

## **Inclusive Physical Education From the Perspective of Students With Physical Disabilities**

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The study describes the phenomenon of inclusive physical education from the perspective of students with disabilities. The experience of 9 elementary school-aged students with physical disabilities (6 males and 3 females with a mean age of 11 years, 1 month) was captured by way of focus group interviews, field notes, and participant drawings. The thematic analysis uncovered a persistent dichotomy in how the participants experienced physical education. Good days were revealed in the themes of sense of belonging, skillful participation, and sharing in the benefits. Bad days were overshadowed by negative feelings revealed in the themes of social isolation, questioned competence, and restricted participation. The students' experiences were discussed within the conceptual framework of ecological perception and affordance theory (Gibson, 1977, 1979).

Inclusive physical education compels teachers to embrace student diversity as an expected and valued attribute (Bunker, 1994). In many respects, however, perceived success in inclusive physical education has been synonymous with "fitting in" to the existing structure by either possessing minimal differences or by managing the reduction of functional ability (DePauw, 1997). Directly or indirectly, researchers have asked teachers, classmates, and administrators how students with disabilities have fit into existing programs (e.g., Block & Zeman, 1996; Garver-Pinhas & Pedhauzer Schmelkin, 1989; Giangreco, Dennis, Cloninger, Edelman, & Schattman, 1993; LaMaster, Gall, Kinchin, & Siedentop, 1998; Tripp, French, & Sherrill, 1995).

Conducting research in inclusive physical education with students with disabilities rather than on or about them will begin the process of dismantling the assumption of disability ownership and validate the need for supports based on student identified environmental constraints (Kirby & McKenna, 1989). Little research has been conducted on the experience of students with disabilities (Blinde & McCallister, 1998). What students think, feel, and know about their participation in physical education has received little attention conceptually or in the

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empirical research (Graham, 1995). Teachers and instructors continue to assume that their view of the world is the students' view of the world and that they understand and know the needs and interests of their students. Including the voice of students with disabilities in our research agendas will deepen our understanding of disability and assist us in identifying barriers that are most meaningful to students (Reid, 1989).

## Theoretical Framework

The determinants of a positive learning environment for students with disabilities in physical education have received only cursory consideration. Environmental factors that afford students the opportunity to be meaningfully involved in the regular physical education program remain undisclosed. The goals and objectives for students with disabilities in physical education have been open to wide interpretation (Davis, 1989; Sherrill & Montelione, 1990) and the degree to which the program content is relevant and ecologically valid for students with physical disabilities is unclear (Davis & Burton, 1991).

Gibson's ecological approach to perception (1977, 1979) provides a framework for exploring the mutuality of the student and the learning environment. His theory (1979) implies the complementarity of the person and the environment, referring to them as "an inseparable pair" (p. 8). What an environment affords us determines where and how we live. Gibson (1979) refers to our natural environmental and the way of life it affords as a "niche." In turn, an environment, or niche, reflects certain types of inhabitants. "The niche implies a certain kind of animal, and the animal implies a certain kind of niche" (Gibson, 1979, p. 128).

Gibson's theory of ecological perception posits that perception and action are mutually linked. To alter and take advantage of what the environment affords us, we must first perceive, value, and give meaning to its affording qualities. Coining the term *affordances*, Gibson (1979) stated: "The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill" (p. 127). Perception then, "is the process of becoming aware of environmental affordances" (Bouffard, Streat, & Davis, 1998, p. 256). For an affordance to be supportive, it must be perceived and attended to by the person. Affordances must also be assessed relative to that person, taking into account the person's size, form, and capabilities (Gibson, 1979). What is an affordance to one person may not be an affordance to another. An affordance links the functional utility or adaptive value of objects or events to the capabilities of the person.

Gibson (1979) provided insights into six environmental affordances: (a) the medium, (b) surfaces and their layout, (c) substances, (d) objects, (e) animals and persons, and (f) places. By way of example, air can be considered a medium. Being able to alter the medium of air by compressing and regulating its release affords breathing and hence life for those who have lost the ability to breathe on their own. This alteration similarly permits travel to places that would otherwise be inaccessible, such as that experienced by free-swimming scuba divers.

