Social Inclusion of Students With Physical Disabilities in General Physical Education: A Behavioral Analysis

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The purpose was to describe the behaviors of eighth-grade students with and without physical disabilities relative to social inclusion in a general physical education program. Participants were 3 girls with physical disabilities and 19 classmates (11 females, 8 males) without disabilities. The method was case study. Data for a 6-week softball unit were collected using videotapes, live observations, and interviews. Findings indicated that students with and without disabilities infrequently engaged in social interactions. Average percentage of time that classmates gave to students with disabilities was 2% social talk and less than 1% in each category for praise, use of first name, feedback, and physical contact. Two themes emerged in this regard: segregated inclusion and social isolation. Students with disabilities interacted with each other to a greater degree than with classmates without disabilities. Analysis of use of academic learning time revealed different percentages for students with and without disabilities.

The inclusion of students with disabilities into general physical education (GPE) classes is a fast and growing trend (DePauw & Doll-Tepper, 2000). In past years, inclusion has been defined as placing students in age-appropriate GPE classes in their residential school districts with only one or two students with disabilities per class and use of supplementary aids as needed (Block, 1994, 2000; Block & Vogler, 1994). Recently, DePauw and Doll-Tepper (2000) argued, “Inclusion should be considered a philosophical approach to implementing social justice in our schools and our society so that all persons are valued as unique contributing members of society and included” (p. 139).

One often cited benefit of inclusion is that students with disabilities can gain from social interactions, particularly if such interactions are positive (i.e., supportive, cooperative, respectful), frequent, and meaningful, and if equal status relationships are encouraged and formed (Sherrill, Heikinio-Johansson, & Slininger, 1999).

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Many advocates believe that an inclusive setting may contribute to enhanced self-esteem for children with disabilities and increased social acceptance on behalf of their peers without disabilities (Block & Malloy, 1998; Hemstetter, Peck, & Giangreco, 1994; Wilhite, Mushett, Goldenburg, & Trader, 1997). For example, Schnorr (1990) studied a first-grade class and reported that children at an early age begin to differentiate between children similar to themselves as “us” and others who are perceived as different as “them.” Schnorr (1990) suggested that if students with severe disabilities are included full time into general education classes instead of part-time in such classes, they are more likely to be viewed by their peers without disabilities as “us” and not as “them.” Stainback and Stainback (1990) stated that “An inclusive school is a place where everyone belongs, is accepted, supports, and is supported by his or her peers and other members of the school community in the course of having his or her educational needs met” (p. 3).

Although many advocates have asserted a number of social and educational benefits of inclusion, not until recent years has research evidence supported such claims relative to students with physical and/or other severe disabilities (Block & Zeman, 1996; Goodwin & Watkinson, 2000; Murata & Jansma, 1997; Slininger et al., 2000; Vogler et al., 2000; Webb, 2000). Albeit limited, the extant literature indicates that students without disabilities are accepting of peers with severe disabilities who are included in their GPE classes, particularly if proper supports are provided (Block & Zeman, 1996; Murata & Jansma, 1997).

Nevertheless, although it is believed that the inclusion of students with physical disabilities into GPE classes can prove beneficial to both students with and without disabilities, limited empirical evidence exists to date to confirm that contention (e.g., Goodwin, 2001; Goodwin & Watkinson, 2000; Slininger et al., 2000; Vogler et al., 2000; Webb, 2000). Clearly, additional research needs to be conducted in this area.

The purpose of our study was to describe the behaviors of students with and without physical disabilities relative to social inclusion in an eighth-grade GPE program at an urban middle school. We were guided by two research questions:

1. What types (e.g., social talk, praise, use of first name, feedback, physical contact) and how much social interaction occur between (a) students with physical disabilities and (b) students with and without physical disabilities in GPE classes?

2. How do students with and without disabilities spend class time (activity, waiting, transitions, off-task, management, knowledge)?

For purposes of this study, social inclusion refers to the nature and number of personal interactions between peers with and without disabilities who are classmates (Sherrill, 1998). In this regard, Sherrill (1998) stated, “typically it is assumed that these interactions are positive and contribute to feelings of accepting and liking each other” (p. 212). It is also important to determine whether such interactions are unidirectional, with students without disabilities “taking most of the initiative and seeing themselves as helpers, or equal status, with both parties reaching out to include each other” (p. 212). A desired outcome of social inclusion is the development of equal status relationships (Sherrill et al., 1994).
Method

Research Method

The research method used was case study (Bogdan & Biklen, 1994; Patton, 1996; Yin, 1994). According to Patton (1996), case studies are most useful where the researcher(s) seeks to understand some special population (e.g., students with physical disabilities), a particular issue, or unique situation in great depth (e.g., inclusive physical education classes in an urban middle school) and where the researcher(s) can identify cases rich in information. Moreover, case study is used when there are not enough participants to use alternative research methods (Yin, 1994).

