

# Talking without words: shared communication between students with severe disabilities and their peers in physical education

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## Abstract

This case study explored the inclusion of students with severe disabilities in a general elementary physical education program. Qualitative methods were used to capture the communication protocols and instructional practices used by the physical education (PE) teacher and Individual Education Plan (IEP) team members in one fourth grade and second grade physical education classroom. Data from three primary sources including field notes, interviews and a journal were analyzed to address questions of interest. Findings revealed four primary themes. The first "Collaboration-Needing to Know What I Don't Know" described the process the PE teacher used in gaining information on her students with disabilities. The second, "Community in the Classroom," revealed the value system shared by the IEP team members. The third theme, "The Role of Modeling" articulated the value of appropriated practices between teachers and students. The final theme, "Talking Without Words" highlighted the communicative processes and shared language between the students with and without disabilities.

KEYWORDS: Disabilities; Shared Communication; Physical Education.

## Introduction

Amanda can tell us in her own way, because she can't use words but she can look at people...Like if she is playing tag, she can play just like everyone else, even though some people say she can't do that. (2nd grade student)

The above quote illustrates the power of an inclusive setting in facilitating social interactions between students with severe disabilities and their peers by revealing the complexity of communicative interactions through pedagogical innovation. The words were spoken by Jason, a second grade student who was asked his thoughts on his classmate, Amanda. His response highlights the interpretive flexibility of children's conception of difference and ability. The purpose of this case study is to provide insight into the educational community of a general physical education environment.

Driven by strong advocacy and policy efforts,

students with severe disabilities are now spending more time in inclusive settings for the purpose of accessing the general education curriculum<sup>1</sup>. The term "severe disabilities" refers to students with extensive difficulties who require significant levels of support<sup>2</sup>. Severe, or low-incidence disabilities, as defined by the Individuals with Disabilities Education Act<sup>3</sup>, typically include the following disability categories: vision impairments, hearing impairments, dual-sensory impairments, significant cognitive impairment, and multiple disabilities. The practice of including students with severe disabilities is one that supports heterogeneity through a range of organizational structures that includes participation in all aspects of educational programming<sup>4, 5</sup>.

While a primary purpose of inclusive practices for students with severe disabilities has been the promotion of social skills, active engagement with the curriculum is also a requirement. Individual

Education Plans often emphasize progress in social and communication skills with opportunities to engage with peers<sup>6</sup>. However, the severity of students' disabilities necessitates a variety of strategic practices when educating students in general education settings<sup>7</sup>. Teaching arrangements and collaborative practices were found to be necessary for effective inclusion<sup>8</sup>.

Performance gains for students with severe disabilities educated with age-appropriate peers, exceeds those educated in separate settings<sup>9</sup>. Students were found to improve in a variety of skills including academic, communication, social and self-determination when educated in inclusive settings as compared to segregated settings<sup>7,10</sup>. Other studies determined that students received a more equitable experience, including positive educational outcomes in general education settings<sup>11-13</sup>.

### Peer Supports and Inclusive Education

SPENCER-CAVALIERE and WATKINSON<sup>14</sup> identified the instrumental role of peers for inclusive education for providing a sense of belonging. When peers were not involved in teacher practices, oftentimes students with disabilities who were educated alongside their peers experienced social isolation and negative peer interactions<sup>15</sup>.

In the context of GPE, peer supports have been used to mitigate the marginalization many students with disabilities experience<sup>16</sup> by providing positive interactions, that have proven to support gains in academic and social learning<sup>17</sup>. Peers have also been found to support motor performance<sup>18</sup>, and activity levels<sup>19</sup>. For students with severe disabilities, KLAVINA<sup>16</sup> demonstrated the efficacy of peer-mediated responses during structured interactions. Peer mediated support conditions provided more instructional contact and interactions than teacher-directed conditions.