The affording qualities offered by surfaces and their layouts are illustrated by interactions with a ramp. A ramp affords ascent or descent to horizontal surfaces that are on different planes for persons who use wheelchairs. Each person will perceive and experience the qualities of the ramp differently, however. Successful negotiation of the ramp will only occur if the ramp is strong enough, at a

low enough angle, and wide enough for the person using it. A ramp that is not of this nature affords the negative consequence of falling. Furthermore, the parameters of a safe and negotiable ramp for one person may be different for another.

Water, as a substance, has a surface but one that does not afford walking support for large creatures. Moving through water of sufficient depth, however, affords locomotion to people who cannot walk on the flat rigid surface afforded by the ground. Perceiving water as an aid to independent walking is experienced only when the body is sufficiently submerged in the water. Its buoyancy quality counteracts the effects of gravity on weakened muscles, affording increased balance and ease of movement.

The affordances of objects are extremely numerous. The grasp-ability of an implement, for example, may enable participation in an activity previously perceived to be unattainable. Building up the grip of a badminton racquet may increase a person's ability to control the head of the racquet. The practice of modifying equipment that prevails in the field of adapted physical activity is grounded in the concept of affordances of objects.

"The richest and most elaborate affordances of the environment are provided by other . . . people" (Gibson, 1979, p. 135). Behavior of a social nature relies upon perceiving what another person affords. Satisfying relationships are based on perceiving mutual affordances. Students, for example, afford teachers the opportunity to facilitate learning. Teachers, in turn, afford students an avenue by which to learn. Peers play a defining role in the experience of students with disabilities in physical education (Block, Oberweiser, & Bain, 1995; Tripp et al., 1995). Peers afford enhanced participation by sensitively judging the force and effort qualities needed to exchange a ball successfully in a partner activity. Peers can also detract from the experience by overhelping and removing choice and opportunity for decision making.

Places afford concealment for hiding an object from others and for the hiding of oneself from others (Gibson, 1977). The places that we associate with physical education, however, do not afford concealment, but rather exposure. A public locker room with open showers does not afford privacy for those who desire it. Similarly, the gymnasium does not afford concealment of a disability. In summary, the affording roles of medium, substances, surfaces, objects, people, and places provide a framework for discussing the experience of students with physical disabilities within the environment of inclusive physical education.

## Purpose

The focus of this study was to add the voices of students with physical disabilities to that of teachers, parents, classmates, administrators, and researchers in the discussion of inclusive physical education by asking the question: What is the experience and meaning of inclusive physical education from the perspective of students with physical disabilities? *Experience*, within an ecological perception framework, is the composite of all of the interactions between perception and action that occur minute by minute. *Meaning* is assigned to our experience as we take note of them, impart memory to them, and assign them significance to our lives (Clandinin & Connelly, 1994). The term *perspective* is used to refer to the interpretations and reflections that students with disabilities assign to their own experiences.

## Method

To address the experience and meaning of inclusive physical education, a hermeneutic phenomenological approach was utilized. Hermeneutic phenomenology is a study of the interpretation of texts for the purpose of obtaining a common understanding of the meaning assigned to everyday experiences (Morse & Field, 1995; Packer, 1985). The underlying dynamics (themes) that account for an experience provide the central meaning that enables one to understand the substance or essence of the experience (Moustakas, 1994). The appeal of hermeneutic phenomenology in educational research rests with the pedagogic reflections that are elicited by the kind of seeing, listening, and responding necessary to understand the realities of students (van Manen, 1986).

### Participants and Setting

Nine participants (6 males and 3 females) from Grades 5 and 6 and between 10 and 12 years of age, mean age of 11 years 1 month, participated in the study. A maximum variation purposeful sampling design was utilized (Patton, 1990). Maximum variation sampling is particularly useful for capturing central themes or principal outcomes that cut across diversity as is found in inclusive physical education settings (Dreher, 1994). As shown in Table 1, the participants had a range of physical disabilities typically found in the regular classroom (i.e., cerebral palsy, spina bifida, and amputation; Sherrill, 1998). Although all of the participants used wheelchairs for participation in physical activity, the severity of the disabilities varied as 4 of the participants were classroom ambulators. Boys and girls participated in the study, and the participants attended different schools across three school divisions. Although the findings of qualitative research do not generalize, the information

**Table 1 Description of Participants**

Age in years	Disability	Girl/Boy	Ambulatory
<b>Group One</b>			
12	spina bifida	girl	no
12	spina bifida	boy	no
12	cerebral palsy	boy	yes
11	double above knee amputation	girl	no
<b>Group Two</b>			
10	cerebral palsy	girl	yes
10	spina bifida	boy	no
10	cerebral palsy	boy	yes
10	cerebral palsy and hard of hearing	boy	yes
10	spina bifida	boy	no

*Note.* Mean age across all 9 students was 11 years 1 month.

can be illuminating to other groups and settings with similar student variations and constraints (Patton, 1990; Schofield, 1990).

