

Boy in the Bubble: Effects of Paraprofessional Proximity and Other Pedagogical Decisions on the Interactions of a Student With Behavioral Disorders

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Abstract. Peer interactions are a critical component of learning; however, students with emotional and behavioral disorders (EBD) are at particular risk of social isolation at school. As students with EBD are increasingly included in general education settings, a better understanding of what affects their interactions is needed. In this qualitative study, structured observations and semi-structured interviews were used to gain an understanding of how specific classroom environmental and pedagogical decisions (i.e., instructional groupings, overall classroom environment, task structure, and proximity of adults) affected the peer interactions of a 2nd-grade student with EBD who was educated in an inclusive classroom with the support of a full-time paraprofessional. Analysis revealed that close physical proximity of the paraprofessional significantly impeded the number of interactions experienced by the student.

The number of students with disabilities who are served in general education classrooms is increasing each year, and increases are predicted to continue (U.S. Department of Education, 2001). Almost half of all school-age children with disabilities are served in general education settings with their peers for more than 79 percent of the school day (U.S. Department of Education, 2005). The trend toward educating students with disabilities alongside their peers without disabilities has been bolstered by the notion that there are critical social and academic benefits to be gained by educating all students in general education environments to the greatest extent possible. Included in the Regular Educa-

tion Initiative (REI) of 1986 was the goal of increasing the academic achievement of all children, including those with disabilities (Will, 1986). More recently, the goals of inclusive educational programming have broadened to also include increasing social competence and fostering positive relationships between students with special needs and their peers without disabilities (Lewis, Chard, & Scott, 1994). These goals continue today and have been incorporated into public policy, most recently in the reauthorization of the Individuals With Disabilities Education Improvement Act (IDEA; 2004), which makes access to general education instruction and curriculum a legal mandate for all students.

Unfortunately, students with emotional and behavioral disorders (EBD) are often considered among the most difficult students to include in the classroom (Yell, 1995). Currently, only 26 percent of all students with EBD spend more than 79 percent of the school day in the general education environment, while another 23 percent spend 40-79 percent of the school day in general education classrooms (U.S. Department of Education, 2005). By definition, students with EBD have difficulty with interpersonal relationships and social adjustment, which makes the stated goals of inclusive education more challenging to achieve. Emotional and behavioral qualities associated with this disability demand that educators attend to the social and emotional needs of this population in order to increase their chances of success in all settings. However, attention to social and emotional needs may be especially important in general education settings, where difficulties with peer interactions and acceptance may be more pronounced.

Relationship Between Interactions and Learning

Educational theorists have drawn attention to the importance of social interaction for decades. In particular, Vygotsky's work provides a theoretical foundation for understanding the importance of social interaction between students. Widely known as the founder of sociocultural theory, Vygotsky focused on the way that children co-create meaning through social interaction (Mahn, 1999). Vygotsky's theory suggests not only that social interaction is important, but also that it is necessary for learning to occur, particularly for students with special needs. He theorized that learning development originates on the social plane, and that we first learn through person-to-person interaction and then individually through an internalization process (Fogarty, 1999).

Maslow (1970), along with other motivational theorists (e.g., Brendtro, Brokenleg, & Van Bockern, 1990; Glasser, 1998), concluded that belonging is an essential human

need that must be met before an individual can achieve a sense of self-worth or self-actualization. Without social interaction, belonging cannot occur, leaving students feeling alone, isolated, and unable to reach their human potential or level of self-actualization (Maslow, 1970). Vygotsky's and Maslow's work continues to have utility in schools today. Including students with disabilities in the general education classroom for the sake of improving academic achievement and for the sake of fostering a sense of social inclusion both are relevant to learning. This leads to the framework for this study, which explored several factors thought to impact interaction.

Conceptual Framework for Current Study

Several well-established theories and hypotheses exist regarding the factors that affect interactions among students. These hypotheses incorporate such variables as instructional grouping arrangements, overall setting characteristics, level of task structure, and the role and proximity of adults in the environment. Many other factors, including academic status (determined in the context of a particular setting) and societal status (determined by, and in relation to, the larger community), most assuredly also affect interactions that students—including students with EBD—have with peers (Cohen, 1994). Additionally, specific student characteristics, such as gender, age, ethnicity, and physical appearance, likely also affect classroom interactions. The authors acknowledge these additional factors, even though they were not examined directly in this study. We believe, however, that the differentiating effects of these additional factors were minimized by our choice of setting.