Participants and Setting

Participants were 3 students with physical disabilities and their 19 classmates without disabilities (11 females and 8 males) attending the same eighth-grade GPE class at an urban middle school in the Midwestern United States. The sampling design was convenience (i.e., this was an intact class regularly taught by a veteran GPE teacher). Students attended GPE classes twice (i.e., Tuesday and Thursday mornings) each week for 50 min per class session. Skill development was emphasized within a traditional multiactivity curriculum model (Harrison, Blakemore, Buck, & Pellett, 1996; Siedentop, Mand, & Taggart, 1986). We believed that the class was representative of the growing number of inclusive GPE classes in the USA.

The 3 participants with physical disabilities were referred to as Ashley, Karen, and Abby (pseudonyms) in this study. These 3 girls were the only students with physical disabilities in the GPE class. They had been included in this GPE class the entire school year (about 7 months at the time of this study) and in this inclusive school since sixth grade. All 3 girls attended general education classes across all subjects with many of their 19 classmates without disabilities in GPE class. A review of school records and the GPE teacher’s input confirmed that these 3 girls had spastic cerebral palsy or spina bifida with no other identified disabilities. These participants also had average or above average intelligence.

A Description of Ashley. Ashley, an African American eighth-grade student with spastic cerebral palsy, lived on the south side of the city and was bused to Eastside Middle School (pseudonym used). Ashley had difficulties with balancing and movement; however, she was ambulatory with use of a walker. Ashley also had a speech impairment, which made communication with others difficult. Teachers described Ashley as possessing a delightfully vivacious personality and agreed that she enjoyed socializing with others.

A Description of Karen. Karen, an African American eighth-grade student, also had spastic cerebral palsy. She lived just blocks from Eastside Middle School (pseudonym used). Ashley had difficulties with balancing and movement; however, she was ambulatory with use of a walker. Ashley also had a speech impairment, which made communication with others difficult. Teachers described Ashley as possessing a delightfully vivacious personality and agreed that she enjoyed socializing with others.
A Description of Abby. Abby, a European American eighth-grade student, had spina bifida and used a manual wheelchair with full use of her upper body. Abby lived about an hour by bus from Eastside Middle School. Abby was the only participant to receive instructions from an itinerant APE specialist. These were provided once a week on Fridays for 30 min during her lunchtime. Abby appeared to be very shy and indicated that the physical education teacher at Eastside MS had helped her “open up to people.” Although shy, Abby did not hesitate to interact with the lead researcher. In contrast, Abby displayed shyness in the presence of her classmates.

A Description of the GPE Teacher. Ms. Thomas (pseudonym used), a European American woman, taught the GPE classes observed in this study. Ms. Thomas lived in the community near the school and had taught for over 15 years. She had K-12 physical education certification and in recent years, had earned an APE validation certificate from the local university. Ms. Thomas indicated that a student with disabilities must have, at minimal, rudimentary reflex development to protect her or himself from harm (e.g., fly ball) before she would feel comfortable including such a student in her classes. By and large, Ms. Thomas was supportive of students with disabilities being included in her GPE classes. Moreover, Ms. Thomas had overseen the Special Olympics program at Eastside Middle School for several years. However, none of the students in this study were a part of the Special Olympics program.

A Description of the School and GPE Program. Eastside Middle School was an urban middle school located in a large public school district in Midwestern USA. A common practice within this school district was to bus students with disabilities to designated schools based on their categorical disability. Eastside Middle School was selected specifically for serving students with physical and developmental disabilities. Students with disabilities at Eastside Middle School (including Ashley, Karen, and Abby) were included in general education classes, where they were typically supported with teacher assistants. In the current study, however, no teacher assistants or other support personnel accompanied the students to their GPE classes.

Instruments

Data collection instruments used were video cameras, nonparticipant live observations, and interview schedules. Two videotape analysis systems were used also: the Academic Learning Time for Physical Education (ALT-PE) of Siedentop, Tousignant, and Parker (1982) and the Analysis of Inclusion Practices in Physical Education, Form S (AIPE-S) of Hodge et al. (2000). The use of several instruments allowed for triangulation, an essential part of qualitative research analysis (Patton, 1996).

ALT-PE. The ALT-PE is a valid and reliable data collection system (Metzler, 1989) frequently used to analyze videotapes (e.g., Vogler et al., 2000) for the following categories of student behaviors: transition, off-task, management, knowledge, activity, and waiting. The instructions require trained observers to use an interval recording procedure of 5 s observe and 5 s record to tally each student’s behaviors for a set number of min. For example, during a 50-min period, the researcher observes behaviors across a total of 300 intervals (5 s each) for each child (i.e., 1,500 s or 25 min) plus 1,500 s (i.e., 25 min) record time.
**AIPE-S.** The AIPE-S instrument was designed to determine occurrence and duration of specific student interaction behaviors during physical education classes. In this study, only the occurrence measure was used. A measure of occurrence indicated the frequency of the following eight student behaviors: (a) initiates or engages in social talk with peer \(T\), (b) models or demonstrates for peer and/or asks peer to model or demonstrate for her/him \(D\), (c) praises peer for effort and/or achievement \(P\), (d) uses peer’s first name \(FN\), (e) gives appropriate feedback to peer \(FB\), (f) gives or asks for “hands-on” help \(H\), (g) has peer interaction not covered by specific behaviors \(I\), and (h) makes no interaction \(N\) (Hodge et al., 2000).

