PHYSICAL & SOCIAL INCLUSION

VANCOUVER ISLAND UNIVERSITY

Physical & Social Inclusion for Children with Cerebral Palsy

by

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We accept the Applied Project as conforming to the required standard.

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Abstract

The purpose of this project is to educate and create positive attitude among teachers and peers towards inclusion of children with cerebral palsy, where the students experience a sense of belonging and are an active part of the class. This project contains a teacher handbook that will help teachers support and create an inclusive environment for children with cerebral palsy. It also aims to assist teachers in providing the necessary tools for all students to understand and support their peers with cerebral palsy.

*Keywords: Cerebral palsy, inclusion, physical, social, peers.*
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## TABLE OF CONTENTS

Abstract iii
Acknowledgements iv
Table of contents v

**Chapter 1** 1

  - Introduction 1
  - Cerebral Palsy 2
  - Inclusion 3
  - Physical challenges 4
  - Social challenges 6
  - Statement of problem 8
  - Purpose of project 9

**Chapter 2** 10

  - Literature review 10
  - Teacher attitude and training 11
  - Impact of inclusion on students without exceptional needs 14
  - Inclusion of children with Cerebral Palsy 16
  - Summary 17

**Chapter 3** 23

  - Considerations for the implementations of project 23
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICAL &amp; SOCIAL INCLUSION</td>
<td>vi</td>
</tr>
<tr>
<td>Findings and conclusion</td>
<td>24</td>
</tr>
<tr>
<td>Wheels on board</td>
<td>25</td>
</tr>
<tr>
<td>Recommendations and potential future policy</td>
<td>27</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>29</td>
</tr>
<tr>
<td>Reflection</td>
<td>29</td>
</tr>
<tr>
<td>References</td>
<td>32</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>37</td>
</tr>
</tbody>
</table>
Chapter 1

Introduction

With my experience as a special education teacher in India, I believe that an inclusive classroom is where all students feel safe and are engaged in learning with each other irrespective of any difference. Education of students with exceptional needs has moved from exclusion to segregation, and now to inclusion. However, my recent encounter with Adam (pseudonym), a child with cerebral palsy, motivated me to rethink whether we actually have moved to inclusion. Every child is different and has different needs. Placing a child physically in a class with other children does not mean that a child has been included. Inclusion encompasses all students; that means providing an environment in which all the students feel welcomed and included.

I believe that when a child enters a school it is the school’s responsibility to make him or her feel part of the place by making the necessary arrangements and adjustments. However, teachers play a very important role in a child’s life, and they not only teach students but are also their advocates in the school setting. It is important for a teacher to develop an inclusive culture in the classroom. To me, inclusion is not only integrating but truly accepting a child for his/her challenges as well as strengths. After a child’s parents, the child spends most of his/her time in a school around the teacher. Therefore, the teacher influences a child’s thinking to a great extent. A teacher needs to model a culture in which children are accepted and respected for their individualism. My project aims to help and guide teachers by providing them with a handbook that includes tips and lessons that focus on helping students with cerebral palsy develop a sense of belonging in a general classroom setting.
Cerebral Palsy

Cerebral Palsy is an umbrella term used for a range of non-progressive syndromes of posture and motor impairment caused by damage or malformation that occurs to the immature, developing brain before, during, or immediately after birth (Hilderley & Rhind, 2012). As a result of this, a child’s muscle tone, muscle control, muscle coordination, reflexes, posture, and balance are affected.

Cerebral palsy is classified as a motor impairment revealed by a neurological examination (paresis, hypertonia, hypotonia, dystonia, dyskinesia, and ataxia), the area of the cerebral dysfunction (pyramidal or extrapyramidal), and the part/parts of the body affected (monoplegia, where one limb is affected, diplegia, where the lower body is affected, hemiplegia, where the arm and leg of one side is affected, tetraplegia, where three limbs are affected, and quadriplegia, where all four limbs are affected). “The motor disorder in cerebral palsy is often accompanied by disturbances of sensation, perception, cognition, communication and behaviour, by epilepsy, and by secondary musculoskeletal problems” (Rosenbaum et al., 2007, p. 9).

It is difficult to estimate how many people have cerebral palsy; however, “it is estimated that one out of every 500 babies, and up to one in every three premature babies is affected to some extent. There are around 60,000 Canadians with cerebral palsy” (The Ontario Federation for Cerebral palsy, 2011). According to Renaud (2015),

The estimated prevalence of CP in British Columbia is 2.68 per 1000 live births, or approximately 1 in 400. Statistics Canada estimates there were 44,113 live births in British Columbia between 2012 and 2013. Using this figure, we can estimate that 118
children in this province were born with CP, or developed the disorder early in infancy, last year alone.