Regarding pedagogical decisions that affect interactions, we first considered those related to grouping students for instruction, as these decisions are thought to affect the amount and type of interactions that occur in a classroom. Grouping students together in small cooperative groups or in peer-tutor-

ing dyads, for example, has been shown to promote academic and social benefits for all students involved (Johnson & Johnson, 1991), and allows teachers to facilitate interaction between students with and without disabilities who do not normally socialize (Kamps et al., 2002). Use of specific instructional groupings has even been linked with improved social interactions for students with emotional and behavioral problems (e.g., Locke & Fuchs, 1995). Therefore, instructional grouping arrangements were considered a key factor when examining interactions in the classroom.

With regard to the overall classroom setting, Cole and Traupmann (1981) assert that no action (in this case, social interaction) takes place without an action-environment interaction. In other words, when observing behaviors, the effect of the particular setting on that behavior must be considered. For example, the likelihood of peer interactions taking place during a particular classroom lesson is certainly affected by such classroom setting variables as a teacher's stated preferences regarding noise level. Setting constructs relevant to this study were generated by the classroom teachers involved.

In addition to consideration of the overall setting, aspects of specific tasks are also thought to have an impact on classroom interactions. Specifically, the degree of task structure has been shown to affect achievement, as well as the amount and type of interactions taking place within an academic activity (Cohen, 1994). For example, a lesson structured to encourage students to investigate a phenomenon independently and form opinions will evoke different behaviors than a lesson that progresses linearly through specific tasks and checkpoints. Therefore, task structure initially was considered to be an important factor for exploration.

Finally, the proximity of adults during academic tasks also is considered to be a strong factor affecting the interactions of students within classrooms. Some researchers have demonstrated that

teacher attention actually suppresses the interactions of students with disabilities in general education classrooms (Chandler, 1991). Giving consideration to the increasingly prominent role of paraprofessionals in educational programming for students with disabilities, Giangreco, Edelman, Luiselli, and MacFarland (1997) have indicated that the close proximity of a paraprofessional often interferes with peer interactions and relationships. This is especially problematic when paraprofessionals have not been trained to facilitate relationships between students (Causton-Theoharis & Malmgren, 2005). Location of adults in the classroom setting during interactions was therefore an initial consideration.

These hypotheses are assumed to hold true for students without disabilities and also, in many cases, for students with mild disabilities (e.g., Johnson & Johnson, 1986). Students with more significant behavioral and cognitive disabilities, however, are frequently included in general education classrooms only if they can be provided with the support of a full-time paraprofessional (Giangreco, Broer, & Edelman, 1999). When paraprofessionals support students in this way, students might be inhibited from interacting naturally with peers. The presence of a paraprofessional may present both a physical and symbolic barrier, a "bubble" of sorts, that interferes with the relationships of students with disabilities (Bishop, Jubala, Stainback, & Stainback, 1996; Giangreco et al., 1999). In a study by Broer, Doyle, and Giangreco (2005), students with disabilities reported on the impact paraprofessionals had on their educational experiences. Students in that study reported that the paraprofessional support could be characterized in four main themes as: mother, friend, protector, and primary teacher. Both positive and negative examples of each of these themes were included. As more and more students with disabilities are included in this fashion (with the support of a paraprofessional), we must ask: Are the goals of increasing these students' acceptance and achievement

through interaction with peers without disabilities being realized?

This study was designed to examine the pedagogical factors that facilitate or inhibit the social interactions between a student with EBD in an inclusive classroom and his peers. Using some of the well-established factors that are hypothesized to affect social interactions in the classroom as a base (i.e., instructional groupings, overall classroom environment, specific task structure, and proximity of adults), we examined how these factors affected the interactions between one elementary-age student with EBD and his peers. Our goal was to gain an understanding of how specific classroom structures and pedagogical decisions affect the interactions experienced by a student with EBD, served in an inclusive classroom with the support of a full-time paraprofessional.