The directions for scoring each behavior identified using the AIPE during the designated time interval followed a coding system similar to that used for the ALT-PE (Siedentop et al., 1982). More specifically, AIPE coding is a system based on interval recording techniques in which behavior is recorded after short periods of time, in this case 5 s (Hodge et al., 2000). The observer watches 1 student for a 5 s interval and records the data directly on an observation sheet. Data for all categories (key behaviors) are recorded and expressed as frequency of occurrence and percentages of the total observed time (total number of seconds) per class period (Hodge et al., 2000). For example, if a student without a disability provided feedback to a peer with a disability, \(FB\) (feedback) was recorded. If a student unjustly criticized the performance of a peer with a disability, \(FB\) was recorded and circled to indicate a behavior that was inappropriate (Hodge et al., 2000).

Content validity of the AIPE was established via a panel of four nationally prominent teacher educators in adapted and general physical education. Panelists were selected based on their established reputation as a leader in inclusion and/or behavioral research in physical education. Importantly, one of these panelists had developed a comparable and often used systematic behavioral observation instrument.

A cover letter, copy of the instrument, and a rating sheet were sent via electronic mail to each of the panelists. The instructions were to critique the AIPE in terms of (a) representativeness, (b) completeness and accuracy, (c) appropriateness and suitability, and (d) utility (Antonak & Livneh, 1988). Panelists’ feedback indicated that the AIPE has content validity. Therefore, although not yet validated using statistical procedures, the AIPE was deemed appropriate for use in this study. Moreover, the AIPE is conceptually and procedurally similar to the Academic Learning Time for Physical Education (ALT-PE) of Siedentop et al. (1982), which is regularly used in physical education research (e.g., Vogler et al., 2000) and considered a valid and reliable data collection system (Metzler, 1989).

Nonparticipant Observations. Nonparticipant observer field notes were taken weekly during live observations by the lead researcher over a 6-week period and focused on behavioral interactions between and among participants with and without disabilities relative to (a) who initiated social and other behavioral contacts, (b) with whom were these contacts made, and (c) what was the nature of such interactions. Notations were made also with regard to the participants’ personalities, lesson context, and unusual occurrences within the GPE classes.

Interview Schedule. An interview schedule of 12 questions was developed and pilot tested to guide individual interviews with Ashley, Karen, and Abby. In the development of the interview questions and probes, the lead researcher used Patton (1996) as her primary source.
Procedure

Data were collected over a 6-week period (i.e., 12 inclusive softball lessons). The lead researcher was present at the school each day (i.e., Tuesday and Thursday mornings for the entire 6-week period) and took extensive field notes. While taking these field notes, she sat against the gymnasium wall or moved unobtrusively around the lesson area. Students were informed that she was there to observe their classes as a learning experience. These field notes were later reflected upon by both researchers and analyzed to discern behavioral and contextual patterns (Bogdan & Biklen, 1994).

We videotaped three randomly drawn class sessions, each 50 min in length, from a total of 12 class sessions and then coded behaviors observed on the tapes. Specifically, we randomly selected one lesson from each of three time frames: the start (first week), midpoint (third week), and end (final week) of the 6-week softball unit (Gay, 1996). This represented 25% of all classes taught during this 6-week period. The decision to select 25% of all class sessions for quantitative analysis was arbitrary, but sampling using smaller percentages (e.g., 20%) of all classes has been used in related research (e.g., Vogler et al., 2000). More importantly, however, our strategy allowed us to code behaviors exhibited at the start, midpoint, and end of the softball unit. Subsequently, we analyzed data relative to individual interactions of each participant with physical disabilities and her peers without disabilities. Data were analyzed also on separate occasions relative to Ashley, Karen, and Abby’s interactions with each other.

In using the AIPE, we followed an interval recording procedure of 5 s observe and 5 s record to quantify student interactions. In analyzing the videotapes, the lead researcher identified the behavior category that best represented the behavior of each participant at the end of each 5 s interval (Cooper, Heron, & Heward, 1987; Vogler et al., 2000). The lead researcher scored all videotaped lessons at least twice on separate occasions before reporting data collected using the AIPE system. Intraobserver agreement was determined to be 98% or better in accordance with guidelines established by Cooper et al. (1987).

Additional videotaped data analysis was conducted using the ALT-PE (Siedentop et al., 1982) to provide a more complete view of “what happened” in these classes. More specifically, the lead researcher reviewed videotaped lessons a second time to code variables specific to the ALT-PE for both participants with and without disabilities across the same three lessons analyzed with AIPE. Coding of ALT-PE variables was synchronized with the exact 50-min time frames analyzed using the AIPE system (Hodge et al., 2000) across randomly sampled lessons. These data were averaged and reported as percentages of ALT-PE variables (i.e., transition, off-task, management, knowledge, activity, and waiting).