The participants were attending a week-long summer camp for children with physical disabilities (i.e., cognitive disabilities were not present) when the study took place. The camp, which was sponsored by two disability sport organizations, was situated outside a larger urban area, drawing campers from a large catchment area. A camp registration fee was required of all campers, although the rates were subsidized by the sponsors. Letters outlining the nature of the study were sent to the 10 parents and caregivers who had children between ages 10 and 12 years registered with the camp. There were approximately 40 children registered in the camp in total. The nine families who expressed interest in the study represented approximately 22% of the total number of children (40) in attendance at camp. To build rapport with the participants, the first investigator spent time volunteering as a camp counselor for several days prior to and after data collection.

## Data Collection

The data collected pertained to school physical education, not the camp. Children were asked to remember and share their experiences in inclusive physical education classes during the past 1 or 2 years. The data were triangulated; that is, a combination of several data sources were used within the study to gain a broad view of the setting (Janesick, 1994; Morgan & Spanish, 1984). Information was collected through focus group interviews, participant drawings, and field notes.

*Focus Group Interviews.* The participants were divided into two small focus groups, one group of 10-year-old participants ( $n = 5$ ) and one group of 11- and 12-year-old participants ( $n = 4$ ). Small groupings provided ample opportunity for each participant to have input. The presence of similar aged participants also reduced the tendency to acquiesce in the authoritative presence of older participants or an adult (Lederman, 1990).

Focus groups are group interviews in which a small number of respondents, under the guidance of a moderator, talk about topics that are of importance to them (Morgan, 1998). Multi-staged or repeated focus groups were conducted to facilitate rapport building and cover a range of questions from easy to more advanced without taxing the limits of the participants' attention or patience (Greenbaum, 1998).

Each group met with the interviewer for 60 min on two occasions, within a 1-week period. The focus groups were audio and videotaped with the participants' permission. The videotaping was done as a backup to the audio taping as well as to assist with voice identification for transcription purposes (Bertrand, Brown, & Ward, 1992). Each focus group session included an introduction, warm-up activity, drawing task, easy nonthreatening questions followed by more difficult questions, and a wrap up activity (Spradley, 1979).

Small focus groups were chosen over one-on-one interviews because group interaction can lead to more open discussions of thoughts, feelings, and behaviors (Kreuger, 1998). Participant-to-participant interactions also provide an opportunity for the participants to guide the discussion and present information important to them that may not be anticipated by the moderator (Bertrand et al., 1992). Group discussions can also generate the snowballing of one person's comment into a chain of additional comments, resulting in a wider data bank than individual interviews alone (Morgan, 1998).

*Visual Recordings.* Working with children in interview settings poses unique challenges. Children need to be put at ease and encouraged to participate, made to understand that there are no right and wrong answers and that what they say is important, and helped to understand the ideas being put before them by the moderator (Greenbaum, 1988). Along with the use of sentence completion and imagination-type interview questions, the participants were asked to draw a picture of what physical education meant to them, using markers, crayon, or pencil crayon. The drawings eased the participants into the interview, provided a stimulus for discussion (McDonald & Topper, 1988), and generated important information.

*Field Notes.* At the end of each day of contact, the first researcher recorded reflections on the project as a whole, impressions about what was said that day, ideas for further probes, and preliminary thoughts about the themes emerging from the data. These field notes were written to facilitate the analysis so the investigators could conceptually return to the setting (Bogdan & Biklen, 1992).

## Method of Analysis

To identify common threads that extended throughout the data, we subjected verbatim transcripts to *semiotic clustering analysis*, defined as the search and interpretation of categories and linguistic structures found in the text (Feldman, 1995). Not only were the words considered, but following the semiotic linguistic tradition, the context of each response received attention (Manning & Cullum-Swan, 1994). To isolate the emerging thematic statements, we conducted a line-by-line analysis. This entailed reading the transcripts and field notes numerous times. Particularly revealing phrases were highlighted and coded with meaningful labels. The denotative meanings were compared with connotative meanings arising from examination of the content, context, and relationships among the entries. Phrases that were conceptually similar were gathered together into thematic statements. Thematic descriptions were further gleaned from the participants' drawings. The essential themes, or those that give fundamental meaning to the phenomenon, were then determined (Kreuger, 1998). Table 2 provides a summary of the analysis. Gibson's (1979) ecological perception and affordance theory was used to facilitate the interpretation of descriptive data after the analysis was complete. The study was not a test of his a priori conceptual framework.