Methodology

This qualitative case study was conducted in the tradition of social anthropology. While the data in this study were codified to a greater degree than is typical in the realm of social anthropology (Miles & Huberman, 1994), the methods were appropriate because of the study's emphasis on describing interactions and gathering participant perspectives.

Setting

This study took place primarily in an elementary classroom in an urban location in Washington state. The classroom was located in an open "team room," consisting of one large open area and surrounded by three classroom-size alcoves. The team room included two general education teachers, one special education teacher, and one full-time paraprofessional, teaching 51 general education students and 8 students with identified disabilities. Officially, the team room was composed of two 2nd-/3rd-grade general education classes and one class designated as a primary grade special education program. In practice, however, all 59 students were treated as one group. The specific classroom was nominated by

the school district's special education director because it was one of the only elementary classrooms in the district in which students with EBD were being educated in an "inclusive" program, wherein students with disabilities were educated alongside students without identified disabilities for the majority of the school day. Over 75 percent of the students in the team room qualified for the free or reduced-price lunch program. The majority of students in the classroom were from one or more ethnic minority groups (e.g., African American, Native American, Asian American); only 7 percent ($n = 4$) were white. Within the course of a typical day, the students would participate in whole-group activities (led by varying combinations of teachers); large-group activities in which the students split off into the three alcoves (with teachers rotating through); and small-group activities that were dictated by academic needs, pairings, and individual seatwork.

For the purpose of data triangulation, observations were conducted in two non-school settings in addition to the classroom setting. These settings included the participant's home and a fast food restaurant play area. The participant's mother and siblings were present in these non-school settings at the time of data collection.

Participants

One student classified as EBD, referred to as "Gary" throughout, participated in the study. Gary was recruited for participation because he met the criteria of having been placed in the classroom for the entire school year and because his mother consented to his participation. Gary, a 7-year-old 2nd-grader who was considered bi-racial, had been receiving special education services for almost two years at the time of data collection. In qualifying for special education services under the EBD category, Gary's behaviors had been noted as "internalizing"—meaning that his behavioral issues had to do with a lack of appropriate social behaviors (e.g., interactions with peers), rather than with the more common aggressive, "ex-

ternalizing” behaviors. However, because Gary also had a history of having highly disruptive tantrums, a full-time, one-on-one paraprofessional had been assigned to work directly with him for the entire school day when he was first placed in the team room at the beginning of the school year. While the paraprofessional occasionally left Gary’s side to take a break or assist the teachers with various clerical or instructional tasks, she was not officially assigned to support any other student or classroom. This type and level of support continued throughout the entire school year.

Additional study participants included the three team-room teachers, the paraprofessional assigned to Gary, and Gary’s mother. Two of the teachers were white, one was Asian American, and the paraprofessional identified herself as Hispanic. The special education teacher had a master’s degree in special education and had been teaching for four years. The two general education teachers had four and five years teaching experience, respectively. The paraprofessional had a bachelor’s degree in a field unrelated to education and five years’ experience working as a paraprofessional in an elementary setting, including two years in her current placement.

Data Collection

Structured observations across naturalistic settings and semi-structured interviews were used to collect data, which focused on describing interactions and gathering perspectives on factors affecting those social interactions.

Structured Observations. In addition to taking field notes, the first author conducted a series of structured observations, in which the observer tallied interactions and marked setting variables on an observation checklist over a four-week period. Individual observation periods varied in length from 10 minutes to 140 minutes. Observations were conducted for a total of 420 minutes (7 hours) in the team room, 45 minutes in the school’s art classroom, 30 minutes in Gary’s home, and 90 minutes in a fast food

restaurant play area. Observational times and settings were chosen to provide variation in those elements hypothesized to affect interactions among peers (e.g., instructional grouping and task structure).

During all the observations, the first author took continuous, detailed field notes of Gary’s verbalizations and nonverbal behaviors. Global setting variables (e.g., seating arrangements, reference to classroom point systems, general noise level) and activity variables (e.g., introduction and explanation of activity, proximity of adults, type of grouping arrangement used) were noted by the observer during each observation.