Semistructured interviews (Patton, 1996) with Ashley, Karen, and Abby were conducted toward the end of the 6-week softball unit. These interviews addressed the students’ perspectives on whether or not they felt socially accepted by their peers within GPE classes. The interviews were conducted during the participants’ GPE classes. The lead researcher explained to the participants that their participation was voluntary and that they could withdraw from the interview at any time without prejudice or penalty. In addition to note taking, the lead researcher videotaped (with audio) the interviews. The average interview took 20 min. The interview tapes were transcribed verbatim and analyzed for emerging themes of importance.
Data Analysis and Triangulation

Use of the aforementioned data collection and analysis strategies allowed the researchers to triangulate the data in an effort to better understand the behaviors and perspectives of students with and without physical disabilities relative to social inclusion. Triangulation (Patton, 1996) was used in combining both quantitative and qualitative data sources to strengthen the analysis and interpretations of the participants’ behaviors and contextual events.

Findings and Discussion

The purpose was to describe the behaviors of eighth-grade students with and without physical disabilities relative to social inclusion in a general physical education program. In reporting our findings, we (a) describe the typical lesson context of the GPE class used in this study, (b) present reoccurring themes that emerged from data analysis, and (c) present findings specific to our two research questions.

GPE Class Lesson Context

Based on field notes and confirmed with videotape analysis, the following is a description of the typical lesson context for this GPE class. The teacher typically divided the class into two groups. Each group went to one of two stations. At the first station, the students paired up and practiced throwing and catching. At the second station, the students played a modified game of softball. Occasionally, the teacher had the whole class get into peer partners and warm up; then everyone played a full game of softball. Most of the time the teacher allowed Ashley, Karen, and Abby to work together. They typically were far from the group (i.e., their classmates without disabilities) by choice. Perhaps one reason for this was that Karen and Abby’s wheelchairs were difficult to maneuver on the grassy field, so they (including Ashley) stayed on the blacktop asphalt near the gymnasium doors, which were approximately 10 to 20 yd away from their classmates without disabilities in the partner drills. However, even while inside the gymnasium, Ashley, Karen, and Abby typically chose not to join the other students. The teacher did not insist that they should join their classmates without disabilities, nor did the teacher come by to give feedback. In other words, the students with disabilities were typically left on their own. However, during the softball games, Ashley, Karen, and Abby were included (i.e., they played outfield and took turns batting). Ashley, Karen, and Abby each needed assistance with batting, and their classmates interacted with them while providing this assistance (e.g., hands-on help, social talk, praise).

Reoccurring Themes

Contextual realities were reflected within the most frequently reoccurring themes that emerged from the interviews with Ashley, Karen, and Abby and were labeled as segregated inclusion and social isolation. The segregated inclusion theme referred to times when Ashley, Karen, and Abby were separated from classmates without disabilities in terms of proximity. Ashley, Karen, and Abby often seemed to choose this arrangement; it is not known why. Moreover, Ashley, Karen, and
Abby were often not included in other school activities (e.g., field trips). To highlight such exclusion, the following is an excerpt from the interview with Ashley:

Interviewer: I was talking with one of your classmates [i.e., Abby] and she said that sometimes she feels that she is not included.
Ashley: Like left out?
Interviewer: Yea, like left out. Say like if there was a field trip.
Ashley: Sometimes I feel like that.
Interviewer: How? Like they did not include you?
Ashley: Yea. Like I mean that they (teachers) don’t pay attention when they have field trips for like regular students and sometimes we (Ashley, Karen, and Abby) don’t get to go because they don’t have any transportation for us. They forget about us.

This segregated inclusion theme was consistent with Chamberlin’s (1999) finding that 4 students with disabilities in an inclusive GPE class at an urban elementary school described themselves as uncomfortable and unhappy. These students expressed that they felt this way because their classmates without disabilities called them names, teased them, and would not play with them on a regular basis (i.e., there was group separateness between students with and without disabilities; Chamberlin, 1999).

Social isolation referred to times when Ashley, Karen, and Abby were excluded, neglected, viewed as objects of curiosity, or a sense of awkwardness existed between them and their classmates. The social isolation theme in the current study supports the findings of Goodwin and Watkinson (2000) that students with physical disabilities were on occasion rejected, neglected, or seen as objects of curiosity by their classmates. Illustrating this theme, Abby stated, “They [classmates without disabilities] come up and grab onto your [wheel] chair and pop a wheelie with your chair or ride on it.” In agreement, Karen said, “Yea, some of them [classmates without disabilities] understand and some of them come up to us [her and other peers with disabilities] and be like ‘Oh ah, I did not know you write’ and ask us like a really dumb question.” Likewise, Ashley stated, “They act like we are different. They will look at us and say ‘Oh she’s retarded.’”