The method used to analyze the participants' drawings was symbolist analysis (Ball & Smith, 1992). Full appreciation of the visual representations was arrived at by first looking for symbols that represented the experience of inclusive physical education. The meanings of the symbols were then derived from the participants' descriptions of their work during the focus group discussions.

## Trustworthiness of Qualitative Research Findings

Prior to data collection, the first researcher used a bracketing exercise (i.e., a self-interview) to identify preconceptions about the participants' experiences in inclusive physical education (Kirby & McKenna, 1989). Answers to questions posed about what the investigator was thinking and already knew about the research topic were recorded on the computer and became part of the field notes. These preconceptions were referred to during the analysis to keep interpretation bias in check (Moustakas, 1994; Patton, 1990). To further the trustworthiness of the findings, an audit trail was kept that recorded the process and decisions made by the

**Table 2 Summary of the Semiotic Clustering Analysis**

Denotative meaning	Connotative meaning	Subtheme
They laugh at me They ignore me They stare at my body	Rejection Neglect Body object of curiosity	Social isolation
They think I can't do it They think I'm dumb	Others judge my ability	Question competence
Teachers don't let me Classmates don't pass to me I can only go on the cement	Lack of support Constraints of space	Restricted participation
Feel good when with the group Teacher says I'm doing a good job They [peers] cheer you on	Being with the class Encouragement and acknowledgment	Sense of belonging
Reasons for participation: - build up my strength - learn new things - become faster - to stay healthy - sportsmanship - makes our brain work more - cause it's a lot of fun	Physical education valued Essential for physical well-being	Share in the benefits
I like them to see that I'm good	Skill competence Self-efficacy	Skillful participation

investigators. This trail included the events, tasks, and sequence of the preentry, entry, data collection, analysis, trustworthiness, and closing phases of the study (Lincoln & Guba, 1985; Morse & Field, 1995).

During the focus group process, as well as after the analysis was completed, we completed a members' check (i.e., at the conclusion of each focus group interview, a brief summary of critical points was provided) and the participants were asked to confirm or correct the reconstruction of their ideas and experiences (Kreuger, 1998; Lincoln & Guba, 1985). In addition, three participants who were particularly articulate in their responses during the focus group discussions (one from Group 1 and two from Group 2) met individually with the first investigator to review a draft of the analysis. Their valuable comments were incorporated into the final reporting of the findings.

## Results

The semiotic analysis resulted in the emergence of a number of themes that revealed a persistent dichotomy in the participants' memories of how they experienced

physical education. There were “good days” and there were “bad days.” At one point in the focus group sessions, the participants were asked to ascribe a color to their physical education experiences. One participant said, “I think purple because, ah, purple is a nice color so sometimes you have nice days, but purple can also be a darker color so you have bad days.” A second participant said, “Rainbow sometimes. . . . Sometimes it’s good and sometimes it’s bad.”

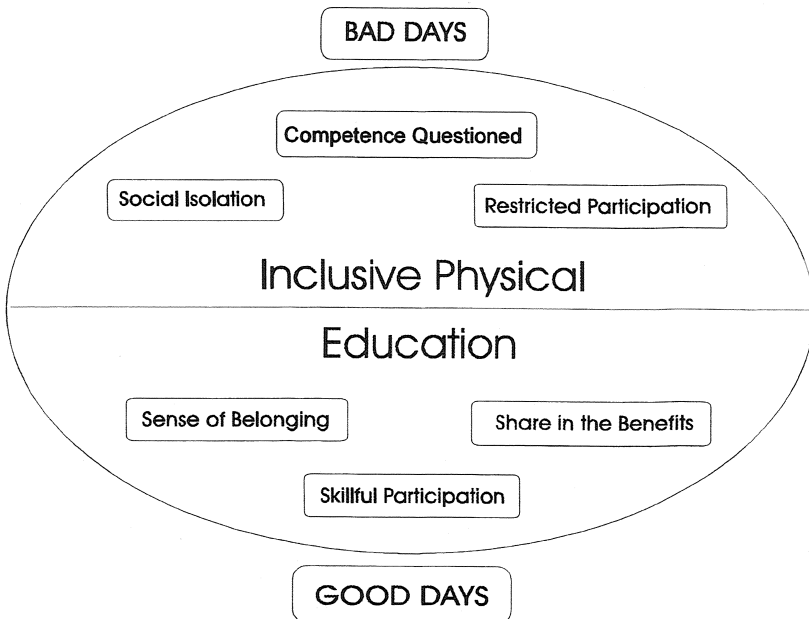
The two central ideas of good days and bad days were helpful in organizing and presenting the data. A visual summary of the themes, based on the semiotic analysis, is provided in Figure 1. Quotes were used to illustrate the themes and express ideas more clearly than could be done by the investigators.