Semi-structured Interviews. Semi-structured interviews were conducted with the three team-room teachers, the paraprofessional assigned to Gary, Gary’s mother, and Gary himself. The interview questions were designed to probe the factors that the adults in the classroom believed had an impact on Gary’s interactions with his peers. Additionally, the teachers and the paraprofessional were asked to generate factors that they felt impacted students’ interactions in general (i.e., what type of settings and activities facilitated or, conversely, inhibited peer interactions).

Two separate semi-structured interviews were conducted with Gary. One was designed to elicit Gary’s perspective on those factors that affected his interactions with peers at school, while the second was designed to gain his perspective on those factors affecting his interactions with peers outside of the school setting. Additionally, Gary’s mother was interviewed to determine what factors she thought affected Gary’s interactions with peers outside of school. Transcripts of all interviews were shared with the interviewees to provide opportunities for stakeholder clarification.

Analysis

Handwritten field notes were transcribed into typewritten pages immediately following each observation. Each observation then was summarized with a write-up of

the observer's most vivid impressions from that observation.

At the completion of data collection, typewritten field notes were searched for instances of interactions. For the purpose of this study, an interaction was defined as a relation between two persons such that "the behavior of either one is stimulus to the behavior of the other" (English & English, 1958). Interactions could be verbal or nonverbal, positive or negative, and were not required to be of any particular duration. An interaction was deemed over when one of the persons diverted his or her attention to someone or something else. Once located and identified in the field notes, all interactions were coded according to whether the interaction was verbal or nonverbal and with whom the interaction took place. Interactions were coded as verbal if Gary's response or initiation was verbal, regardless of the other person's response or initiation. Interactions were coded as

nonverbal if Gary's response or initiation was nonverbal, regardless of the other person's actions. Interactive partners were coded as Adult, Peer Non-Disabled, or Peer With a Disability. The only exception was that the peer interactions that took place in the out-of-school settings were not coded for disability status, as disability status was not available to the researchers in those settings. See Table 1 for examples of interactions in the initial coding scheme. Interrater reliability for these initial codes was checked on a subset of 20 interactions by having a second researcher code interactions highlighted in the transcripts, using the initial codes. Interrater reliability was thus established as 100 percent.

Following this initial coding, interactions were grouped by pattern coding. First, Gary's interactions were coded by those activity factors assumed to affect peer interactions in general (i.e., type of grouping, degree of task structure). Addi-

Table 1
First-Level Coding Scheme for Gary's Interactions

Code	Explanation	Example
V-SPED	Verbal interaction with another special education student.	Gary smiles at BJ, shows him his Band-Aid. Gary answers BJ's questions. They become animated, flinging their hands up and down playfully.
V-PEER	Verbal interaction with a non-disabled peer.	Gary asks: "Two?" Ron answers: "It goes here, in the middle." Gary erases something from his paper, fills in the blank correctly.
V-AD	Verbal interaction with an adult.	Gary whispers something to Ms. Campbell. She smiles and responds.
NV-SPED	Nonverbal interaction with another special education student.	Gary hits BJ with his paper. BJ responds: "Stop it, Gary!" Gary sticks his tongue quickly in and out several times at BJ.
NV-PEER	Nonverbal interaction with a non-disabled peer.	Gary lays down on the floor. Jon lays down next to Gary and talks to him. Gary smiles. Jon leaves to talk to someone else.
NV-AD	Nonverbal interaction with an adult.	Ms. Martin compliments Gary's painting. Gary looks at his water can. She asks Gary if he wants to make another picture. Gary looks up at her and nods.

tionally, interactions were coded by setting factors—both those identified by previous research (e.g., proximity of adults) and those also identified through the semi-structured interview process (e.g., existence of specific classroom management routines). Interview transcripts were reviewed on an ongoing basis for references to activity and setting factors to inform and guide the collection of observational data.

Results

Gary participated in only 84 interactions over 420 minutes of observation in classroom settings (i.e., approximately one interaction every 5 minutes). Of those 84 interactions, 52 (62 percent) were with adults. Only 16 of the remaining 32 interactions were with Gary's peers without disabilities; the other 16 peer interactions were with one particular student (referred to here as "BJ"), who also had a disability. In the 120 minutes of observations conducted outside the school setting, 30 additional interactions were noted (i.e., approximately 1 interaction every 4 minutes). Twenty of those interactions were with Gary's mother or the observer, and the remaining 10 were with children—including seven in the fast food restaurant play area and three in Gary's yard. Note that pseudonyms are used for Gary's peers throughout.