As we present our findings specific to each research question, it is important to keep in mind the GPE class context and the reoccurring themes as highlighted.

Research Question 1

The first research question was, “What type and how much social interaction occurs between (a) students with physical disabilities and (b) students with and without physical disabilities in GPE classes?” We found that almost no social interaction occurred between students with and without disabilities in the classes observed. Most of the “no interaction” time involved (a) students with and without disabilities listening to the teacher instructions, (b) class management events, and (c) no interactive behaviors while students participated in lesson activities.

The most frequent category coded using the AIPE (Hodge et al., 2000) was no interaction. Table 1 reveals the frequency and percentage of social interactions in the AIPE categories of “no interactions” and “interactions.” During the three lessons analyzed, no interactions occurred between peers without disabilities and
Ashley 96% of the time, Karen 98% of the time, and Abby 95% of the time. The mean percentage for the no interaction category was 96%. Moreover, no interactions occurred among the 3 girls with disabilities as follows: Ashley, 86% of the time; Karen, 90% of the time; and Abby, 95% of the time. The mean percentage for the no interaction category was 91% (Table 1).

Table 1  Mean Data (Frequency of Occurrence and Percentage of Time) of Analysis of Inclusion Practices in Physical Education (AIPE) Categories

<table>
<thead>
<tr>
<th>AIPE Categories</th>
<th>Ashley f (%)</th>
<th>Karen f (%)</th>
<th>Abby f (%)</th>
<th>Total f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer(s) with disabilities</td>
<td>104.0 (95.5%)</td>
<td>107.7 (89.7%)</td>
<td>114.5 (95.4%)</td>
<td>108.7 (90.5%)</td>
</tr>
<tr>
<td>Peer(s) w/o disabilities</td>
<td>114.0 (86.4%)</td>
<td>117.0 (97.5%)</td>
<td>113.5 (94.6%)</td>
<td>114.8 (95.9%)</td>
</tr>
<tr>
<td>No Interactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Social talk                             |             |             |             |             |
| Peer(s) with disabilities              | 9.3 (7.8%) | 8.3 (6.9%) | 2.5 (2.1%) | 6.7 (5.6%) |
| Peer(s) w/o disabilities               | 0.3 (0.2%) | 2.0 (1.6%) | 5.0 (4.2%) | 2.4 (2.0%) |

| Praise                                  |             |             |             |             |
| Peer(s) with disabilities              | 1.3 (1.1%) | 1.0 (0.8%) | 0.5 (0.4%) | 0.9 (0.8%) |
| Peer(s) w/o disabilities               | 0.0 (0.0%) | 0.0 (0.0%) | 0.0 (0.0%) | 0.0 (0.0%) |

| Use of First Name                       |             |             |             |             |
| Peer(s) with disabilities              | 0.0 (0.0%) | 0.0 (0.0%) | 0.0 (0.0%) | 0.0 (0.0%) |
| Peer(s) w/o disabilities               | 0.0 (0.0%) | 1.0 (0.8%) | 1.0 (0.8%) | 1.0 (0.8%) |

| Feedback                                |             |             |             |             |
| Peer(s) with disabilities              | 1.7 (1.4%) | 2.0 (1.7%) | 0.0 (0.0%) | 1.2 (1.0%) |
| Peer(s) w/o disabilities               | 0.0 (0.0%) | 0.0 (0.0%) | 0.0 (0.0%) | 0.0 (0.0%) |

| Hands-on                                |             |             |             |             |
| Peer(s) with disabilities              | 2.3 (1.9%) | 0.7 (0.5%) | 1.0 (0.8%) | 1.3 (1.1%) |
| Peer(s) w/o disabilities               | 1.3 (1.1%) | 0.7 (0.5%) | 0.5 (0.4%) | 0.8 (0.7%) |

| Peer interactionsa                      |             |             |             |             |
| Peer(s) with disabilities              | 1.3 (1.1%) | 0.3 (0.3%) | 1.5 (1.2%) | 1.0 (0.9%) |
| Peer(s) w/o disabilities               | 1.7 (1.6%) | 0.3 (0.5%) | 0.0 (0.0%) | 0.7 (0.7%) |

| Inappropriate Interactions              |             |             |             |             |
| Peer(s) with disabilities              | 0.0 (0.0%) | 0.0 (0.0%) | 0.0 (0.0%) | 0.0 (0.0%) |
| Peer(s) w/o disabilities               | 2.0 (1.6%) | 0.0 (0.0%) | 0.0 (0.0%) | 0.7 (0.5%) |

Note. aDenotes student interactions (e.g., give peer “high five”) not covered by specific AIPE behavior categories. No behaviors were categorized as demonstration across lessons for peers with or without disabilities; therefore these data were not reported in this table.
Table 1 reveals, however, some interaction did occur; for example, on average, Ashley talked (8%) and received praise (1%) and feedback (1%) from Karen and Abby to a greater degree than she talked (0.2%) and received praise (0.0%) and feedback (0.0%) from peers without disabilities. Field notes for Lesson 2 illustrate these findings:

_Introduction of Lesson Context and Activity._ They are a bit more rowdy than usual. Only Karen and Ashley are present today. Students are on their spots separated by 4 feet of distance. The SWD (students with disabilities) are doing what is being asked of them with no interactions during this time. The SWOD (students without disabilities) are very talkative and are not following instructions.

