Barriers and Facilitators to Inclusive Education

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ABSTRACT: To examine how inclusive our schools are after 25 years of educational reform, students with disabilities and their parents were asked to identify current barriers and provide suggestions for removing those barriers. Based on a series of focus group meetings, 15 students with mobility limitations (9-15 years) and 12 parents identified four categories of barriers at their schools: (a) the physical environment (e.g., narrow doorways, ramps); (b) intentional attitudinal barriers (e.g., isolation, bullying); (c) unintentional attitudinal barriers (e.g., lack of knowledge, understanding, or awareness); and (d) physical limitations (e.g., difficulty with manual dexterity). Recommendations for promoting accessibility and full participation are provided and discussed in relation to inclusive education efforts.
meets their education and related services needs in the least restrictive environment (LRE). However, unlike American national legislation which mandates that all children with disabilities be educated in the class and school building they would normally attend if not disabled, except where the child’s needs dictate otherwise (U.S. Public Law 94-142), inclusive educational policies in Canada are provincially based and vary across the country in their scope and breadth (Valentine, 2001).

In the province of Ontario, for example, the Education Act (Regulation 181/98) defines a student with exceptionalities as a pupil whose behavioral, communicational, intellectual, physical or multiple exceptionalities are such that he or she is considered to need placement in a special education program. This determination is based on defining the level of functioning and disability of students with exceptionalities in order to determine needed resources and services. The Education Act requires that school boards provide, or purchase from other boards, special educational programs and services for their students with exceptionalities. The special services include the facilities and resources necessary for developing and implementing a special education program (Ontario Ministry of Education, Ministry of Training, Colleges and Universities, 2000).

This study addresses the question of whether these special education efforts meet the needs of children with disabilities and comply with our convictions of inclusion, full participation, and citizenship. Integration has been defined by educators as “an educational placement procedure for exceptional children, based on the conviction that each child should be educated in the least restrictive environment in which his or her related needs can be satisfactorily addressed” (p. 2, Canadian Teachers’ Federation, 1981). More recently, inclusion has been advocated for children with disabilities (Bunch & Valeo, 1997; Helmstetter, Peck, & Giangreco, 1994; Hunt & Goetz, 1997) where students with disabilities learn alongside their age-appropriate peers in general education classrooms with appropriate aids and services (Gilhool, 1989).

How are schools assessed and evaluated for inclusive environments and practices? A good first step is the assessment of structural environments, some of which have been conducted by governments, disability organizations, engineers, researchers, and health care professionals (see http://www.wheelchairnet.org/WCN_Living/Accessibility.htm for a list of organizations examining architectural accessibility). Also important is the examination of school climates and cultures for promoting inclusive efforts within schools (e.g., National Institute for Urban School Improvement, 2000). Zoller, Ramanathan, and Yu (1999) explored the elements of climate and culture in a school considered a model for inclusive practices. Using qualitative methods these authors concluded that a successful inclusive school climate depended on the attitudes and actions of the principal, a supportive school community, and shared values and language. Inclusive efforts on the part of teachers and school staff regarding accommodation, instructional needs, and curriculum have also been examined (Destefano, Shriner, & Lloyd, 2001). These authors found that teacher training in these areas improved participation and accommodation efforts, as well as teacher confidence.

Another valuable method for determining the quality of inclusion within schools is to ascertain the experiences of the parents of children with disabilities. In an exemplary study, Law (1993) used focus groups and interviews with the parents of 22 children with disabilities to explore cultural, economic, institutional, physical, and social environmental factors associated with home, neighborhood, school, and community environments. The physical barriers noted most often included steep ramps, uncut curbs, heavy doors, and one-inch thresholds. One facilitator (a solution which ameliorates barriers), according to these parents, would be the involvement of individuals with disabilities in the planning stages of public facility development. Structural or physical barriers within the child’s environment included a lack of knowledge, bureaucratic inflexibility, and beliefs toward resource availability.