Grouping for Instruction

During the semi-structured interviews with Gary's teachers and the paraprofessional, several themes emerged that aligned with the literature on pedagogical choices that facilitate interaction in the classroom. When asked for an example of a time at school when Gary experienced positive interactions with peers, three of the four adults interviewed mentioned "Drop Everything And Read" (D.E.A.R.) time. During this daily activity, Gary would read with one of two students without disabilities while the rest of the class would read silently. The value of this practice is supported by research findings that peer tutoring arrangements not only are effective in improving the academic per-

formance of both members of a dyad (Bloom, 1984), but also are a way to increase interactions between students with and without disabilities (Kamps et al., 2002).

In the semi-structured interview with Gary, he could not come up with an answer to a question about a time when he "had a good time doing some schoolwork with other kids." Therefore, the first researcher asked Gary directly: "How about in D.E.A.R.? Do you work with other kids during D.E.A.R. time?"

Gary: "Yeah! Read, ummm, with Naomi and Dana, I read with. And BJ reads with, um, Dana and I read with, um, Naomi. Sometimes, sometimes, um, Naomi works or reads with BJ and Dana reads with me sometimes."

Interviewer: "Do you like that time?"

Gary: "Yeah. Sometimes I fall asleep."

Even though Gary's response to this question did not sound as positive as his teachers' description of this activity with regard to the level of interactions, a follow-up observation of the D.E.A.R. activity was scheduled to provide additional data.

The 20-minute observation of Gary during a D.E.A.R. session yielded two verbal interactions, only one of which was with his designated peer tutor. The other interaction was with BJ. BJ was the youngest student in the team room (the only 1st-grader), and one of the eight students in the combined class with a disability. At no other time during the 7 hours of observation was Gary observed interacting with either of his designated D.E.A.R. reading partners.

All observational data of Gary's interactions were grouped by pattern codes according to type of instructional grouping. Grouping arrangements were classified as Large Group, Small Group, or Pair activities. The Individual/Independent activity code was not needed because none of Gary's interactions took place during this type of activity. While prior research and the teachers in this study pointed to grouping arrangement as a salient factor affecting Gary's level of interaction in the classroom,

analysis of the observational data by pattern codes did not bear this out. Gary interacted equally as much (or as little) in all of these groupings.

Classroom Environment

Interviews with Gary's teachers and the paraprofessional revealed two setting factors that they believed made interactions easier for all members of the class in general. One was the existence of a group point system. The group point system was a classroom management reinforcement strategy that had been in place in the team room for the entire year. During the school day, all of the teachers referred to the group point system multiple times, although no formal data on the point system's overall effectiveness was maintained. Analysis of the observational data showed that Gary's level of interactions with peers was just as low in the art room setting (where the point system was not a factor), and in the out-of-school observational settings, as it was in the team room setting. This lack of variation led us to the conclusion that the group point system was not a strong factor in facilitating or inhibiting Gary's interactions.

The second factor mentioned by all of the teachers and the paraprofessional during the interview as one that they believed encouraged positive interaction among all students was a class problem-solving strategy. This strategy was employed in times of conflict among students. Because the problem-solving strategy was mentioned by each adult interviewed, the interviewer later asked each teacher and the paraprofessional if Gary used the strategy as well. Only the paraprofessional could recall an instance of Gary utilizing the strategy:

Yeah, I think I remember Gary solving one problem. But he doesn't really solve it. The other person solves it for him more. I think he had a problem with another kid. It wasn't B.J. Basically, I think he had kicked someone, or something like that. He really didn't say much of anything, but they just told him, "I don't like

it when you do that." And I tried to prompt him, and [said,] "Well, if you do something on accident, what do you need to do?" And he kind of sits there and looks at me and you kind of *drag* it out of him, kicking and screaming.

While the problem-solving strategy may have induced positive interactions for other students in the team room, it did not appear to have an impact on Gary's day-to-day level of interactions.