While in a huddle (formation) the students with disabilities are separated and on the outside of the cluster. No interaction between SWD and others. SWOD are looking at each other or leaning on each other. Their proximity to each other is close and far from any SWD.

As they transition outside (to softball fields), SWD take hall while SWOD go through the locker room. SWD have some conversation, a few words are exchanged. The SWOD are talking so much that it is difficult to isolate any words or cases. They group off into twos or threes. Some are touching each other with taps or laughing. All students are very slow at transitioning. They are ignoring the teacher’s prompts while they continue to talk. The majority of students without disabilities did this. Finally, several SWOD started to move toward the throwing station. Others slowly followed suit. SWD just got into position for throwing and waited until everyone left the area so they could throw. No interactions between SWD and other SWD.

SWD are in a group far away from SWOD who are throwing to each other. The teacher delivers more instruction on the CE (critical elements) of the skill and also talks to them about their off-task behaviors (i.e., excessive socializing, failure to respond to teacher’s prompts to walk at a quicker pace). Tossing in a group together, the SWD are far away from SWOD. The SWOD are tossing together and talking. Most are on task with the tossing but still are a bit chatty. This continues throughout this entire segment of the lesson. No interactions with SWD (Field notes, Lesson 2).

Moreover, whenever social interactions did occur, the largest category coded was talking. Across lessons with one exception, Ashley, Karen, and Abby mostly talked to one another (6%) and to their peers without disabilities only 2%. The exception was when Abby talked more with her peers without disabilities than with either Ashley or Karen in the third lesson. This was because Abby had gotten hurt, and her peers without disabilities were asking questions about whether or not she was “all right” (Field notes, Lesson 3). The following excerpt captured this incident.

_Game Activity_ (lesson context). The SWD were in the outskirts of the line or group for batting. Some talking going on by SWOD but not as much as last lesson. . . . She (Abby) got hit in the face by a fly ball off the plate. Many students are asking if she is ok. Small talk occurs between Karen and Ashley. Abby has to leave to seek medical attention (Field notes, Lesson 3).

The next most frequent type of interaction was hands-on assistance or physical contact. On average across lessons, peers with (1%) and without disabilities (0.7%) engaged in various types of contact with Ashley, Karen, and Abby. These
data were similar across all lessons for both students with and without disabilities in their efforts to assist or engage in physical contact with a peer with a physical disability. This was captured in the field notes from Lesson 1:

**Game Situation** (lesson context). All of the students without disabilities batted first. Then Ashley spoke up to the teacher and then they (students with disabilities) were able to bat. They (students with disabilities) were passive in regard to participating. Most SWOD were interacting as they had in the past with little comments or gestures to each other. The SWD were doing the same to a similar degree. However, the only interactions that occurred between the groups (SWD and SWOD) were when SWOD assisted with the batting of the SWD. There was a great deal of wait time that occurred when trying to get the SWD ready to bat (Field notes, Lesson 1).

In short, more often than not, no interaction occurred between students with and without disabilities. However, some limited positive (i.e., supportive, pleasant, respectful, friendly) and appropriate (i.e., cooperative) interaction occurred with Ashley, Karen, and Abby. These findings are consistent with those of Goodwin (2001) and of Goodwin and Watkinson (2000), who noted that students with physical disabilities described some experiences that were positive (i.e., supportive interactions with classmates and teachers) and meaningful (i.e., those experiences that promoted a sense of belonging, chance to share or partake in the benefits of the program, and the opportunity to participate skillfully with classmates).

We observed no demonstration, praise, and feedback interactions between students with and without disabilities on the videotapes. In contrast, Ashley and Karen praised and gave feedback to each other in one or more of the lessons. Abby received praise from a classmate with a physical disability on only one occasion across coded lessons, but no praise at any time from her classmates without disabilities. It is important to recall that Abby was described earlier as a very shy child, particularly in the presence of other students. This was further supported in Abby’s interview where she indicated that she was “working on her shyness” with her physical education teacher to help her “open up to people.”

Videotape analysis revealed that only 1 out of the 19 students initiated negative interactions with peers with disabilities. Specifically, Kevin initiated negative or inappropriate behaviors (2%) toward Ashley (see Table 1) that included verbal threats, physical threats, and badgering. Ashley typically reacted to the inappropriate behaviors toward her, whereas the other two students with physical disabilities ignored Kevin. It appeared that Kevin enjoyed intimidating Ashley. Ashley’s comments during her interview confirmed that such interactions between her and Kevin occurred in other classes and in the hallways. Moreover, Ashley was the only student in this class with a speech impairment and a walker for ambulation; we do not know, however, whether these factors contributed to Kevin’s behaviors. Interestingly, no inappropriate behaviors were targeted against Karen and Abby, who both used wheelchairs.