### Bad Days

Three themes emerged from the data analysis under the central idea of bad days. Students described their experiences as unhappy when they were subjected to social isolation, were perceived as different due to their disability, or had active participation in class restricted.

*Social Isolation.* A bad day in physical education was characterized as one in which the participants were rejected, neglected, or seen as objects of curiosity by their classmates. The socially isolating nature of disability took three forms.

Instances of rejection were characterized by overt actions such as yelling, name calling, and laughing. “Like if they go up to their cool friend or something or to a popular person and tell them that I suck or something at that sport . . . Or if they laugh, if they laugh.” “I find that, when your friends and you’re doing a sport, there’s always one or two kids that are making fun of you.”



**Figure 1** — Thematic summary of inclusive physical education from the perspective of students with physical disabilities.



When you are participating in something, and like you are going fast down the run-way and someone puts their foot in front of you on purpose and then you run over it and then you get yelled at by them and then the teacher yells at you cause it's like not your fault cause you can't stop in time . . . some of the time it makes you feel like you just want to leave the gym.

At other times the participants indicated they had little or no communication with peers, and they felt they were being ignored and overlooked. Lack of attention from classmates was expressed this way by one participant: "They [classmates] don't listen to me anyway. I say something and they ignore me."

Participants were aware that their bodies were sometimes perceived as objects of attention that further isolated them from their classmates. At these times, participants perceived that classmates did not see them, but rather their bodies. The participants explained: "I don't like when there's a lot of people that you don't know, cause sometimes they always stare at you. I hate that, cause people from the different classes stare at you when you're doing different sports." ". . . before we went into the pool and ah, a lot of the time my bathing suit didn't cover the scar on my back and that was really embarrassing but it's like why I'm in a wheelchair, so . . .".

*Competence Questioned.* The performance aspect of disability was accentuated within the social context of physical education for these participants. Disability has been defined as: "Any restriction or lack (resulting from impairment) of ability to perform an activity in the manner or within the range considered normal" (United Nations definition of disability as cited in Shogan, 1998, p. 273). The social comparison standard implicit in this definition was applied to the participants' ability to participate in physical education by their classmates. The participants' status in regard to disability/ability was accentuated by calling into question their performance competence within that environment.

Although the participants appeared to use self-appraisal to determine their ability to participate (e.g., "I can do this. . ."), their classmates tended to "normalize" participation in physical education by suggesting that there were standards of acceptable performance. Students with disabilities who were perceived to be incapable of meeting performance standards had their ability to participate questioned. Participant comments included ". . . like when they say uhm, you can't do this, you're disabled. And I say back, I can to do this, I'm not that disabled." "A girl came up to me and she talks to me like I'm dumb or something. Like they act like you have a mental disability or something. And you know that and they know that, but they just act like that because you have a disability." "Sometimes some people think I'm kind of stupid."

*Restricted Participation.* A bad day in physical education was also portrayed as one with limited participation. Participation was inhibited by a lack of support from teachers, a scarcity of engagement from classmates, constraints imposed by the instructional space, or all three. Lack of teacher support was not associated with overt actions that limited participation but with uncertainty about appropriate performance expectations and activity adaptations. Some of the comments portraying teachers were "My teachers won't let me do anything." "He's like go pump up balls in the storage room. And they're playing volleyball and I'm like - grrrrr!" "I think sometimes they ask you if they want you to participate in sports, like if you want to stay back and do your work or something, like during

gymnastics they always ask me and I always tell them NO! I want to be with the group.” “...uhm baseball uhm, sometimes I can’t get the ball like, I swing, and I’m slow so I need a tee and you can’t get a tee in the big group.” “I wish they had the same activities but adapted for our disability, like swimming, they adapt it . . .”.