Although physical barriers were considered an impediment to full participation, the most frequently reported barriers to activity and participation limitations for children with disabilities were institutional and attitudinal. Institutional barriers referred to those reflecting the institutional bureaucracy in schools and school boards, health
care facilities, recreational programs, and charitable organizations. These parents felt frustration with regard to the lack of information and feeling of helplessness toward having their needs addressed. The facilitators for overcoming institutional barriers reported by the parents included better communication methods, the opportunity to educate service providers about their child’s requirements, the opportunity to be consulted regarding improving disabling environments, and the provision of more coordinated and understandable information about programs and policies. These parents singled out attitudinal and social barriers as the biggest difficulty for their children, including inappropriate comments, lack of knowledge, or rude behavior by both adults and children. The main suggestion for improving this situation was the integration and inclusion of individuals with disabilities within all aspects of society.

Specific to school environments, Hanson et al. (2001) interviewed parents to determine their perspective of their children’s school experiences in order to identify those factors that influenced inclusive placement decisions. Although the majority of parents valued inclusive placement, concerns about class size, availability of therapeutic services, acceptance by other children, attitudes about the child’s disability, as well as teachers’ level of training and experience were expressed.

Parental opinions (along with those of teachers and therapists) were also garnered to examine the environmental influences of children’s social experiences in school (Baker & Donnelly, 2001). Even though only one of the four children with Fragile X syndrome attended a fully inclusive class, the authors stress the importance of the school environment for influencing the quality of social experiences, specifically, its physical environment, other children, executive staff, professionals, policy, and ethos. The concerns noted from these studies describe barriers to inclusive education and underscore the value of parental reports for assessing and evaluating inclusive school environments and practices.

However, what is lacking in the literature are empirically based studies examining the barriers to inclusion and full participation in general school settings, identified by those most impacted—students with disabilities. It is our assertion that students are fully capable of identifying and expressing accessibility concerns and should be allowed and encouraged to participate in evaluating inclusive environments. This capability was observed by Ronen, Rosenbaum, Law, and Streiner (1999) when they asked youth with epilepsy to provide their perceptions of the disease in order to identify health-related quality of life factors. Endorsement for acquiring the opinion of youths with disabilities was also given by Cook, Swain, and French (2001) after they explored the views of pupils with disabilities upon the closure of their segregated school. Likewise, Hemmingsson and Borell (2000) interviewed students with physical disabilities about their accommodation needs in relation to a specially adapted school for students with disabilities in Sweden. Even in a school designed to remove architectural barriers for students with severe physical disabilities, 83% of the students reported unmet accommodation needs, particularly in the areas of reading, remembering, and speaking. This study stresses the need to assess and address individual accommodation needs and supports the concept of student reporting.

No studies were found where students with disabilities were asked about their opinions of accessibility and inclusion within an integrated school setting. Therefore, the present study examined barriers and facilitators to accessibility and inclusion within eight different school settings based on comments from students with physical disabilities and their parents. Focus groups were chosen as the methodological approach since they are considered very effective for eliciting perceptions, feelings, attitudes and ideas on a topic relevant to the group’s experience (Vaughn, Shay, Schumm, & Sinagub, 1996). Implementation for focus groups generally involves having the moderator or leader define the purpose, outline the process, define guidelines of behavior, and then provide the guideline question or questions.
METHOD

SUBJECTS

Purposive sampling was used, with the participants chosen based on three main factors: (a) having a mobility limitation, (b) being able to understand and participate in the focus groups, and, (c) regular attendance in an integrated school. Recruitment for the participants was effected through a local children’s rehabilitation center, where letters describing the study and requests for participation were sent to the parents of youth who fit the inclusion criteria. Those indicating an interest in participating were contacted and organized into three different focus groups, based on level of education and gender. The first group ($n = 5$) consisted of younger children (9-13 years old) who attended primary or middle school. The second group ($n = 5$) consisted of males between the ages of 14 and 16 years who were attending or entering high school. The final focus group consisted of 4 females (9-15 years old) and one male (14 years old). The youth attended eight different schools in the Ottawa-Carleton area (Ontario, Canada). The students participating in the focus groups had either cerebral palsy ($n = 10$) or spina bifida ($n = 5$). The mobility level of the students, based on the Gross Motor Function Classification System scale (Palisano et al., 1997) included one student who used a power wheelchair, four students who used manual wheelchairs, four students who required assistive devices such as walkers, and four students who had gross motor difficulties but did not require assistive devices. Concurrent with, but separate from the student focus groups, 12 parents of the student participants also took part in focus groups based on the same purpose. The first parent focus group consisted of two mothers and two fathers. The second group consisted of three mothers, and the last group consisted of two fathers and three mothers.