Inclusion

In many countries, inclusive education has been a topic of debate when it comes to education of children with exceptional needs. Inclusive education, as the name suggests, means educating all students together irrespective of their varied backgrounds and educational needs. According to Mitchell, the field of special needs education has moved from a segregation paradigm through integration to a point where inclusion has become central to contemporary discourse in the past 40 years. (Mitchell, 2010).

Today’s classroom is very different and requires that students and educators have an open and progressive approach towards new and innovative teaching methods or techniques. The abolishment of a separate special needs class, while a step in the right direction towards inclusive education, thrusts challenges upon classroom teachers trained in traditional educating techniques. Teachers and schools have to ensure they are up to date with the difficulties faced in an inclusive educational setup to ensure a fair and valuable educational experience for all students. Being educated in an inclusive environment encourages participation and helps students bond with each other, teaching them life’s valuable lesson of respecting each other’s differences and accepting everyone for their unique abilities.

Inclusion of children with cerebral palsy has been a challenge for the school community and families due to several barriers. The World Health Organization (WHO) (2001) reports that Barriers are factors in a person’s environment that, through their absence or presence, limit functioning and create disability. These include aspects such as a physical environment that is inaccessible, lack of relevant assistive technology, and negative
attitudes of people towards disability, as well as services, systems and policies that are either nonexistent or that hinder the involvement of all people with a health condition in all areas of life. (p. 214)

**Physical challenges**

A child with cerebral palsy is unique and has a distinct set of skills and challenges. However, the most common challenge that can be pointed out would be the physical barriers that they face. My recent observation of Adam, a child with cerebral palsy, has surprised me that even in today’s day and age, schools are not easily accessible. It gets difficult to move from one place to another due to a lack of facilities. The school does have doors that can be opened after pressing a button when you need to enter the location, but does not have this facility when you need to go to the other side of the building and when you need to exit it. Accessing the playground during breaks is yet another challenge, as the only exit ramp to the playground is on the other side of the building. In addition, the door to gain access to the ramp is itself not wheelchair friendly making this an even bigger barrier to Adam’s independence. Adam and his educational assistant (EA) take this round-about route several times a day when entering or exiting the building in order to access the playground. I can say that it will be impossible for this child to move independently in the school. The lack of ramps and elevators in multi-level school buildings, the heavy doors, inaccessible washrooms, and inaccessible transportation to and from school make it difficult for students with cerebral palsy to have access to educational services.

During classes like gym and cardio, other students exercise or play games organized by the physical education teacher, while Adam watches the students or plays with a ball with his EA. He does not have any interaction with his class; it is as though he is in the same room but is invisible. Research suggests that there are a range of potential benefits associated with physical
education for children. “It helps children to develop respect for the body—their own and others’, contributes toward the integrated development of mind and body and develops an understanding of the role of aerobic and anaerobic physical activity in health” (Bailey, 2006, p. 397). The research by Bailey also pointed out the psychological benefits such as development of self-esteem, self-confidence, and social benefits like learning important social skills and having the opportunity to communicate with peers. Therefore, it is very important that students with cerebral palsy have the chance to participate in physical activities, especially at school with their peers. “In physical education, inclusion has been effective in facilitating motor engagement, motor performance, and the self-concept of children” (Vogler, Koranda, & Romance, 2000, p. 162). Hilderley & Rhind (2012) pointed out,

Three higher order themes emerged from the data: psychological (i.e., enhanced self-esteem and body image, enjoyment and a sense of freedom), social (i.e., being part of the group, developing relationships and social skills) and physical (i.e., mobility). Barriers to inclusion were also identified. Four key themes emerged: environmental (i.e., appropriate equipment and facilities), organizational (i.e., appropriate staff, health and safety, and class sizes), the disability (i.e., physical aspects and the wheelchair), and attitudes (i.e., of peers, staff and the child). (p. 6)

It is understood that a child with cerebral palsy would have more barriers as compared to children who are able bodied. But this does not mean that they are not able to do anything or that they deserve to be invisible to the others.

Barriers in physical environment can also be related to school traditions and routines; for example, even though Adam is a child with cerebral palsy, his class is located on the second floor, as all the higher-grade classes are located in that section. When the students get their 15-
minute break, Adam has to pass his time in the second-floor corridor, while the other students spend some time in open air outside, as by the time he reaches the ground floor, let alone outside the school building, the break is over. Apart from this, the wheelchair-accessible washroom is located on the ground floor, making it difficult for Adam to use the washroom when he needs to. Also, because all the classrooms in the school are designed in a uniform manner, the spacing in the classroom makes it difficult for him to move around the class, as he used a wheelchair and sometimes a walker. In order to move around the class, it appears as though Adam is participating in an obstacle race to get past the tables and chairs. Consequently, he sits with his EA at the end of the class near the door to avoid obstacles. Unfortunately, by doing so Adam’s peers have their backs turned towards him making him less visible and consequently less included. This project aims to point out the physical barriers that were missed by the school staff.