RHAGAVENDRA et al.<sup>20</sup> suggested the need for increased research that focused on specifically tailored interpersonal activities with age-appropriate peers as a mechanism for improving the involvement of students with severe disabilities in general education classrooms<sup>21</sup>. CARTER et al.<sup>9</sup> found students in peer supported arrangements rather than adult-delivered support, experienced increased interactions, progress towards goals, academic achievement and enhanced social experiences.

Communicative behaviors have been defined as

the non-verbal ways in which an individual initiates and responds to conversation with others. This can include eye contact, sounds, smiles, body movement and/or reaching and touching<sup>22</sup>. OVERTON et al.<sup>23</sup> suggests that strategic interactions with significant partners can improve responsiveness in students with severe disabilities. Identifying the factors that contribute to positive and productive peer interactions is necessary when investigating the communicative behaviors between students with severe disabilities and their peers<sup>24,25</sup>. This research seeks to investigate the communicative behaviors between students with severe disabilities and their peers as well as the classroom conditions that promote engagement between the students using social-relational theory as a lens for analysis.

### Social-Relational Theory

Research on students with severe disabilities in general education settings requires a paradigmatic shift in orientations that can access both the experience of disability and factors that contribute to meaningful participation<sup>26</sup>. In the last several decades, the social model of disability has advanced the notion that restriction in sport and physical activity is the result of societal practices that disable individuals<sup>27,28</sup>. The model has been effective in highlighting the marginalized experiences of disabled individuals through discriminatory practices<sup>29</sup>. In the physical education setting, GRENIER<sup>28,30</sup> utilized the social model to investigate the changing landscape of disability depending on opportunity, environment and teacher practices including peer relationships that may support or hinder student performance. These supports are essential for socio-emotional wellness<sup>31</sup>, and school engagement<sup>32</sup>.

REINDAHL<sup>33</sup> criticized the social model for its lack of accounting of the personal experience of impairment. REINDAHL<sup>33</sup> also elaborated on the distinctions between impairment and disability illuminating the interplay between the two. *Impairment* is the functional limitation caused by physical, mental or sensory differences. *Disability* is the loss or limitation of opportunities to participate due to physical and/or social barriers. SHAKESPEARE<sup>34</sup> further articulated the limitation of the model in minimizing the individual bodily experience. Within the context of an inclusive classroom, how the environment is structured environment can

either hinder or facilitate classroom interactions. Disablism, according to THOMAS<sup>35</sup> is “the social imposition of avoidable restrictions” (p. 37).

THOMAS<sup>36</sup> directs attention to the relational and communicative aspects of the environment as either mitigating or heightening the experience of disability. Her descriptions of impairment effects are necessary for understanding disablement, particularly the nature of the interactions between students with and without disabilities. She elaborated on the impairments effect as the situational impact of the disability<sup>36, 37</sup>. An impairment *effect* is the consequence of impairment with both *social* and *personal* implications, particularly for students who lack the social capital to engage with peers. Thomas<sup>37</sup> holds the view that the social conditions impact the relationship between impairment effects and disablism.

Within a social relational perspective, the impairment does not always equate with *being disabled*. Disability becomes a relational

phenomenon between the impairment features of the individual and the surrounding social and physical world<sup>38</sup>. A social relational view of disability can elucidate the quality of interactions between students with severe disabilities, their peers, and the pedagogical practices of teachers that promote positive social interactions. What is suggested is that relationships, namely those between teachers and students and students and students, are important catalysts for the promotion of successful inclusion. Given that, the purpose of this research was to:

To examine students’ understanding of their peers’ with disabilities non-verbal and verbal communication.

To assess the impact of the communicative skills between students with and without disabilities in GPE.

To identify the communicative and instructional strategies used by the GPE teacher and other members of the school community in facilitating positive interactions between students.

## Methods

A qualitative methodology was adopted to reveal the communicative practices within an inclusive GPE setting. Case study analysis was selected to gain access into the day-to-day events that contributed to a relational analysis of disability<sup>39</sup>. MOEN<sup>40</sup> writes that “inclusive activities can only be understood in terms of a continuous developmental process.” (p. 181) that should be observed and thoroughly analyzed to consider what goes on in the classroom. Internal Review Board approval was obtained from the primary researcher’s affiliated institution. Parents and professionals provided consent for the data collection.