PROCEDURE

Each focus group session lasted 1.5 hours and consisted of one session per group. To ensure comfort level and familiarity, the session for the younger students was held at their rehabilitation center, where they had either attended preschool or had outpatient appointments. The two focus groups with the older students were held in a classroom at the University of Ottawa, in a building adjacent to the rehabilitation center. All parent focus group meetings were held in a room next door to the student focus group meetings. Prior to the meeting, information letters and consent forms were sent to all parents. The focus group process included thanking the participants for agreeing to be the expert consultants on the project, an introduction of the moderator and recorder, an explanation of the purpose of the focus group, a warm-up exercise, a brainstorming session, the prioritization of identified barriers and solutions, and wrap-up. The first author (female) served as moderator for the students’ focus group sessions, the second author (female) moderated and recorded the parents’ sessions, and the third author (male) recorded the students’ focus group meetings. Along with the manually recorded notes, all sessions were audiotaped. Following the introduction of the moderator and recorder, verbal consent for participation and for the use of the audiotape was requested. A warm-up exercise was then carried out for the student focus groups.

All participants were then told that the reason for holding the focus groups was to determine the content of a virtual reality (VR) program aimed at teaching disability awareness (Pivik, McComas, Macfarlane, & Laflamme, 2002). Specifically, the participants were told, “Today, we hope that you will assist us in deciding what should go into the VR program; that is, can you describe the barriers or constraints you deal with at school?” The content question was left very broad and only supplemented with prompts when necessary (e.g., “any bad attitudes?”). Following the listing of barriers, the participants were asked to suggest possible solutions to overcome these barriers. A modified version of the nominal group technique was used to narrow down the list of barriers and facilitators.

During the brainstorming session, each point was printed out on a flip chart that was visible to all participants. Following the session, each participant was given seven stickers and asked to place one or more of these stickers on the barriers he or she felt were important to include in the software. Thus, a child could place any number of...
stickers (up to 7) on any number of barriers (up to 7), depending on their perceived relative importance. The same exercise was conducted for the facilitators’ list. The list was then reformatted based on the number of stickers allotted each factor, from highest to lowest frequency.

RESULTS

STUDENT DATA

With few exceptions, the comments and suggestions from the students did not differ between the three focus groups, so the data were combined. Although the focus groups were audiotaped and transcribed, the main barriers and facilitators were also listed at the time of the focus group meeting and were then prioritized by the students for inclusion into the VR software. The data were analyzed using qualitative thematic analyses using Hycner’s (1985) guidelines. This process involves initially examining the data to determine the context of potential themes. The data are then delineated into units of meanings relevant to the research purpose. Subsequently, themes and metathemes are identified and reported. Themes related to barriers and facilitators were identified, with interrater coding reliability between two researchers surpassing a 75% agreement level. All disagreements were resolved through discussion.

Environmental barriers. The reported environmental barriers included the following categories: doors, passageways, elevators, washrooms, stairs and ramps, lockers, water fountains, and recreational areas. A major problem identified by many of the students was physically getting into school.

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scribed his experiences during physical education as "helping to set up and keeping score." Typically, the play areas were not accessible and often the gyms were difficult or impossible to access when not directly attached to the school building. If the gyms were accessible, the equipment (e.g., basketball hoops) was not adaptable for those who use wheelchairs. This lack of accessibility not only isolated the students and prevented the opportunity for physical activity, but it also impacted on social activities such as school dances.