**Social challenges**

Adam was always accompanied by his educational assistant. On my third day, I noticed that he was sitting with a small group of students, as his EA was visiting the washroom. Adam was sitting in a group with a few of his classmates, but he didn’t look like a part of the group as the students were mostly speaking amongst themselves. As I mentioned above, in class Adam sat with his EA with his peers facing their backs to him, and the other times, for instance, gym time and cardio as well, he played with his EA. This meant he had very little meaningful interactions with his peers. Adam had been included in a mainstream school, but is this “meaningful inclusion?” Just by placing a child in a class, we cannot say that the child is socially included.

When a child is only working with an educational assistant at the back of a classroom, in no way is he forming social relationships with his peers. Social inclusion means involving all students in order to give them a sense of belonging and connectedness (Koster, Nakken, Pijl, and van
Houten, 2009). This means that from the time a child enters the school in the morning, he should not only be greeted by teachers and peers but should also feel like he belongs to the school. Social inclusion simply means giving a child, irrespective of his/her ability, disability, race, culture, socioeconomic status, or gender, the chance to feel like a part of the school and to grow and learn with his peers. In British Columbia, The ministry of education promotes an inclusive education system in which students with special needs are fully participating members of a community of learners (British Columbia Ministry of Education, 2013). The practice of inclusion goes beyond only placing a child in regular classrooms; it includes meaningful participation and the promotion of interaction with others.

Studies that have assessed the social adjustment of children with cerebral palsy in mainstream classes reported that, as compared to their typically developing classmates, this group of children are more socially isolated, more rejected and victimized by their peers, experience greater difficulties initiating and maintaining positive social interactions, and have lower self-esteem (Nadeau & Tessier, 2006). The findings of the study by Nadeau and Tessier also determined that students with cerebral palsy faced a number of issues which could lead them to social isolation, these included fewer students willing to be their friends, bulling and victimization. Socially isolated children are more likely to report being victims of peer aggression, as low social status does not provide the protective function of friendships (Nadeau & Tessier, 2006). Children with cerebral palsy are different in many ways when you compare them to their peers. This forms a barrier between them and their peers. As time passes, this barrier creates a disconnect between the child with a disability and the other students. Schools are not only places where children learn math, science, and other subjects, it is also a place where they learn to get along with others. These social skills acquired in school help all children
survive and navigate the world outside the education system. Adam’s classmates spoke through the EA to convey messages to Adam as they did not know the “right way” to speak to him. It was clear that Adam’s peers (or classmates) had no previous exposure communicating with someone with cerebral palsy. Unfortunately, the adults supporting Adam did not encourage the other children to communicate directly with him. My project aims to give these children the tools to interact directly and meaningfully with children with cerebral palsy.

**Statement of problem**

As a special educator, the word “inclusion” has been with me since I finished my post-graduation in special education. I would say that if I compare what I have learned in India to what I have learned in British Columbia, there is not much of a difference. But when I compare the minute details that make up inclusion, they are actually the same. We all have the “umbrella” of inclusion; it also means the same thing: Inclusion of students with exceptional needs. However, I also believe that even though we have the umbrella over our head, rain water always slips in. Intentionally or unintentionally, we miss out on some students or their needs. Therefore, we all talk about inclusion, but I believe that we still are far away from “meaningful inclusion.” Having meaningful inclusion is not only beneficial for students with cerebral palsy but also for the other students present in the class. The research CERP (2009) concluded that increasing the proportion of students with special needs did not have any notable effect on the achievement of the other students. On the contrary, as per the research, a few educators suggested that all students benefitted by sharing a classroom with special students, as it improved their interpersonal skills. The physical and social barriers that come in the way of a child with cerebral palsy create a wall between them and holistic development.
Purpose of project

Merely placing a child in a class does not make him or her a part of it. We also need to think about major and minor physical constraints that act as barriers for the child to feel like they belong in the school. Giving both children with cerebral palsy and the other students without disability the tools to interact with each other is also very important. Teachers play a very important role in a child’s life. Creating a sense of “belonging” in a class helps children develop love, friendship, commitment, and care towards each other. In a class, a teacher is solely responsible for creating such a feeling of belonging that helps children develop an inclusive culture (Brownlie & King, 2011). My project aims to help and guide teachers with strategies and lesson plans that they can use to make a child with cerebral palsy feel a sense of belonging. It will also help them to guide students with CP and the other students in the class to have meaningful interactions with each other.
Chapter 2