Task Structure

Degree of task structure was another factor that was brought up several times by Gary's teachers as potentially affecting his level of interaction. When asked, "What kinds of things in the classroom make interactions difficult for Gary?" one teacher answered:

I think those times, like last rainy day recess, you know, where it is unstructured and kids are kind of just doing a lot of different things, and Gary tends to be on the computer by himself. He doesn't join a game. So if there's not that structure provided for him, I don't think he knows how to join the other kids. If they are playing with games with manipulatives, you know, a lot of stuff that he would like probably—but he would never join because a *group* of kids were playing.

Gary did not verbalize in his interview responses that a "lack of structure" impacted his ability to interact with peers. However, he did say that it was "a little bit hard" to play at recess and "not easy" to play with kids at home after school. He also said that it was "very hard" asking kids to "do stuff" with him. His favorite school times were math "in the small room" (where he works in a small group with the paraprofessional), and working on the computer. Each of these answers could have been interpreted as evidence for the above-quoted teacher's hypothesis about structure and Gary having difficulty joining groups—except that the observational data did not support it. While "level of structure" proved to be a difficult term to define operationally, playing in

the fast food restaurant play area (during the non-school observation) was clearly an unstructured activity in which Gary was able to interact with similar-age peers—at least seven times during one observational period.

Paraprofessional Proximity

Another round of pattern coding—paraprofessional present (Y) or not present (N)—yielded the clearest finding. Of the 32 peer interactions that Gary participated in at school during the study, only 3 took place in the presence of the paraprofessional. Furthermore, two of those three interactions were ended by the paraprofessional (who directed Gary to be quieter). Since the paraprofessional was by Gary's side for 270 minutes of the 420 minutes of the structured observations (64 percent), this means that over 90 percent of Gary's interactions with peers occurred during 36 percent of the time that he was observed without an adult in his immediate proximity.

Discussion

In analyzing the data for this study, we initially looked to see how a set of well-established factors influenced the classroom peer interactions of one student with EBD in an inclusive classroom. We were surprised to find that most of the structures we identified a priori did not seem to affect this student's level of interaction whatsoever. Gary engaged minimally in interactions with his peers throughout the study regardless of grouping patterns, setting variables, and level of task structure. This finding led us to question whether the nature of Gary's EBD might make his interactions different enough that typical factors were not applicable to his school-day experiences. However, the proximity of the paraprofessional assigned to provide him with support seemed to have a great impact on the number of interactions Gary had with his peers; when the paraprofessional was close by, Gary's interactions were severely inhibited. Of the 32 interactions with peers observed over the course of this study, 29

(90 percent) of them occurred during the short time frame (approximately two and a half hours) in which the paraprofessional was not physically proximate. Of those factors that we expected to influence Gary's level of interaction with his peers, only proximity of adults—specifically, the paraprofessional—emerged as a particularly important pedagogical decision.

Our findings align with literature focused on the detrimental effects of using paraprofessionals to support students in the classroom. For example, Giangreco et al. (1997) studied the effects of paraprofessional physical proximity on students with severe disabilities and found that excessively close paraprofessional proximity caused problems for students. These problems included: interference with ownership and responsibility for general educators, separation from classmates, dependence on adults, and a negative impact on peer interactions. Researchers have found that regardless of educational setting, children who are supported by a paraprofessional spend the majority of their time interacting with the paraprofessional assigned to them (Cole & Meyer, 1991), leaving less time for interaction with peers. Giangreco, Yuan, McKenzie, Cameron, and Fialka (2005) illustrate additional concerns about individual paraprofessional support. These include concerns that paraprofessionals are the least qualified staff members who are teaching students with the most complex learning needs, and that paraprofessional support results in lower levels of direct teacher involvement.