Gymnastics was hard on me ‘cause I just have to sit there and watch. You’re in the gym and it’s supposed to be your gym time, right? Well you’re not allowed bouncing the ball or else it would distract them and make them fall off the bars or something. . . . Adapt it for wheelchairs, like get someone to lift me down onto the mats and do rolls and stuff.

Classmates’ prejudgment of skill level also hindered the participation of students with disabilities as they were overlooked during class activities. One participant recounted: “When I was in Grade 4 a group of boys and girls didn’t want me to play soccer, because they said, you can’t play cause you can’t play soccer very well.” A participant described his drawing of soccer as follows: “I’m not playing, cause no one passes to me. They don’t let me do anything I want to do. They won’t let me be in the net or anything. That’s the only thing I can do in soccer and they don’t believe that I’m good. [Who’s ‘they,’ when you say ‘they’?] Kids in the class.”

Physical barriers also contributed to restricted participation in physical education. However, access to indoor gymnasium areas was not a concern, because ramps were reportedly available in all of the facilities. In contrast, students reported exclusion from special events and performances because other areas were not accessible. One participant recalled: “Okay, we were going to do some line dancing on the stage for the whole school. Guess what, he [teacher] wouldn’t let me do it. . . . Well, they could have just lifted me upon the stage and wheeled my chair up. I got to practice, but I didn’t get to perform. [How did you feel?] Horrible, just horrible.”

Outdoor teaching areas also limited participation because accessing grassy areas and play structures was difficult. Not only was participation restricted, but the students were physically apart from classmates because of their inability to get to the instructional areas. In one of the illustrations, a participant depicted herself and two classmates “fooling around” on the small plot of tarmac available outside the fire escape doors of the gym, while the remainder of the class played soccer baseball in an adjacent field. Physical isolation and lack of participation contributed further to feeling she was no longer part of the class by referring to “their physical education” in the following:

You know what really ticks me off about my classmates and their physical education, ‘cuz I can only go on the tarmac right, and that’s like I can only go on the cement part without someone pushing me. And they want to go to the park all the time and they want to go to the field and then they say, “oh, you stay here and you’ll find something to do.” Well, you sit there and you do nothing, right. And they don’t really think about that.

Other participants commented: “I think they should make part of the playground wheelchair accessible.” “Like maybe they should cut it [grass] for those who are like in wheelchairs.” “This year I helped the librarian pack our books . . .

Because our field needs, the grass needs to be cut and I can't push through it. . . . I was really ticked off cause they had someone cutting some of the grass and I think they should have cut all the grass. It wouldn't have taken that much money."

## Good Days

As well as having bad days in physical education, the participants characterized many of their experiences as being very positive. Meaningful experiences promoted a feeling of belonging, the chance to share or partake in the benefits of the program, and the opportunity to participate skillfully with classmates.

*Sense of Belonging.* A sense of belonging emerged from supportive interactions with classmates and teachers in the regular physical education program. Past involvement with "special" physical education classes was portrayed as boring and socially isolating. One participant said: "I like being with the class better. . . . Cuz like well so you play better sports cause all of those other kids I was talking about, all they do is play bowling, and you get pretty sick of playing bowling." ". . . it makes you feel really good when you are with the group and you are doing stuff with them."

In contrast to the earlier discussion of classmates' limiting participation, classmates also contributed to active involvement in physical education. A sense of belonging was reinforced when classmates provided physical support such as helping with equipment and providing encouragement. Companionship, or having someone willing to spend time with the participants, was also significant. "Like when you're doing relays they cheer you on cause you are doing good and it's hard." "Well, cause he agreed to help me and he was so nice to me . . . when I walk I get some people to help me with my canes and they were really fun too." "I can't go through the gym equipment doors if it's too crowded. I'm kind of slow to get my ball and get out. They get it for me and that."

*Share the Benefits.* The participants were able to clearly articulate the generally accepted goals of physical education. Fitness, skill development, knowledge acquisition, and positive social relationships were all identified as relevant and valid reasons to be involved in physical education. They recognized that by participating, they were benefiting from the goals of the program which, in turn, contributed to their physical well-being. Typical comments included: "It builds my strength." "To keep in shape." "To learn new things." "So you can learn new sports. This year we learned how to play volleyball and we're learning how to do serves and stuff so it was kind of fun." "How to have good sportsmanship."