Literature Review

When a child is placed in a classroom, integration happens; when a child is made a part of the class, inclusion happens. At an international level, the principle of inclusion is very well established. The Convention on the Rights of the Child Article 23.1 states, “Parties recognize that a mentally or physically disabled child should enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate the child’s active participation in the community” (As cited in Towle, 2015, p. 20). All parties that signed the convention are required to demonstrate the following with respect to education:

- “Persons with disability are not excluded from the general education system on the basis of disability, and . . . children with disabilities are not excluded from free and compulsory primary education, or from secondary education, on the basis of disability.
- Persons with disabilities can access an inclusive quality and free primary and secondary education on an equal basis with others in the community in which they live.
- Reasonable accommodation of the individual’s requirements is provided.
- Persons with disabilities receive the support required within the general education system to facilitate their effective education.
- Effective individualized support measures are provided in environments that maximize academic and social development, consistent with the goal of full inclusion (As cited in Towle, 2015, p. 20).
This means that children with exceptional needs should be part of regular classrooms and should have access to accommodations and requirements as per the individual’s needs. They should have individualized support in order to maximize their holistic development. When children with cerebral palsy are placed in a regular class, they are already dealing with their self-image when they look at the other students in the class. The mental gap between them and the others is already established at that moment; it is the duty of the school and the teachers to help these students feel that they are a part of the school and to fill the gap between students with CP and the others by giving these students the necessary tools to work together as peers. This chapter includes reviews of selected research articles and books that speak in depth about a few aspects of inclusion of children with exceptional needs in regular classrooms.

**Teacher attitude and training**

Teachers play an important role in a child’s life. A teacher is the link between the child’s school and home. For a student, the teacher wears several hats; for example, that of a mother/father, mentor, advocate, and many more. We can say that a teacher plays a vitally important role in a child’s holistic development. The responsibilities of a teacher also include informing and supporting parents as well as directing duties of educational assistants who are assigned to work with students. McGhie-Richmond et al. (2013) stressed the fact that “teachers are central to realizing inclusion” (p. 200).

This supports the findings of Lupart, Odishaw, and McDonald (2006), Loreman (2007), and Horne and Timmons (2009) that teacher attitudes play a central role in achieving true inclusion, which in turn impacts all students. “Positive teacher attitudes are an important predictor of the successful education of children with disabilities” (as cited in Rodríguez, Saldaña, & Moreno, 2012, p. 1). “Studies have revealed that teacher attitudes and expectations
are significant barriers to the successful implementation of inclusive classrooms and equitable participation of all students” (Vaz et al., 2015, p.1). Vaz et al. pointed out that teachers’ attitudes are mostly based on practical concerns on how inclusive education can be implemented, instead of being grounded in a particular ideology. They also stated that the common practical concerns raised by teachers include accommodating the individualized time demands of students with disability without disadvantaging other students in the classroom, being uncertain of the quality and quantity of work output of children with disabilities, lacking adequate support services, and having limited training and competence in supporting children with exceptional needs. “The severity of the disability that teachers are required to accommodate within their classroom is inversely associated with their attitude towards inclusion” (Vaz et al, 2015, p.1). This means that the more severe the child’s disability was, the less positive was teacher’s attitude towards inclusion. They also reported that a lack of confidence with regard to teaching students with exceptional needs was associated with negative attitudes to inclusion.

Lupart et al. (2006) had similar findings; they found that although many teachers support the inclusion of students with exceptional needs in general education classrooms, concerns regarding limitations in resources and professional preparation limit this support. McGhie-Richmond et al. (2013) pointed out that special education teachers are seen to have a more positive outlook and attitude towards inclusion than general education teachers. Special education teachers are more confident and optimistic towards an inclusive classroom not only because of their positive approach but also due to the intensive training program they may have had to go through to become special education teachers. Special education teachers often help general education teachers in implementing inclusion in the classroom; however, the daily learning experiences of all students in each classroom is ultimately dependent on the classroom
teacher. Vaz et al. (2015) believed that knowledge appeared to be a key factor that influenced teachers’ ability to change their teaching practices. The researchers also believed that training in teaching students with exceptional needs was associated with positive attitudes towards inclusion. Therefore, the more training a teacher would have in teaching students with exceptional needs, more confident and positive they were regarding accommodating a child with exceptional needs.