One of the most common answers to the question of how to support students with significant EBDs has been, and continues to be, to assign a paraprofessional to support them in academic and non-academic settings (Giangreco, Edelman, Broer, & Doyle, 2001; Werts, Wolery, Snyder, & Caldwell, 1996; Wolery, Werts, Caldwell, Snyder, & Liskowski, 1995). The findings from this study suggest that the use of paraprofessionals as a support mechanism in the education of students with EBD should be

carefully examined. Determining whether or not a paraprofessional is a necessary support mechanism remains a challenging aspect of developing individualized education programs for students with disabilities who exhibit significant needs. As educators continue to place students with emotional and behavioral issues in general education classrooms, serious consideration needs to be put into the utilization and training of the paraprofessionals assigned to facilitate those placements. It is important to evaluate whether or not paraprofessional support truly matches the educational needs of students and whether that support has the intended effect of helping students meet their academic and social goals in the classroom. When the support of a paraprofessional is not meeting the needs of an individual student, but is still deemed necessary, it is critical, then, to look to training of the paraprofessional to increase the likelihood that the paraprofessional support will have the intended effect. General educators and special educators have a responsibility to ensure that the type of support given is meeting the needs of the student. If educators believe that the support is not appropriate, the educational team as a whole needs to reconsider the supports and create a mutually agreed-upon plan for social and academic student success.

The training that paraprofessionals receive throughout the United States can be described as minimal and often unrelated to facilitating interactions between students with and without disabilities (Giangreco et al., 1997). The type of preparation currently required for paraprofessionals is either two years of post-secondary education or a passing grade on a state or local test related to reading, writing, and mathematics (Black, 2002). These preparation requirements do not take into account any training needs in the area of social interactions for students. In addition, the type of support that results from improperly or undertrained paraprofessionals can serve to maintain the segregation between students with disabilities and their peers (Giangreco et al., 1997).

Because it is clear that paraprofessionals can inadvertently hinder interactions between students, paraprofessionals should receive training on how to facilitate and promote interaction between students with and without disabilities.

To ensure that educators are not defeating the goals outlined in the REI, nor the intent of the least restrictive environment provisions outlined in IDEA (2004), we need to seriously re-examine the utilization and training of paraprofessionals. While we would assume that other setting and activity factors, such as choice of instructional grouping arrangements, task structures, and global classroom management structures, have the ability to affect the number and quality of peer interactions experienced by students with EBD in general education settings, it is possible that the effect of physical proximity of a one-on-one paraprofessional has such a great impact that it may mask any impact that these other, well-researched, factors might have. Addressing the problem of a paraprofessional's impact on classroom interactions will help educators meet the broader goals of inclusive education and hopefully penetrate the isolating bubble of paraprofessional support in which so many students with EBD find themselves when learning alongside their peers.

References

- Bishop, K. D., Jubala, K. A., Stainback, W., & Stainback, S. (1996). Facilitating friendships. In W. Stainback & S. Stainback (Eds.), *Inclusion: A guide for educators* (pp. 155-168). Baltimore: Brookes Publishing.
- Black, S. (2002). Not just helping hands. *American School Board Journal*, 189(5), 42-44.
- Bloom, B. S. (1984). The 2 sigma problem: The search for methods of group instruction as effective as one-to-one tutoring. *Educational Researcher*, 13, 4-16.
- Brendtro, L., Brokenleg, M., & Van Bockern, S. (1990). Reclaiming youth at risk: Our hope for the future. *Intervention in School and Clinic*, 26, 200-214.
- Broer, S. M., Doyle, M. B., & Giangreco, M. F. (2005). Perspectives of students with intel-