**Intentional attitudinal barriers.** All of the students in the focus groups reported instances of isolation, physical bullying, or emotional bullying. Isolation took the form of either being ignored or having difficulty forging friendships. Physical bullying usually related to people pushing the student’s wheelchair without permission, and in one instance, being purposely knocked out of the wheelchair. The most frequent attitudinal barrier mentioned was that of emotional bullying. The students indicated that this was the most hurtful and included name calling, pointing, mouths dropping open, being ridiculed, being labeled as “stupid,” condescending attitudes by teaching staff, and generally being treated differently from other students. For example, one youth reported that her peers “just stare at you and point and then whisper to each other . . . all they have to do is ask me about my disability, but they don’t.”

**Unintentional attitudinal barriers.** Unintentional attitudinal barriers relate to a lack of knowledge, education, understanding, or effort on the part of the educational system or staff. From the entire sample, the most frequently reported barrier was a lack of understanding by teachers and support staff. This took the form of being given inappropriate substitute work when too busy to adapt the curriculum, always being assigned as a teacher’s helper in physical education classes instead of adapting or equalizing the playing field, excluding children with special needs from certain classes without reason, or not understanding their physical capabilities or limitations. As one youth reported, “I can deal with water fountains being too high, but when a teacher reprimands me for talking too loud because I am trying to tell someone behind me to stop pushing me in the wrong direction, that is not fair. They are behind me and can’t hear me unless I speak loudly.” Another unintentional attitudinal barrier reported was the failure to plan or get advice for wheelchair access when building or renovating a school.

**Physical barriers.** Along with the environmental and attitudinal barriers they had faced on a daily basis, these youth also bear the difficulties associated with their condition or disability. For example, many of the students require a personal assistant or teaching aide for such basic activities as getting dressed for recess, personal care, remedial education efforts, or maneuvering within the school. The other major barrier noted by the students was their need for extra time to get to class, eat lunch, or complete school work. Along with information about their disability or condition, these physical requirements were the type of information the students wanted school staff to understand.

**Suggested facilitators.** The students were also asked to suggest possible facilitators to the barriers identified, in order to improve accessibility and promote full participation. The facilitators focused on three areas: (a) environmental modifications, (b) social/policy changes, and (c) institutional resources. For the environmental barriers, suggestions included technological solutions, along with basic architectural changes to doors, elevators, washrooms, and ramps. Technological facilitators included motion sensors to open doors, flush toilets, and activate sinks; keypad entry or fingerprint ID for opening lockers and accessing elevators; and, finally, automatic door buttons for easier access through doors. Voice recognition technology was also suggested for activating many of the above-mentioned barriers. Basic architectural changes to school buildings would include lowering locker shelves and hooks, lowering water fountains, building wider corridors and classrooms, installing ramps near stairs, widening doorways and eliminating lips and ledges on doors, removing unnecessary doors and equipping remaining doors with access buttons, and, lastly, providing a more gradual incline on ramps. Architectural facilitators for washrooms would include lowering sinks, placing paper towels and soap within reach, enlarging washroom stalls, and installing grab bars and toilet paper dispensers closer to the toilets. The final category of environ-
mental facilitators focused on elevators, where the youth suggested additional or larger elevators, lower elevator buttons, and easier access such as keyless entry.

Social or policy facilitators reported included providing disability awareness education for both students and educational staff. Many of the youth stated that they would be willing to talk to their peers about their disability, “but no one had ever asked them to do anything like that.” The general consensus was that it would be better to “get it out in the open than have people staring and giggling.” Other social changes would include having special physical education classes for the students with disabilities and sometimes “equalizing the playing field by having everyone play wheelchair or chair basketball.” Policy facilitators would include allowing extra time to get to classes, having a rule stating that consent must be obtained before pushing someone’s wheelchair, providing suggestion boxes at schools, including individuals with disabilities in the planning of renovations or expansions, and finally, repairing elevators swiftly. The students also felt that added resources would be greatly beneficial. They recommended more teachers’ aides, access to laptop computers (since writing can be difficult for some), and working copies of books for homework to avoid having to carry all of their books to and from home and school.