## Participants

Purposeful sampling was conducted in a second and fourth grade inclusive GPE class<sup>41</sup>. The school was located in New England and was comprised of a diverse mix of students across a range of socio-economic levels. The elementary school served students in kindergarten through 5th grades and enrolled over 500 students.

The observed second grade class consisted of 17 students. Several of the students had IEP’s but one student, Amanda, was identified as having a severe

disability, which included an intellectual disability, orthopedic, and visual impairments. Amanda had limited mobility in her arms and legs and used a wheelchair. She was assisted by a full-time paraprofessional who accompanied her throughout the day. Amanda was fully included in her general education and GPE classes. Her primary mode of communication included the use of gestures, visual contact, reaching, and smiling.

The fourth grade class contained 20 students, including two students with significant disabilities. The focus of this research centered on Zoe, a young female with severe and multiple disabilities who was medically fragile. Zoe had a seizure disorder, used a wheelchair for support, and required a full time nurse. When transitioning, Zoe used a stander hooyer lift, which she could propel or push-off while in the lift. Zoe communicated primarily through facial expressions, eye contact, and pulling a bell suspended from her chair. Like Amanda, her engagement varied widely depending on her physical and emotional state. Both students received occupational therapy (OT), physical therapy (PT) and speech therapy (ST) services.

Each GPE class met once a week for 50 minutes. The classes were taught by Ms. Roe, an

experienced GPE teacher with a master's level certificate in Adapted Physical Education. Ms. Roe was an exceptional teacher, recognized by her state association as the Teacher of the Year. She was actively involved in extracurricular activities including jump rope club, archery, and golf teams. Her GPE curriculum included a skill theme approach with additional units on dance, fitness, cooperative games and biking. All children in the school were enrolled in GPE, including the students with severe disabilities.

Because of the inclusive nature of her program, Ms. Roe emphasized the development of communicative behaviors between students with disabilities and their non-disabled peers. In order to accomplish this, she worked closely with her students' peers, the IEP team that included the physical therapist, and occupational and speech therapists, as well as two classroom teachers. In addition to Ms. Roe and the two classroom teachers, the girls' IEP team members were involved in the study, including Zoe's nurse and Amanda's paraprofessional.

### **Data Collection**

Field notes were conducted by the primary investigator during 16 GPE classes using SCHATZMAN and STRAUSS<sup>42</sup> system of organizing notes. The system recommends three distinct ways of organizing notes including observational, theoretical and methodological notes enabling the researcher to delve into classroom activity within the relational theory.

Observational notes comprised the majority of note taking with eight observations conducted in the second grade class and eight in the fourth grade GPE class. Observations focused on teacher-to-student and student-to-student interactions, particularly those that occurred between the students with severe disabilities and their classmates. These interactions varied in the nature of their intentions and consisted of supportive behaviors such as when a child encouraged another child, assistive; when a child placed an object in another student's hands, or instructive; when a child directed the next series of instructions for completing a task. Observations also included the peer support strategies provided by Ms. Roe or the paraprofessional that consisted of verbal, visual, or manual prompts. Identified, facilitated dialogues used for prompting between the teacher and students addressed types of communication, who initiated the conversation, and the cues that

were used.

Three to four-person focus group interviews with selected students were conducted during the students' lunch period<sup>43</sup>. Only students whose parents signed consent forms participated in the interviews. The primary researcher and the GPE teacher conducted the interviews and together, generated a list of questions they felt would elicit responses on students' perceptions of the learning environment aligned with the purposes of the study. Before interviewing the students, questions were rehearsed and potential prompts reviewed. Ms. Roe's engagement as both researcher and teacher encouraged an environment that contributed to a positive and consistent rapport with participants 44. Questions addressed students' perceptions of the class activities, and their interactions with their peers, including students with disabilities. Interviews with the peers lasted approximately 10 minutes and occurred on six separate occasions for each of the two classes.