- lectual disabilities about their experiences with paraprofessional support. *Exceptional Children*, 71, 415-430.
- Causton-Theoharis, J. N., & Malmgren, K. W. (2005). Increasing interactions between students with severe disabilities and their peers via paraprofessional training. *Exceptional Children*, 71, 431-444.
- Chandler, L. K. (1991). Strategies to promote physical, social, and academic integration in a mainstream kindergarten. In G. Stoner, M. R. Shinn, & H. M. Walker (Eds.), *Interventions for achievement and behavior problems* (pp. 305-331). Silver Spring, MD: National Association of School Psychologists.
- Cohen, E. G. (1994). *Designing groupwork*. New York: Teachers College Press.
- Cole, D. A., & Meyer, L. H. (1991). Social integration and severe disabilities: A longitudinal analysis of child outcomes. *The Journal of Special Education*, 25, 340-351.
- Cole, M., & Traupmann, K. (1981). Comparative cognitive research: Learning from a learning disabled child. In W. A. Collins (Ed.), *Aspects of the development of competence: The Minnesota Symposium on Child Development* (Vol. 14, pp. 125-153). Hillsdale, NJ: Erlbaum.
- English, H. B., & English, A. C. (1958). *A comprehensive dictionary of psychological and psychoanalytical terms*. New York: Longmans, Green.
- Fogarty, R. (1999). Architects of the intellect. *Educational Leadership*, 57(3), 76-78.
- Giangreco, M. F., Broer, S. M., & Edelman, S. W. (1999). The tip of the iceberg: Determining whether paraprofessional support is needed for students with disabilities in general education settings. *Journal of the Association for Persons With Severe Handicaps*, 24, 280-290.
- Giangreco, M. F., Edelman, S., Luiselli, T. E., & MacFarland, S. Z. C. (1997). Helping or hovering? Effects of instructional assistant proximity on students with disabilities. *Exceptional Children*, 64, 7-18.
- Giangreco, M. F., Edelman, S. W., Broer, S. M., & Doyle, M. B. (2001). Paraprofessional support of students with disabilities: Literature from the past decade. *Exceptional Children*, 68, 45-63.
- Giangreco, M. F., Yuan, S., McKenzie, B., Cameron, P., & Fialka, J. (2005). "Be careful what you wish for...": Five reasons to be concerned about the assignment of individual paraprofessionals. *Teaching Exceptional Children*, 37(5), 28-34.
- Glasser, W. (1998). *Choice theory in the classroom*. New York: Harper Perennial.
- Individuals With Disabilities Education Act Amendments of 2004. Pub. L. No. 105-17, 20 U.S.C. §§ 1400 et seq., 111 Stat. 37 (1997).
- Johnson, D. W., & Johnson, R. T. (1986). Mainstreaming and cooperative learning strategies. *Exceptional Children*, 52, 553-561.
- Johnson, D. W., & Johnson, R. T. (1991). *Learning together and alone: Cooperative, competitive, and individualistic learning* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
- Kamps, D., Royer, J., Dugan, E., Kravits, T., Gonzalez-Lopez, A., Garcia, J., Carnazzo, K., Morrison, L., & Kane, L. G. (2002). Peer training to facilitate social interaction for elementary students with autism and their peers. *Exceptional Children*, 68, 173-187.
- Lewis, T. J., Chard, D., & Scott, T. M. (1994). Full inclusion and the education of children with emotional and behavioral disorders. *Behavioral Disorders*, 19, 277-293.
- Locke, W. R., & Fuchs, L. S. (1995). Effects of peer-mediated reading instruction on the on-task behavior and social interaction of children with behavior disorders. *Journal of Emotional and Behavioral Disorders*, 3, 92-99.
- Mahn, H. (1999). Vygotsky's methodological contribution to sociocultural theory. *Remedial and Special Education*, 20, 341-350.
- Maslow, A. H. (1970). *Motivation and personality* (2nd ed.). New York: HarperCollins.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.
- U.S. Department of Education. (2001). *To assure the free appropriate public education of all children with disabilities: Twenty-third Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*. Washington, DC: Author.
- U.S. Department of Education, Office of Special Education and Rehabilitative Services, Office of Special Education Programs. (2005). *25th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*, Vol. 1. Washington, DC: Author.
- Werts, M., Wolery, M., Snyder, E., & Caldwell, N. (1996). Teachers' perceptions of the supports critical to the success of inclusion programs. *Journal of the Association for Persons with Severe Handicaps*, 21, 9-21.
- Will, M. C. (1986). Educating children with

learning problems: A shared responsibility.
Exceptional Children, 52, 411-415.

Wolery, M., Werts, M., Caldwell, N., Snyder, E.,
& Liskowski, L. (1995). Experienced teachers'
perceptions of resources and supports for
inclusion. *Education and Training in Mental
Retardation and Developmental Disabilities*,
30, 15-26.

Yell, M. L. (1995). Clyde K. and Sheila K. v.
Puyallup School District: The courts, inclu-
sion, and students with behavioral disorders.
Behavioral Disorders, 20, 179-189.