Bunch and Valeo (2004) pointed out that general education classroom teachers avoid taking responsibility for students with exceptional needs. Instead, most general education teachers look to special education teachers to assume functional ownership of those students with disabilities. This supports the belief of Vaz et al. (2015) that knowledge is the key. Hastings and Oakford (2003) also found that in order for teachers to provide a variety of accommodations, they needed ongoing professional development opportunities in order to develop their skills. This could include attending workshops, observing other inclusive classrooms, reviewing research on inclusion, and collaboration with colleagues to develop a successful inclusion program.

The study by Leyser and Tappendorf (2001) also supports Hastings and Oakford’s findings that teachers needed to attend various workshops and in-service training to learn more about students with exceptional needs and inclusion. If teachers are provided with adequate training, they will begin to feel more comfortable working with students with exceptional needs and implementing various accommodations within their classrooms. Teacher training programs need to prepare general education teachers to work with all children, with or without exceptional needs. As general education teachers set the tone of classrooms, the success of inclusion programs depends upon their attitudes, as they are the ones that most interact with the students (Buford & Casey, 2012).
Impact of inclusion on students without exceptional needs

There have been a few debates on the impact of having a child with CP or any other exceptional needs on the other students who don’t have any identified special needs. However, there is growing research evidence that this widely held belief, in actuality, is not true. One of the results from the McGhie-Richmond et al. (2013) study on teachers’ attitudes addressed the notion that students with exceptional needs detract from the education of the other students in the classroom; a few teachers agreed to this notion when they were taken as a single group.

However, the study also pointed out that not all teachers believed in this notion. Some of the participating teachers also saw inclusion as benefitting all students, not just those students with exceptional needs. Research has found that students without disabilities educated in inclusive classroom settings had higher academic achievement scores compared to their counterparts educated in a non-inclusive setting (Cole, Waldron, & Majd, 2004; Ekeh & Oladayo, 2013).

Buford & Casey (2012) added to this by stating,

Benefits are also seen for those students without disabilities as they (a) build meaningful friendships with students different from themselves, (b) gain an increased appreciation for individuals with different needs, (c) acquire preparation for living in a diverse community, and (d) show heightened levels of self-esteem as compared to their peers not in the inclusive classroom. (p. 17)

Idol’s (2006) study of eight schools in the southwestern United States found strong links between inclusion and improved performance in academics of students without identified exceptional needs at the elementary school level, with three of the four schools improving notably in state-wide test scores. Also, at the secondary school level, the majority of teacher
respondents believed that the students were not negatively affected by the presence of students with disabilities in their class, with 24% believing that students had improved overall.

A study by Demeris, Childs, and Jordan (2007) based upon the analysis of approximately 2000 grade three classrooms across the province of Ontario showed similar results on a wider scale. An examination of the relationship between the number of students with special needs in grade three classrooms and the large-scale mathematics, reading, and writing assessment scores of their peers without exceptional needs were examined, and the results reported a slight increase in performance for the students without special needs when the number of students with special needs in their classes increased.

Ekeh and Oladayo (2013) compared academic achievements in Nigeria of regular students in inclusive settings and non-inclusive classroom settings. Their findings could be compared to the findings above; the difference in academic achievement was in favour of those in inclusive classrooms. They suggested that inclusive settings increased the emphasis on individual needs of each student in the widely diverse populations of inclusive education, and the general education teachers paid attention to the needs of all the students. They also pointed out the possibility that non-disabled students in inclusive settings are challenged to work harder amid the special needs students to remain noticeable.

Apart from positive academic outcomes, social benefits for students without disabilities are also reported in literature. Research by Friesen, Hickey, and Krauth (2009) concluded that increasing the proportion of students with special needs did not have any notable effect on the achievement of the other students. On the contrary, as per the research, a few educators suggested that regular students benefitted by sharing a classroom with special students, as it improved their interpersonal skills. Loreman, McGhie-Richmond, Lupart, and Barber (2008)
found that students without exceptional needs reported higher degrees of friendship and
advocacy and had more accepting views of students with exceptional needs in inclusive settings.

**Inclusion of children with Cerebral Palsy**

Inclusive education is when regular students and students with exceptional needs are
brought together in the same academic environment and classroom for the purpose of learning.
There have been a few research studies that prove the benefits of inclusion for children with
exceptional needs. The study by Ekeh and Oladayo (2013) found that students with exceptional
needs learning in inclusive classrooms had higher academic achievement scores, as compared to
their counterparts raised in non-inclusive classrooms. A child not only learns from his/her
teacher but also learns from peers, friends, and the environment.