Semi-structured interviews were conducted with the GPE teacher, and the physical, occupational, and speech therapists. In addition, the paraprofessional, the two classroom teachers, and the nurse were interviewed. The interviews were conducted in a quiet setting during the school day and lasted approximately 30-45 minutes. Questions addressed communication practices and strategies associated with getting students to engage with each other. The principal investigator conducted the semi-structured interviews. The GPE teacher also kept a journal to record her personal thoughts.

### **Data Analysis**

Data from three primary sources including field notes, interviews, and the journal were analyzed to address questions of interest. Interviews were transcribed by the primary investigator to evaluate the role communication played in creating an inclusive environment. An inductive thematic analysis was used to identify common threads that extended throughout the data<sup>45</sup>. The data were continually examined to determine whether categories be expanded or collapsed. Ms. Roe assisted in the data analysis to better inform the analysis. Meetings between the primary investigator and the second author continued until saturation was reached. Theory development between the data was an aspect of the research that exposed findings and informed the theoretical perspective.

Quality of the research was established through credibility and significance of the contribution<sup>46</sup>. Credibility was established through triangulation of multiple data sources that verified the results<sup>47</sup>. Member checking was conducted by providing the transcripts to adults who were interviewed to ensure authenticity to the interview process and their response to the questions<sup>44</sup>. The primary researcher's on-going and consistent presence in the school environment reinforced an ethic of collaboration with the involved adults<sup>48</sup>.

## Findings and Discussion

The analysis revealed four primary themes. The first, "Collaboration-Needing to Know What I Don't Know" describes the process of working with and identifying needed information through a shared vision of inclusion. The second, "Community in the Classroom," revealed the value system shared by the classroom teachers. The third theme, "The Role of Modeling" articulated the value of appropriated practices between teachers and students and students and students. The final theme, "Talking Without Words" highlighted the communicative processes and shared language of the students.

### Collaboration - Needing to Know What I Don't Know

Although Ms. Roe was a veteran teacher noted for her innovative teaching practices, having students with severe disabilities challenged her to consider how she could align her curriculum with students' learning goals.

As the only PE teacher, she wore both GPE and adapted physical education (APE) hats. The catalyst for her collaborations emanated from her personal view that she was not doing enough for her students.

By partnering with the professionals that work with these students, I would become familiar with the goals they have for them and adapt those goals to make the GPE class more accessible. In the end, I would become a more effective teacher (Ms. Roe's journal).

Ms. Roe spent several hours in team meetings as well as observing the students in their occupational and physical therapy sessions. These sessions provided insight on Amanda and Zoe's strengths,

including eye contact, right hand preference, and the ability to reach for objects. She also observed how Amanda communicated through a voice output cause and effect switch and noticed that she turned her head when hearing a familiar voice or music (Ms. Roe interview). However, to make meaningful connections between her students with severe disabilities and their peers, she needed to develop a movement dictionary that would serve as a communicative bridge between students.

According to CALCULATOR and JORGENSEN<sup>49</sup>, the foundation of communication consists of signals for attention, accepting, and rejecting. These are distinguished from yes or no responses requiring a more sophisticated level of skill. Ms. Roe's first step was to create a communicative dictionary that identified Amanda and Zoe's behaviors.

It was at this time that I had an epiphany that in order for the students with multiple disabilities to be successful and fully access all the goals I had for them, not only would I have to learn to communicate with these students, but just as importantly, their peers would need to learn how to communicate with them. (Ms. Roe, interview)

Ms. Roe worked diligently with the team to determine how to support Zoe and Amanda. She developed the dictionary that translated the girls' gestures into represented meanings. For example, when Amanda rocked her body from side-to-side it meant she was engaged. When her head was down, she was tired and disinterested.

