; Termination, behavior that terminated an interaction.

Discussion

The purpose of this study was to explore the nature of spontaneous peer social interactions in a preschool program integrating children with profound disabilities. Each child with disabilities, as well as three peers without disabilities, was observed for 480 min during teacher-supported indoor and outdoor play over a 4-week period. Initiation-response chains of behavior were analyzed to determine the frequency, length, and nature of peer interactions. Because of the small sample size, the results of this study must be interpreted and generalized with caution. However, because preschool mainstreaming research rarely includes children with the severity and type of disabilities of the children included in this study, the study provides data documenting that young children with profound disabilities attending regular early education programs have opportunities to participate in and potentially learn through spontaneous peer social interactions within the context of play activities.

Opportunities to participate in peer social interactions are documented by the finding that the children with disabilities engaged in interactions with peers during the majority of observation periods. This finding conflicts somewhat with those of other studies, in that

the children with disabilities did not seem to be as socially isolated as in other descriptive studies of preschool integration. Although the children with disabilities engaged in fewer interactions than their peers without disabilities, Crystal, Robin, and Jerek interacted with those peers over 95%, 79%, and 92% of the observation periods, respectively. This is substantially more time than reported by Faught et al. (1983), Peterson (1982), and Peterson and Haralick (1977). Although variation in research methodology may account for the different findings, it is also possible that the differing ratio of children with disabilities to children without disabilities influenced social interaction patterns. In the present study, children with disabilities were integrated in more of a natural proportion (less than 10% in each classroom) than in the other studies. In the other studies, more than half of each class was composed of children with disabilities.

The full-inclusion model utilized in this program also may have influenced interactions. In other preschool integration descriptive studies, integration occurred only during certain times of the day (e.g., Field et al., 1981, 1982). In addition, Guralnick (1981) showed that children with mild disabilities were more socially integrated than children with moderate and severe disabilities. However, in this study children with mild disabilities attended the same classroom as their peers without disabilities, but the children with moderate and severe disabilities were enrolled in a separate classroom and were integrated only for select activities. Although the children with disabilities in this study participated in fewer social interactions than did children without disabilities, interactions between the two groups of children were a common event. The children with disabilities clearly were not rejected by or rejecting of peers without disabilities. It may be that the shared experiences created by full inclusion provide the foundation for more social integration.

Social integration also may have been facilitated by the curriculum focus of the preschool program, because the program emphasized learning through interactions with others within the context of play and provided teacher support and ample opportunity in the daily schedule for this to occur. Other studies have indicated that the learning that occurs in integrated settings may be more a function of the curriculum emphasis and quality of instruction than of integration alone (Jenkins, Odom, & Speltz, 1989) and that adequate time for play must be allotted if play is to be socially interactive (Christie & Wardle, 1992). In addition, given the present knowledge base in preschool integration, when designing the inclusion aspect of the summer program, methods to encourage social interactions between children with and without disabilities were incorporated into the existing preschool structure. Thus, the data presented in this study represent the outcomes of an

"eclectic" approach to facilitating full inclusion within the context of a developmentally appropriate play-based curriculum.

A surprising finding of the study was that children without disabilities seemed actively to continue their interactions with children with disabilities to a greater degree than with peers without disabilities. That is, these children followed a "no response" from a peer with disabilities with a positive response over 90% of the time, but responded to "no responses" from peers without disabilities approximately 30% of the time. The majority of "no responses" within the context of interactions including only children without disabilities were followed by termination of the interaction. However, over 60% of interactions involving children with disabilities ended after the child without disabilities received a response from a child with disabilities. In addition, the length of the interactions and the percentage of responses within the context of ongoing interactions were comparable for interactions involving children with and without disabilities. Once the interactions were started, they tended to maintain themselves. Obtaining a response appeared to be rewarding to children without disabilities and to sometimes be the purpose of the interaction. These children were persistent in obtaining a response and, when they received a response, they appeared pleased and would often turn excitedly to another child or to an adult and announce their success. This persistence gave the children with disabilities an opportunity to participate in reciprocal interactions, as well as time to respond.

Although responsive within the context of ongoing interactions, the difficulty in interactions for children with profound disabilities and their peers without disabilities may be more related to the initiation than the maintenance of social interactions. Children without disabilities responded to the positive initiations of the children with disabilities at a lower rate than they responded to the initiations of peers without disabilities, possibly indicating that children without disabilities did not correctly interpret the idiosyncratic social cues of the children with disabilities. Further difficulty related to the initiation of social interactions is evidenced by the finding that children with disabilities initiated fewer interactions than did the children without disabilities. Other researchers have noted the importance of such skills for young children (Corsaro, 1985; Putallaz, 1983; Salisbury, Britzman, & Kahn, 1989), and Guralnick and Groom (1988) have recognized the importance of such skills in integrated preschool settings.

Not unexpectedly, interaction patterns for the children with disabilities varied. Differences between Robin and the other two children with disabilities are most noticeable, because Robin had less contact with peers without disabilities. This difference may possibly be explained by Robin's lower rate of initiation. Other

researchers have found that the ability to initiate social interactions influences the number and type of peer interactions of young children (Hartup, Glazer, & Charlesworth, 1967; Kohler & Fowler, 1985; Strayer, 1980). It is also possible that children without disabilities perceived Robin differently than they perceived Crystal and Jerek. That is, although responding to peers, Robin appeared to be a child who received little pleasure from this contact. He was unable to establish eye contact because of his visual disability, and he did not smile. In contrast, the behaviors used by Crystal and Jerek (i.e., smiling, eye contact, squealing) were more typical and appeared to indicate joy and excitement, and may have been interpreted as such by peers, thus reinforcing more frequent interactions. In addition, the only reports of negative outcomes of preschool integration of which the author is aware have involved children with visual disabilities (i.e., Simon & Gilman, 1979; Tait & Wolfgang, 1984). Although these studies attributed the outcomes to lack of support for teachers, visual impairments may present challenges to peer interactions in the preschool years that are different than with other disabilities.

Conclusions

This study showed that three children with profound disabilities in a full-inclusion preschool had many opportunities to participate in peer social interactions because peers without disabilities were responsive to the children with disabilities. The young children with disabilities also were responsive to their peers without disabilities. However, this study indicates that particular attention may need to be paid to the encouragement of initiating interactions and to helping young children without disabilities understand and respond to the idiosyncratic behaviors of peers with profound disabilities. Furthermore, the findings of this study suggest that additional research more closely analyzing the types of communicative behaviors used in interactions and the quality of interactions be conducted. In addition, although supporting the availability of peer interactions as a context for learning in play-based preschools, further research verifying that such settings are effective learning environments for young children with profound disabilities is needed. Additional challenges in relation to the education of young children with profound disabilities include the expansion of opportunities for these children to be integrated into community early education programs and the documentation of interventions that assure full inclusion and developmental progress in such settings.

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