According to Vygotsky’s sociocultural theory, a child’s specific mental structures and
processes could be traced to his/her interactions with others. According to Vygotsky, social
interactions are much more than just influences on the cognitive development of the child; they
also help develop the child’s cognitive structures and thinking processes the child’s cognitive
structures and thinking processes (as cited in Perry & Woolfolk, 2014). “Vygotsky
conceptualized development as the transformation of socially shared activities into internalized
processes” (Perry & Woolfolk, 2014, p. 46). According to Vygotsky, every function in a child’s
life happens twice: first, on a social level when a child is interacting with others, and second,
inside the child. Therefore, he believed that parents, caregivers, peers, and the culture at large
were responsible for developing higher order functions. He also put great emphasis on the
importance of cultural tools, including material and psychological tools, on a child’s cognitive
development. With their interaction with other capable members of their groups, children begin
to develop a “cultural toolkit” that helps them make sense of and learn about their world. As the
toolkit is filled with physical tools to help direct the child in the external world, the psychological tools help the child with concepts and problem-solving strategies both intellectually and emotionally. Social interactions happen in class and during participation in school and leisure activities, including recess and lunch breaks. However, for a child with cerebral palsy, interactions with peers may be more difficult due to environmental barriers as well as physical factors.

Nadeau and Tessier’s (2006) study of social adjustments of children with cerebral palsy in mainstream classes demonstrated that children with cerebral palsy differed from their classmates with respect to social status, number of reciprocated friendships, sociability/leadership, social isolation behaviours, and verbal and physical victimization, which means that children with cerebral palsy were less accepted by their peers, had fewer reciprocated friendships, and were more victimized by their peers as compared to other children without disabilities, which leaves them at risk of being socially isolated. There are several barriers due to which we can say this happens. One visible barrier that can be pointed out could be the physical difference between a regular child and a child with cerebral palsy. The study by Egilson and Traustadottir (2009) investigated several factors that hindered school participation of students with physical disabilities. They pointed out the following factors.

**Environmental characteristics.** Some environmental characteristics are school buildings that are only partly accessible to students with physical disabilities, distances within school premises, cluttered hallways and classrooms, and natural conditions like snow hampering access to the school playgrounds. They pointed out that use of assistive devices helped students to maintain adequate posture to promote optimal performance, concentration and endurance within a classroom and to travel within the school, however, the lack of time and knowledge about how
to use the devices frequently resulted in limited benefits. Egilson and Traustadottir (2009) stated that the school’s tradition and routine also became a hindrance when students with physical impairments were placed in higher storey classrooms due to the design of the school, which made it difficult for these children to transfer between classes. The authors also stated that several teachers had difficulties in adjusting activities for students with disabilities while attending to regular students.

**Child’s characteristics.** A child’s will, motivation, capacity, and knowledge to perform a task along with social skills, problem solving, and resilience added to the physical limitations. “Impairment effects were also striking, and involvement in many school activities was complicated by excessive effort, fatigue, and pain, occasionally leading to disengagement or withdrawal” (Egilson & Traustadottir, 2009, p. 268). However, the authors also stated that without opportunity, a student’s strengths are of limited value in ensuring participation in the school.

**Task characteristics.** Distinctive school activities and a lack of flexibility of implementation and modification of traditional ways of execution and performance affected student participation. Egilson and Traustadottir (2009) noted that during their study, even though they encountered positive instances when teachers enabled students to participate in educational activities by modifying the curriculum or instruction, there was less flexibility seen when adapting the physical aspects of the educational activities. They further stated that academic endeavors were emphasized by the school in which students were expected to participate in traditional educational tasks, but they were not expected to join in with physically challenging activities. Students were often alone or passively observed while their classmates engaged in play.
School settings. Egilson and Traustadottir (2009) stated that most participation happened during mealtimes; this could be because all the students sat in the class or a designated area together. However, most challenges were seen during recess, field trips, and transportation. Classes like physical education and swimming were also seen as problems for students with physical impairments. Gym and the playground were not physically accessible to these students, and even if they were, the lack of knowledge, experience, or imagination of staff diminished its use. “The factors that contributed to success included shared philosophies and goals within school, extensive communication between the school and the family, and support from administrators and outside agencies” (Egilson & Traustadottir, 2009, p. 270).

Recent research reflects that disability results from the dynamic interaction between the person and his or her environment, rather than residing within the person, and that the ability to perform activities and participate in life situations is an essential component of health, as defined in the International Classification of Functioning, Disability and Health (World Health Organization, 2001). “Children with cerebral palsy (CP) experience motor impairments, as well as deficits in other domains, which impact on their ability to move, solve problems, communicate, and socialize” (Majnemer et al., 2008). Because of this, they may be at risk of reduced or no participation in activities in schools. Participation in leisure activities has emerged as an important “outcome” for children with disabilities, with benefits that include fostering friendships, enhancing skill competencies, and developing personal interests and identity (Majnemer et al., 2008, p.1).