I thought if I could get those answers then I could teach their peers how to "read" their friends with disabilities' non-verbal and verbal cues. I kept asking myself, what constitutes communicative behavior and what do they perceive to be the meaning of each message? (Ms. Roe, interview)

Ms. Roe utilized a collaborative dialogue to dismantle the barriers between general and special education<sup>50</sup>. The strategies she adopted formed the foundation for the girls' support system and were grounded in her belief that all students should engage with their peers and be active members of the classroom<sup>30</sup>. The educators worked with the peers and the team to access the girls' communicative abilities as a way into their lives so they would not be excluded<sup>51</sup>.

## Community in the Classroom

As a teacher with 29 years of experience, Ms. Barnes, Zoe's fourth grade teacher, was committed to establishing a community in her classroom. Her prescription for Zoe was simple, "do not expect sympathy, but empathy." She reflected on this practice:

I work at it; it doesn't just happen. I remember at the beginning of the year, the students would approach Zoe, speaking slowly while exaggerating their movements. 'Hi Zoe' (she says in a long drawn out voice) and it's like 'stop right there!' Because you know Zoe is a fourth grader, so it's important for them to know how to say hello age appropriately as just fourth graders.

Her appreciation for the learning possibilities led to the discovery that Zoe, despite her inability to use words to communicate, had an affinity for poetry. "She let them [students] know. She would ring her bell so they understood what it was she was interested in." This encouraged a natural reciprocity and an appreciation of the students' communicative actions.

For both Ms. Barnes and Ms. Roe, everyone belonged and, more importantly, each student had a role. The engagements they encouraged contributed to communicative possibilities<sup>52</sup>. The following scenario described by Ms. Roe highlighted relational possibilities:

Chip and Amanda, both students in Ms. Roe's second grade GPE class were completing a cycling unit one fall afternoon. While Chip zipped around on his two-wheeler, Amanda rode in the front seat of a specially designed tandem bicycle pedaled by Ms. Roe. Every time Chip cycled past Amanda he would slow down and say "Hi Amanda." Amanda would turn her head in acknowledgement and he would take off again in a whirl. This playful interaction continued until a crash occurred with Chip falling to the ground. Quick to react, Ms. Roe said, "Amanda, let's check on Chip" who lay on the ground, crying but unhurt. While Ms. Roe examined Chip, Amanda became very animated, swaying her body back and forth. Noting Amanda's behavior, Ms. Roe said, "Chip, look how Amanda is moving her head, arms, and legs. What is she saying to you?" "She wants to know if I'm okay" Chip said. "Well are you?" Ms. Roe asked. Chip turned to Amanda and said, "I'm

okay Amanda." With that, Chip returned to his bike and continued practicing his skills with Ms. Roe and Amanda following closely behind (Ms. Roe, journal).

This situational relationship relied on cooperation and a shared language. Habermas<sup>53</sup> legitimized this knowledge by valuing individual capability addressing the importance of transformational experiences<sup>36</sup>.

To do this, she capitalized on teachable moments and learning opportunities. "What do we have to say in our teaching to nine and 10 year olds is so important that we cannot stop? And we do stop" (Ms. Roe's interview). These acts were fundamental to Ms. Barnes and Ms. Roe's way of teaching. "Mutual respect; also, these students know they were chosen for this role." (Ms. Barnes interview). The teachers continually extracted meaning from the girls' gestural responses. Most times they were successful but occasionally they were not. "Amanda is much more capable. I think there is so much going on in her head and she is not able to communicate verbally" (Ms. Locke, second grade teacher), "We are just not getting it and that's what breaks my heart as there are times when we just don't know." What we see within the educational setting is the significance of valuing communication in the design and development of learning.

These quotes and situations clearly showed that the team embraced a sense of community. In addition to the sense of community in the gymnasium, there was the use of modeling.

## The Role of Modeling

ROGOFF<sup>54</sup> utilizes the term, guided participation as essential for children to appropriate the tools needed to engage and interact. BIKLEN<sup>55</sup> further elaborates on the role of the teacher, not only to determine students' particular skills, but structuring and optimizing the environment. Both the GPE teacher and the classroom teachers took necessary steps to prioritize the relationships. For example, Ms. Roe would disseminate several copies of her lesson plans to classroom teachers and the paraprofessionals at the start of each day. Her planning contextualized learning for her students.