The health benefits derived from physical activity were also highlighted as a reason for participating in physical education. Some participants believed that their disability predisposed them to illness and that it was important to build resistance against it. "I think that I participate a little, but I would like to participate most of the time in the class because it's better for our health, because we're disabled. Yah, because we get sick and if we participate in gym then we will stay healthy maybe." "So you don't get sick, so you stay healthy."

*Skillful Participation.* The participants valued skillful participation for the intrinsic reward that accompanied self-efficacy as well as external acknowledgment. They enjoyed the opportunity to demonstrate skill proficiency to their classmates. One participant drew himself shooting for the basket from his wheelchair, his teammates in the distance, with one second left on the clock. The admiration

they received from classmates contributed to a positive physical education experience. One participant recalled with enthusiasm an opportunity he had to demonstrate wheelchair basketball skills for his classmates, “and I knew so much!” Another participant recalled a swimming episode. “We had swimming lessons at our school . . . and I like it because a lot of people think I can’t do sports and it’s nice when they see me in with the Grade 6 kids swimming at their level, and ahead of them sometimes. I like them to see that I’m not in Yellow, that I’m in Life Saving I.” Yet another commented, “What made me happy is that, ah, I kept up with the other kids in swimming and I was ahead of some of them . . .” “It’s good when you can do a sport and you feel like you are special.”

## Discussion

Gibson’s (1977, 1979) concept of affordances provides a useful conceptual template for comprehending the significance of the experiences of the participants of this study. By posing the questions, “What affords a positive experience (good day) in physical education” and in turn, “what affords a negative experience (bad day)?” and listening carefully to the answers, we learned how these participants perceived their environments and attended to the affording qualities of people, substances, surfaces, places, objects, and medium.

As Gibson (1977, 1979) points out, the richest and most elaborate affordances within the environment are provided by interactions with people. People played a significant affording role in the negative experiences of students with physical disabilities. A preconception that people with disabilities had competence below the norm that was considered acceptable by classmates and teachers was instrumental in restricting participation. Students with physical disabilities were endured in activities, but their participation was not deemed to be essential to the outcome. Hence, the participants reported that they were not passed to during games, were simply ignored, or were discouraged from assuming highly valued roles. Often they were assigned to the position of goalie.

Name calling, being the target of laughter, and simply being overlooked all together highlighted the socially isolating nature of disability. These “put downs” are an outgrowth of the social value placed on homogeneity that all children experience at some time (Santrock, 1993). Not fitting in as a result of a physical disability can be exacerbated in the gym, however, because the ability to compensate or even disguise its functional impact on motor performance may not be possible. A tactful teacher knows when to intervene, when to hold back, when to redirect, and when to use a situation to educate. Sensitivity in teaching can strengthen what is good and unique about children and minimize that which can hurt students (Brown, 1992).

People also contributed in very positive ways to the experience of students with physical disabilities by affording a sense of belonging. Some classmates were supportive of accomplishments, facilitated participation by helping with equipment, and were willing partners. They reinforced a sense of belonging, group membership, and companionship. Not all classmates contributed to negative experiences, and similarly, not all classmates contributed to positive experiences. The support of even a very few classmates in physical education facilitated an expression of optimism about physical education.

The opportunity to participate meaningfully and competently contributed to positive experiences in physical education. The participants enthusiastically commented on their desire to “keep in shape,” “learn new sports,” and develop “good sportsmanship.” It would appear that the goals of the regular physical education program are valued by the students with physical disabilities. An opportunity to demonstrate superiority over their classmates was especially highly valued as was the case with swimming and wheelchair basketball for a number of the participants. The students’ desire to be skillful performers bears out the position that motor skill acquisition should be an essential goal of physical education and primary to the experience of students with disabilities (Davis, 1989).

Water, as a substance, affords the potential for movement competence for students with physical disabilities that may not be possible elsewhere. Several participants commented on their proficiency in the water and how the swimming unit provided an opportunity to equal or excel the performance levels of their classmates as they “kept up” or were “ahead of them sometimes.” The swimming unit made the physical education program meaningful and memorable for some of the participants. The buoyancy qualities of water can be liberating and a welcome reprieve from the constant constraints imposed by gravity.