Summary

Based on these studies and research, it can be assumed that integration is different from inclusion. This is further explained in detail under the Convention on the Rights of the Child,
Article 23.1, which requires special needs students to be a part of regular classes with access to necessary help and resources that ensure their holistic development. It is the teacher’s responsibility to ensure that the students are accommodated and is made to feel a part of the class as much as all other students, so that they do not feel left out due to their physical, psychological, or physiological condition.

Teachers are role models and play a very important part as a link between the student’s home and school. They are not only responsible for the student’s holistic development, but also in guiding parents as well as educational assistants. Therefore, it is necessary for teachers to have a positive approach if inclusive education is to become a success. Some of the major challenges faced by teachers include time management, their approach to special needs education and its evaluation, and their ability to cope with limited help and minimal training in special education. There is also significant evidence to show that the more severe a student’s disability is, the less positive the teacher’s attitude will be towards inclusion. It may also be said that special education teachers are better trained and have a more positive attitude towards inclusion compared to general education teachers due to their intensive training. However, the ultimate success of inclusion dependents on the classroom teacher. Training plays a key role in developing a positive attitude among general education teachers; studies have suggested that professional development such as workshops, observations, research, and collaboration with special needs teachers can go a long way in developing a positive attitude and make general teachers more confident in accommodating students with exceptional needs.

There has been a common misconception about students with special needs detracting from the education of other students in the classroom. But research has shown that inclusive education benefits not only students with special needs, but all students in general. It has also
been proved that students without special needs who were educated in an inclusive class have higher academic scores, are better at building friendships with special needs students, appreciate their differences, acquire a greater understanding of living in a diverse community, and have higher self-esteem as compared to peers from non-inclusive classrooms. Studies and research reports have proved time and again that an inclusive setup not only benefits special needs students, but has a major impact on students without special needs and their academic results, which were consistently found to be higher among students without special needs but educated in an inclusive setup.

As established earlier in this summary, students with and without special needs can both benefit from learning in an inclusive environment because social interaction and environment have a deep impact on children’s learning abilities and their cognitive development. Therefore, it can be assumed that children learn not only from teachers but also from their classmates, friends, and social environment. Research suggests that children with cerebral palsy find it difficult to interact socially due to their physical condition and may be at a higher risk of social isolation. During lunch and snack breaks, it is understood that a child without a disability would be more involved in their own play than thinking of the needs of his/her peers. The teacher can counter this situation by planning inclusive activities that would help children with special needs feel more comfortable and socially integrated during physical education or gym classes, and also giving them a chance to become friends. However, it is seen that most children with cerebral palsy do not participate in regular school activities. There can be several reasons: Physical inaccessibility, a child’s personal characteristics, school routines, the flexibility of a task, and the lack of knowledge and imagination by the school staff. Therefore, it may be concluded that the success of an inclusive classroom may be dependent on a number of factors that can be
overcome by a collective effort made by teachers, school administration, parents, and students, but the end result is beneficial to all.
Chapter 3

Considerations for the Implementations of the Project

All schools today are expected to be inclusive. As schools have become more diverse in nature, much more is being expected of the classroom teacher today. Classroom teachers have a new challenge almost every day in order to maintain a healthy learning environment. In an inclusive classroom, a teacher plays an important role in creating an atmosphere where all the students feel safe and get a sense of belonging. Research suggests that teachers are not well equipped to accommodate students with exceptional needs. There is also significant evidence to say that the more severe a student’s disability is, the less positive the teacher’s attitude will be towards inclusion.

When children with cerebral palsy are enrolled in a class, they also come with their own unique needs, for which a classroom teacher is expected to be prepared. This handbook consists of tips that will help teachers in this process. It contains minor details and adjustments that might be missed by teachers already dealing with busy classrooms, particularly if there has been little time for research or preparation. Furthermore, in Adams case his classmates already had established friendships making it even more difficult for him to interact socially. This handbook also includes activities that will help the teacher equip these student with tools that could help them know and understand the needs of a child with cerebral palsy.

In this chapter, I will describe the handbook along with my summary of conclusions and findings through this experience, the recommendations, further implications, and potential for future policy and practice.
Findings and conclusion

Making a handbook to help teachers in their initial days to support the physical and social inclusion of children with cerebral palsy was the final product of my research. By reviewing the research on inclusion and the various areas that are affected by inclusion and through examining my classroom observations, a few conclusions could be drawn. We can say that the odyssey to become completely inclusive would be challenging and will take some time. But we will be there someday, and when we are, this journey will strengthen the school community and all the students in it. Inclusion does not only mean placing students in a general classroom. We can say we are inclusive when children, irrespective of their strengths, weaknesses, race, and culture, are made to feel like they belong in the class. They feel safe and part of the school community. When a child with cerebral palsy, or any exceptional need, for that matter, is enrolled in a school, it’s not only one person’s responsibility, it is the collective responsibility of all the members of the school.