I think one of the most important things she does [Ms. Roe] is she gets students all together at the beginning of the class and then she says, 'what can we do to include Zoe?' And kids will

raise their hands and she will provide examples related to communication. Then she'll bring Zoe into the conversation and she explains exactly what they are going to do during class. So, communication is huge. And she creates the expectation that you have to be working on including Zoe no matter what (Zoe's nurse).

The presence of the girls' functional impairment did not undermine their ability to participate in the class thereby challenging notions of dependence and independence. Ms. Roe's debriefing at the end of each class allowed the students to describe their interactions with Zoey. "The neat thing that is happening is that these kids have an impact. These communications have an impact on other people" (Interview Speech therapist). Modeling practices transferred responsibility from adult to students and reinforced behaviors that occurred throughout the school community. Ms. Barnes recounted a field trip experience in which students took over an archery activity for Zoe by supporting and modifying the task.

We [the students] are at archery and you know, here's the thing. It's not really about adults; it's about the kids. It was not anything out of the ordinary for them. It wasn't like here now, we have to do this for Zoe in the wheelchair. It wasn't. She was a classmate; they knew what to do so that she could participate in archery (Ms. Barnes).

Zoe's participation and actions were assumed behaviors appropriated through verbal discussion, scripted prompts, and manual cues. Ms. Roe would prompt identified peer supports prior to the start of class. When Amanda entered the gymnasium, she would give a greeting using her voice output machine. Because of her right side dominance, her peers were cued by Ms. Roe or the paraprofessional to approach her and say, "Hi Amanda." When eye contact was established, a peer would present her with the Big Mack button on the voice output machine. The peer supports were instructed to place it near her right hand and wait for her to say hello by activating the button. In most cases, adults facilitated the interactions (field notes). Because the teachers internalized values of inclusion and modeled accessible interactions, educators shared responsibility for involving Zoe and Amanda. Thomas 56 highlights similar social dimensions that give full recognition to one's biological dimensions.

## Talking Without Words - Student Learning

For Zoe and Amanda, GPE was a time to play and interact with peers. Because each of the children operated at such a sensory level, a stimulating gymnasium environment was essential for engagement. "Her environment is huge though. What stimulates her? What will engage her? If you had a different, more closed environment, you would just lose so much of her (Interview Amanda's paraprofessional). These opportunities to practice social skills with peers would be much less likely in a separate, individualized program<sup>57</sup>.

Students willingly engaged in various forms of relations that contributed to appreciative values<sup>58</sup>. They learned there were multiple ways to interpret disability. When asked in the focus group on the meaning of the term disability, one student responded by saying: "A disability is when you can't do things and you need to respect people with disabilities." Students also described a variety of communicative strategies when playing the games: "I would use eye-contact, and if I was the tagger I would say I am going to get you. That's what I think that it means. That's what people say when they are the tagger or they will say it in some other way."

It also meant learning the rules of engagement in the class. As one student noted: "When she comes after me in a tagging game, she tags me and I go over and tell her 'Zoe you tagged me!' And she gives me eye-contact and I'll be frozen." Communication between peers also meant providing choices and understanding the students' moods. As one fourth grader described: "I think you can do different things with her. Sometimes when she doesn't like something, she usually just puts her head down and acts like she wants to go to sleep so that she doesn't have to do it." Students differences are accepted and acknowledged.

Contextual learning complimented the interpersonal relations that enhanced the children's performance in an on-going and sustained manner. As described by one fourth grader:

I always felt comfortable with Zoe because she's been in the school since like pre-school. So, I've been in her classes a lot and I am really comfortable now with her. She's really nice and funny and she wears nice socks.