**Parent Data**

Twelve parents attended concurrent focus group meetings with the same purpose: to identify barriers and facilitators to accessible education and full participation based on their children’s experiences. Interestingly, the parents reported many of the same barriers and facilitators identified by the youth. However, the parents of the elementary students and those attending high school voiced somewhat different concerns. The main concern for parents of the elementary school children related to social difficulties, isolation, and their child’s self-esteem. The overriding barrier identified was unintentional attitudinal barriers on the part of the educators. These included teachers who had “no or outdated information about the disabilities, had condescending or negative attitudes, and did not have the information or interest in adapting the teaching environment to include my child.” The parents of these elementary children overwhelmingly suggested that disability awareness training should be integrated into teacher training and professional development, and that school administrators should encourage positive attitudes toward inclusion, be aware of their staff’s level of knowledge, and encourage the development of support groups within the school for other students or parents.

The parents of the older youth also reported the need for increased education of teachers and students regarding disabilities, their impact, and methods of encouraging greater participation. Other suggestions for teachers included providing keyboard training, downloading timetables, notes, and assignments in advance to assist the student and involve the parent; allowing classes to be audio-taped; providing copies of overheads to the students who have difficulty taking notes; and including visual cues to help those students organize thoughts and remember sequences. Science laboratories and cafeterias were also reported as typically inaccessible for students who have mobility limitations in high school. The laboratories themselves usually have benches that are too high, materials that require the use of two hands, and microscopes placed too high. The cafeterias are often not adapted to the needs of students who use wheelchairs, with food aisles being too narrow, food placed too high to reach, and inaccessible seating arrangements. According to the parents, these types of environmental barriers cause their children to be differentiated and isolated from their peers.

**Discussion**

Facilitating inclusive school environments requires ensuring physical access, the opportunity for optimal learning and social experiences, and providing a nurturing climate. Without these elements in place, students with disabilities are denied full participation and an equitable educational experience. In this study, students with disabilities and their parents identified four areas that require improvement in schools. These include modifying physical structures to improve accessibility, addressing negative attitudes through increased disability awareness programs, dealing with the lack of knowledge or understanding through increased inclusive education of teachers.
and staff, and finally, developing more inclusive education policies.

Facilitating inclusive school environments requires ensuring physical access, the opportunity for optimal learning and social experiences, and providing a nurturing climate.

Although this study was specific to school environments, many of the concerns of this sample were consistent with previous research examining inclusivity. For example, Law (1993) and Hemmingsson and Borell (2000) also reported many of the same physical barriers such as steep ramps, heavy doors, and door thresholds. Further, institutional, attitudinal, and social barriers were found to be important factors as well. Our students and their parents expressed concern about their teachers’ knowledge for adapting the curriculum to meet diverse learning styles, a finding also expressed by Hanson et al. (2001). The need for personnel to understand physical limitations and special needs was reported by our students as well as the students interviewed by Hemmingsson and Borell. Finally, the lack of inclusive policies and procedures reported by our students and their parents echoed Law and Baker and Donelly (2001).

The students in these eight schools were capable of identifying both barriers and facilitators to inclusive school environments. In fact, we asked them only about structural and attitudinal barriers, and they extended the task to include unintentional attitudinal barriers and ethos considerations, as well as policy and procedure issues. Although their parents reported many of the same issues, there were differences found between these two groups. This result stresses the need to include both students and their parents in the evaluation of inclusive school environments and in the planning of new facilities or renovations.

Attitudinal barriers were identified by our students as the most deleterious of their school experiences. All of the participants had experienced negative comments, teasing, staring, and isolation. To ameliorate negative attitudes, schools need to institute prosocial programs that include sensitivity and disability awareness training. According to Rowley-Kelly (1993), this type of program may include: highlighting individual differences as well as commonalities, ensuring that students with disabilities understand that they have the right to be included, providing the opportunity for students with disabilities to take an active role in helping their peers achieve understanding and social acceptance, and facilitating acceptance of individuals with disabilities through age-appropriate disability awareness and sensitivity training exercises. For example, exercises appropriate for grades 3 and 4 may include: alike-and-different activities, information about disabilities, children designing a room that would be accessible, developing games that would include individuals with disabilities, discussions about name calling and teasing, and wheelchair simulation.