Data triangulation confirmed the occurrence of negative interactions. When interviewed, Ashley stated that she considered Kevin’s behaviors as badgering. Kevin engaged in inappropriate talk, which consisted of threatening peers with disabilities or making fun of them. For example, Kevin would kick Ashley’s walker, make physical threats while grabbing Ashley’s shirt, and other physical contacts that were deemed inappropriate. During instances where she was threatened, Ashley would just laugh or tell Kevin to “shut up!” (Field notes, Lesson 1). Further, Ashley
stated that she “did not like those who made fun of her.” To highlight this, the following is an excerpt from the interview with Ashley:

Ashley: Yea, yea. There is this one boy that talks about us and says “he don’t like you” and he keeps going and going.
Interviewer: He just won’t stop, huh?
Ashley: Yea
Interviewer: So what do you do? Do you tell them to be quiet?
Ashley: He knows he makes me mad, he’s like “what you gonna do run me over.”

This ongoing situation between Kevin and Ashley was the only example of harassment observed. Ashley, Karen, and Abby each, when interviewed, stated that for the most part, everyone socially accepts them and “only a few do not.” For instance, Karen said her peers without a disability “appear to be afraid or unsure” of them (students with physical disabilities) “until they got to know them and then they would be friends” (Karen, interview transcription).

To support this, field notes suggest a sense of awkwardness between students with and without disabilities. In situations where behavioral interactions did occur, it was the same cohort of 3 or 4 students without disabilities (both females and males) who initiated contact. Typically, however, middle school-aged students develop small cohorts of friends (Bukowski, Newcomb, & Hartup, 1996; Harrison et al., 1996) and their behaviors toward peers with disabilities are often unidirectional and not reflective of equal-status relationships (Goodwin, 2001). For example, students without disabilities would offer to bat or run for Ashley, Karen, or Abby; open doors; or be partners with them if asked.

Not all students displayed favorable attitudes or behaviors toward Ashley, Karen, and Abby. For example, there was an occasion where a student without a disability (we will refer to her as Tammy) was paired up with Ashley for a throwing drill. Tammy was very upset about this arrangement, and the videotape analysis suggested that her poor attitude and demeanor were due to being paired up with a student with a physical disability (Field notes, Lesson 3).

Compared to their interactions with peers without disabilities, social interactions between and among Ashley, Karen, and Abby did occur at a slightly higher frequency across coded lessons. Such behaviors (e.g., talking, praise, feedback, physical contact, and other social behaviors) were analyzed as friendly (i.e., cooperative, pleasant, respectful) and sociably interactive (field notes). Most often, talking behaviors (among Ashley, Karen, and Abby and with peers) occurred during transitions, waiting, or activity times:

Transition Outside (lesson context). While talking with each other, the SWD leave to go outside by way of the hall. The SWOD get more information (from teacher) and then go through the locker room. SWD waited for them (SWOD) to catch up. The students without disabilities are not as talkative today as (they were) last lesson. As they come out (onto playing area), they once again divide into groups of twos or threes to talk. SWD do not talk during this time. SWD get into their throwing group while the rest (SWOD) go out to throw at the station, which is far away from the SWD (Field notes, Lesson 3).
Typically, talking consisted of students without disabilities stating their willingness to bat for Ashley, Karen, or Abby or courtesy words of “sorry” or “thanks.” Other behaviors observed for students with disabilities included feedback, accounting for 1% of the total interactions with their peers who also had physical disabilities, and no feedback (0%) from peers without disabilities.

In summary, Ashley, Karen, and Abby had limited social interactions with their classmates without disabilities. Moreover, the spatial distances between students with and without disabilities during skill practice that were characteristic of this GPE class reduced opportunities for socializing beyond self-selected groupings. Ashley, Karen, and Abby often expressed their desire to be placed together into groups or be paired up together. This desire might have been because these 3 students attended other classes together and therefore had had multiple opportunities to establish friendships; however, these 3 students also had multiple opportunities to establish friendships with peers without disabilities in that all students attended general education classes together throughout the day. Because Ashley, Karen, and Abby tended to group themselves together across classes limited their opportunity and perhaps reflected lack of comfort and/or willingness to socialize outside their group. The same was true also for students without disabilities with their small cohorts of 3 or 4 friends. Social and developmental psychology research indicates that individuals tend to select friends on the basis of perceived similarities (Bukowski et al., 1996; Hamm, 2000; Shrum, Cheek, & Hunter, 1988; Sullivan, 1953; Tesser, Campbell, & Smith, 1984). Self-selected grouping of students with and without disabilities therefore contributed to the theme of segregated inclusion. More research needs to be conducted on friendship choices between children and on proximity and interactions between students with and without disabilities within GPE classes.