Examining these interactions provided insights

on the way students without disabilities think about difference. Noticing the likes and dislikes became part of the everyday repertoire. “Yea. She [Zoe] is a champion in archery. She’s good at archery. She has arrows and a special bow... and her own target.” (Interview peer)

Proximity also meant witnessing the impact of a disability that made it difficult to participate; that being different meant you were not always going to do the same things. As one student revealed, “Yeah, she [Zoe] loves it. If she can’t do it, like if we are snowshoeing she can’t necessarily do snow shoeing but they [teachers] do something else with her so she’s not left out. She’s never left out.” Or another, “Yeah, and

sometimes when we do games [Ms. Roe] always makes up ways Zoe can join in.”

Although Ms. Roe’s efforts at full engagement were on-going, there were times it was not possible. THOMAS<sup>36</sup> suggests that acknowledging personal experiences of impairment and disability is politically unifying because it recognizes the full range of experiences that represent what it means to be disabled. Zoe’s peripheral existence had value. “Yea. Even with the kayaking she was having fun watching all of us.” As expressed by this child, disability was not an aberration but rather a degree of difference and timing. Accessing her peers within this community enabled Zoe to explore different ways of being and belonging<sup>59</sup>.

## Conclusion

I went into this process with the approach that I was going to better meet the needs of my students. What I failed to realize is that I was going to learn a better understanding of each of my students, how they communicate with the world, their likes, dislikes, strengths, needs and how they learn. Knowing this, I then would be able to teach them so that they could become an active, interactive, physically educated, friend and be successful in the PE classroom and beyond (Ms. Roe, interview).

A relational lens provided a window on the effects of supports, including opportunities for meaningful engagement. Much of the work undertaken by Ms. Roe and the team of educators were aimed at dealing with educational challenges of having students with severe disabilities in the class. Shaped by Ms. Roe’s personal teaching philosophy, the communicative support structure served as the interface between the students and provided students with a sense of agency<sup>11</sup>. These supports and communication strategies established by the educators made it possible for Zoe and Amanda to access the physical education program. More importantly, it enabled them to participate with their peers through non-verbal forms of communication that were continually reinforced by Ms. Roe in the classroom<sup>11</sup>. Students’ interactions, based primarily on a shared understanding of the physical movements and eye contact made by Amanda and Zoe were

essential for their participation, both physically and socially in the gymnasium. As THOMAS<sup>37</sup> points out, the impaired body is both biological and social.

Collaboration of key stakeholders including peers, and a desire on the part of the educators to provide an enriched program for the girls was essential. It also meant educators viewed themselves as a support network that identified structural changes rather than individual remediation focused on the students’ disability. The students’ support system was designed to meet their needs through a flexible adaption and understanding of their demonstrated behaviors<sup>60</sup>. What is important to note is that the absence of these supports would have significantly limited the students’ participation in the gymnasium<sup>59</sup>.

Most important was the centrality of placement within the GPE classroom and the significance of the instructional strategies that informed and to some extent, catered to the students’ skills. Learning in the GPE classroom, as in the other classrooms, was a community effort shaped by practices that encountered difference through accommodation and acceptance<sup>61</sup>. Absent this proximity and the ensuing interactions, these communicative practices that forged relationships would not have occurred.

## Implications for Inclusive Practices

Assuming there is support for the inclusion

within mainstream practices, the question then becomes how best to address the needs of all students within the context of a general education classroom. It is here that distinctions should be made between placement and practice. Increased access to general education classes must be accompanied by actual efforts to ensure students are participating fully in these educational settings. Collaborative practices, particularly for the physical education teachers, should be encouraged as a strategy to enhance the quality of educational experiences for students with disabilities. Future recommendations for research include an examination of teacher practices that promote inclusion and student interactions between students with and without disabilities, particularly those who exhibit non-verbal communication.

## Limitations

In presenting this case, the authors of the manuscript are aware that not everyone will agree with the inclusion of students with severe disabilities into a general education program. There are no doubt challenges to the process, risks to be taken, and necessary supports for inclusion and the school community to be made. As understood in this case study, inclusion is about removing the barriers to access learning, particularly for children whose lives are made more difficult by their disabilities. The case was purposefully selected to investigate this particular context. Given that, there is a limit to generalizations drawn from the findings<sup>62</sup>. Further, readers must interpret these findings in light of their own experiences.

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