Another useful tool may be the freely accessible desktop VR program, Barriers—The Awareness Challenge that was developed from the results of this study (Pivik, et al., 2002; see http://www.health.uottawa.ca/vrlab). This computer program was designed and evaluated to teach children without disabilities about the accessibility and attitudinal barriers encountered by their peers with mobility impairments. Sitting in a virtual wheelchair, children wheel through a virtual school and experience obstacles such as stairs, narrow doors, and out-of-reach objects and attitudinal barriers such as inappropriate comments.

For improving inclusive school climates, the National Institute for Urban School Improvement (2000) has developed a series of guides to help individuals examine whether a school is focusing on inclusive practices. For example, the guides suggest examining the school’s mission...
statement, the school’s structural layout, the curriculum, teaching practices, and the methods used to evaluate both students and teachers. As well, Center, Ward, and Ferguson (1991) identified appropriate resource support and structured teaching techniques as the two most important conditions for successful placement of students with disabilities in general education classes. Appropriate support includes: (a) support teachers who have special education training; (b) integration aides being provided with professional training; (c) term teaching used as a mode of operation, so that assistance is not focused solely on the target student; and (d) support (teacher/aide) that is appropriate to the child’s needs.

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Related to educational support is the effect teaching staff can have on facilitating inclusive participation of children with disabilities. In this study, particular concern was expressed by both students and parents regarding the lack of understanding, knowledge, or effort by educational staff. Providing all teachers with disability awareness training and methods for making school subjects more inclusive (especially physical education) would greatly facilitate a more equitable learning environment. One method for acquiring specific disability awareness information is through the use of parent panels (Duckworth & Kostell, 1999). The typical parent panel would consist of meetings between parents and educational staff, in order to share information about different disabilities and discuss associated issues and concerns. It is also important for the educators to spend time listening and talking to students with disabilities, as their viewpoint may differ from their parents. Finally, training of general education teachers to modify or implement teaching methods to be inclusive is needed, a finding also recommended by Hanson et al. (2001).

Kauffman and Hallahan (1997) define the goal of special education as offering effective instruction in academic and social skills areas, as well as the opportunity to foster social networks that induce and sustain desirable social behavior and lead to satisfying relationships. We would add that a fully inclusive school milieu provides the opportunity for educators and school administrators to develop an environment that reflects societal ideals—equality without discrimination. According to the sample of students and parents involved in this investigation, their schools fall short of meeting this obligation, and there is no reason to believe that this situation is unique to these individuals or these schools, as evidenced by current policy scans conducted in Canada (Valentine, 2001) and the United States (National Council on Disability, 2000). These documents describe the current situation of inclusive education and both find the situation lacking in terms of resources, effort, and enforcement.

IMPLICATIONS FOR PRACTICE

This study provided a snapshot of the experiences of youth with physical disabilities in integrated school settings. Further research is needed to examine the experiences of children with other types of disabilities and learning styles. Based on this study, we recommend that governments continue in their efforts to enforce their civil rights laws and provide resources to meet them. Similarly, school boards need to develop inclusive policies and procedures and direct resources to that effort. Principals need to ensure that their schools are fully inclusive and take a lead role in modeling inclusive attitudes and behaviors. Teachers need to ensure that they have the knowledge and skills to adapt their teaching to include all children and the willingness to learn about the experiences of children with disabilities. Finally, we all need to stop and listen to students with disabilities to better understand their realities. With its structures, rules, and objectives, a school is like a microcosm of our world. We have the opportunity to provide schools that model the behavior and attitudes that we want our children to take with them into the real world. In order for our actions to reflect our words, we need to provide the necessary effort, educational policies, and resources to ensure that our values and principles are met.
References


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