Research Question 2

For completeness of this study, it was deemed important to determine “what happened” contextually at those times of no interaction relative to social behaviors. Therefore, our second research question was, “How do students with and without physical disabilities spend class time (activity, waiting, transitions, off-task, management, knowledge)?” ALT-PE data revealed that on average across three randomly selected lessons, both students with and without disabilities spent most of their time in motor activity (36% and 31%, respectively). Listed from high to low in terms of percentage of other time spent, Ashley, Karen, and Abby spent 29% of their time waiting; 12% in transitions; 10% in knowledge content (i.e., listening to information about technique, rules of game, strategy, or background); 8% in management; and 2% off task. In comparison, students without disabilities spent 24% of their time in transitions, 21% in knowledge content, 13% in waiting, 6% in management, and 5% off task. Percentages are presented in whole numbers for ease of reading. The percentages for Ashley, Karen, and Abby add up to 97% (some rounding error), whereas the percentages for their peers add up to 100%.

Based on ALT-PE data triangulated with field notes, videotape analysis, and supported by reoccurring themes, we concluded that Ashley, Karen, and Abby tended to stay active and on task (i.e., motor activity) with little or no instruction or direction from the GPE teacher (this helps account for the low knowledge content time for these students with disabilities). In contrast, Ashley, Karen, and Abby’s
classmates without disabilities were more likely to engage in off-task behaviors and transitioned at a slow deliberate pace (e.g., took time to socialize with one another, often appearing to ignore the teacher’s request to “move quickly”) from one activity to the next. However, the GPE teacher provided students without disabilities with knowledge content (i.e., instructional information) to a greater degree than that given to Ashley, Karen, and Abby. In terms of waiting time, Ashley, Karen, and Abby, for example, waited in the batting line more often and generally for a longer period of time than their peers without disabilities.

Clearly, both students with and without disabilities in our study had less time in motor activity and knowledge than what Vogler et al. (2000) reported for a kindergarten child with cerebral palsy and his classmates without disabilities. It is important to note, however, that Vogler et al. (2000) used a people resource model, with an adapted physical education specialist and concluded that this was a highly effective educational practice. No such support personnel or resources were readily available for the GPE teacher in the current study.

Field notes suggest that students without disabilities tended to engage in behaviors that could be considered as good moral acts reflective of a social justice paradigm (i.e., acts that were perceived as morally right in the sense that the students without disabilities felt that they were supposed to open a door for someone with a physical disability who needed assistance). We concluded that such acts were more reflective of a sense of moral obligation than an innate desire to befriend a peer with a physical disability, particularly because these acts were based on physical assistance only and generally void of friendly conversations. In cases where a student without a disability did initiate interaction with a peer with a physical disability, it typically was for class participation purposes only. For instance, a classmate would ask a peer with a physical disability if she needed him to retrieve a ball that went astray. Once again, such acts related to assisting the student with a disability in a physical manner with little social interaction. In comparison, Goodwin (2001) found that students with physical disabilities perceived self-supporting peer interactions as positive in nature and reflected peer interactions that were instrumental (i.e., assistance with equipment, mobility, and active participation) and caring. Goodwin also reported that some students with physical disabilities perceived some helping behaviors as threatening (i.e., loss of independence, a threat to self-image, help that was reckless, or in some cases interfering).

Given the preceding findings, the question becomes “What can be done to increase the occurrence of social interactions between students with and without disabilities, and in turn, promote social inclusion?” In that regard, Sherrill (1998) provides an excellent discussion of strategies meant to promote social inclusion in GPE contexts. As fundamentally important as affective learning outcomes are for students without disabilities in physical education (Harrison et al., 1996), it is imperative that affective learning outcomes are also emphasized for students with disabilities (Sherrill, 1998). In the current study, perhaps it was pedagogically easy for the teacher to group or to allow the students with physical disabilities to group themselves together. Although this grouping strategy may or may not have facilitated meeting the skill objectives, it clearly did not promote social inclusion for these students. We agree with Sherrill et al. (1994) that teachers ought to provide opportunities for frequent, meaningful, pleasurable, long lasting, and equal-status interactions for students with and without disabilities that foster the attainment of affective outcomes for all students. In the current study, this was not consistently done.
Conclusions and Recommendations

Within the limitations of a case study research design, it can be concluded that eighth-grade students with and without physical disabilities who are attending an inclusive school and participating in a GPE softball unit with a class size of 22 (a) engage infrequently in social interactions and (b) use academic learning time in slightly different ways. When the physical education teacher conducts a 12-lesson softball unit in traditional ways over a 6-week unit without emphasis on social inclusion goals, it appears that few social interactions will occur.

We believe that including students with and without disabilities in GPE classes can lead to increased social interaction only if the inclusive process is practiced with appropriate curricular adaptations, instructional modifications, and human resources (e.g., peer tutors, specialists), and informed decision making occurs (Lienert, Sherrill, & Myers, 2001; Sherrill et al., 1994; Vogler et al., 2000). We recommend, therefore, that more research be conducted on the variables in GPE settings that may help to explain social interactions and social inclusion among children with and without disabilities.

References


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