The surfaces on which we conduct our physical education programs afforded students lost opportunities for participation. Physical accessibility to outdoor instructional environments was identified as a problem for students who could not negotiate the terrain in a timely manner or without undue fatigue. Although great gains have been made in joining surfaces together by ramping the interior of our buildings, outdoor areas and auxiliary instructional settings, such as stages and playgrounds, need to be more accessible. One participant indicated that a strategy of simply cutting the grass more frequently and over a wider area would have afforded her the opportunity to participate. Having access to the areas where the program is being conducted was fundamental to a positive experience in physical education. Benevolent facility usage and continued vigilance to physical accessibility is needed.

A metaphor for the physical education program is the gymnasium. It is the place we lay claim to and regard as our “classroom.” For the participants of this study, the gymnasium afforded heightened awareness of their bodies. They could not, for example, minimize the conspicuousness of their wheelchair as is possible when working at a desk or table in the classroom. Due to its stark openness, the gymnasium exposes its inhabitants to the full view of others. For the participants of this study, being observed or “stared at” reminded them that their bodies were different from that of their classmates. This reminder contributed to feelings of self-consciousness and transpired into feelings of ambivalence about physical education in some circumstances. The pool setting was another place that exposed students to the observation of others as clothing typical of the school day was replaced by bathing suits.

The experience of these students should compel us to ensure privacy in locker room and pool change areas and afford students with disabilities the dignity of nondisclosure if they so choose. The barrenness of the gymnasium cannot be modified. However, by recognizing the inherent negativity this open space can afford students with disabilities, we become more sensitive to the experience of students and can bring tact to our teaching.

The inclusive physical program as a whole can be conceptualized as a “niche” with its own set of affordances. The participants indicated that they preferred being with classmates in the regular program over participating in a segregated or special program. The segregated programs were reported to have limited or tiresome program offerings. Inclusive physical education, in contrast, afforded these participants the opportunity to benefit from the goals and diversity of activities of the regular program. Even at this relatively young age, the health benefits of physical activity toward the alleviation of illnesses were understood. Physical education was meaningful to these participants because of the physical well-being they were afforded through participation in the program.

Modifying equipment can make motor tasks easier or more difficult and can afford enhanced participation. Changes can be made to such factors as the size, weight, length, speed, and trajectory of objects. Interestingly, the participants of this study did not identify the affording qualities of objects in their experiences in physical education. This raises the question of whether students with physical disabilities perceive, attend to, or actively seek out affordances that are to their advantage in physical education. Would introducing the concept of affordances to the students contribute to their being more active decision makers and requesters of choice in their participation? This question is worthy of further investigation as we seek to empower students to be active in the learning process and initiators of strategies that will guide their own learning. Although there has been an increasing interest in self-determination in special education (Sands & Wehmeyer, 1996; Wehmeyer, 1992), we really do not know if the inclusive physical educational settings promote expressions of preference, student choice, input into goal setting, strategies for monitoring personal progress, and personal responsibility for outcomes. Work recently completed on ecological task analysis (Burton & Davis, 1996; Davis & Burton, 1991; Davis & van Emmerik, 1995) provides a timely and needed instructional model that systematically addresses the need for participant choice, flexibility in movement form, and other task variables such as equipment and space in the completion of the task outcome.

The medium of air was not an influential factor in the reporting of good or bad days for these participants. The affording qualities of air certainly contributed to their participation, in fact made it possible, as air is essential for respiration. Whereas certain features of air (e.g., temperature, humidity) can impact the degree of comfort experienced while participating in physical activity, there was no reporting of such an affordance. Although air also affords the perception of sound through air transmitted vibrations, and visual perception when it is illuminated and free of fog, there was no reported awareness of these affording qualities on participation in physical education. Had access to air been diminished through a lung disease process, or communication interrupted due to sound wave disruption or darkness, the affording qualities of air may have been perceived and given participant attention.

The present study provided insights into what contributes to positive and less than positive experiences for students with physical disabilities in physical education and provides cause for reflection on other inclusive physical education programs. The voices of students conceptualized within the theoretical framework of affordances (Gibson, 1977, 1979) has reinforced the need to be pedagogically sensitive to individual students. By listening carefully to students, will we come to see disability as a natural expression of diversity and come to understand that which is setting us apart from one another?

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