Even though it is the entire school’s responsibility to maintain inclusion, a classroom teacher always plays the most important role. He/she is the bridge between the school and the parents, the student, and the regular students in the class. The role a classroom teacher plays in inclusion is challenging. If the teacher is not properly trained, it is highly possible that it would affect the teacher’s attitude. Research shows that teachers’ attitudes and expectations are significant barriers to the successful implementation of inclusive classrooms and participation of all students. It is important that they are knowledgeable and well trained in order to be prepared to take on this challenging role with a positive attitude.

Inclusive education not only benefits students with exceptional needs, but also creates an environment in which every student, including those who do not have disabilities, have the
opportunity to grow. Research suggests that students without disabilities educated in inclusive classrooms have higher academic achievements compared to their counterparts educated in a non-inclusive setting. They gain an increased appreciation for individuals with exceptional needs and show heightened levels of self-esteem and improved interpersonal skills.

**Wheels on board**

This handbook begins with a brief explanation of cerebral palsy. It then moves on to give basic information that a classroom teacher should know about children with cerebral palsy. The information provided is also merged with a few tips that can be used by the teacher in the classroom. The handbook also provides tips that will aid the participation of students with cerebral palsy during sports and extracurricular activities. After the tips and guidance, the handbook consists of four activities: 1) using one hand, 2) wheel the obstacle, 3) understanding one another, 4) my role. Each activity also mentions the materials that will be needed to complete it.

The first and second activities are meant for disability awareness. They will help students without disabilities understand the difficulties children with cerebral palsy face while performing different tasks in school. Hurst, Corning, and Ferrante (2012) found that students without disabilities who participated in a disability-simulation program experienced an increase in their levels of acceptance of students with disabilities. Therefore, we can say that it is important for students to understand their peers’ disabilities and experiences.

In the first activity, all the students will use only one hand to complete a series of tasks like eating, drinking, tying shoe laces, and cleaning up. Students then write a reflection on a sheet of paper, which is then followed by circle time with the classroom teacher. Here the teacher and students discuss the experiences faced.
In the second activity, students are taken to the gym where they experience sitting in a wheelchair and complete different tasks given to them. This is then followed by circle time, where the students and teacher discuss the experiences.

During the circle time of both activity one and activity two, the teacher discusses the needs of children with cerebral palsy. If the student is present in the class, it is also suggested that the teacher discusses a few other disabilities so that the child does not feel targeted. The teacher can speak about how students can be helpful and empathetic towards children with cerebral palsy.

In the third activity, the students are given sheets with a human figure on it. The students are expected to write their personal traits and characteristics around the picture. Once they are done, they move around the classroom and buddy with a different classmate. Here they discuss their image, and everything written around it. After the discussion, they say to each other, “I understand and respect you the way you are.” They then colour one small part of the image on their peer’s sheet (for example, earrings, hair, belt, etc.). When the students are done with all their peers in the class, the teacher explains the importance of understanding and respecting one another. This is where the teacher can also speak about the right and wrong ways of addressing students with exceptional needs. For example, not addressing peers with cerebral palsy as “CP kid” or “he is hemiplegic,” but instead addressing peers by their names. Students with cerebral palsy can be accompanied by their EA or the teacher him/herself.

In the fourth activity, the students watch “Katie’s Disability Awareness Video” on youtube.com. After the video, the teacher discusses the video and talks to the class about their roles as peers towards inclusion. The students then explore the internet and make handmade posters or online pamphlets about “how to be a good friend to peers with cerebral palsy.” They
can also choose another disability that they have come across and make a poster on that. Once
the posters are ready, they can be displayed outside the classroom or different areas of the
schools for the other children in the school. This activity would give a deeper understanding to
the students without disabilities of how they should behave around students with cerebral palsy.
For example, the most common mistake made by most is asking an adult next to the child what
he or she needs instead of asking the child directly. The teacher can address most of these little
things that happen almost daily but go unnoticed.

**Recommendations and potential future policy**

Merely placing a child with cerebral palsy in a general class is not inclusion. It is
important that the inclusion is meaningful. This handbook provides teachers with the necessary
tools that will help them to physically include students with cerebral palsy. The activities in the
handbook, with the teacher’s guidance, will help students in the classroom understand and
support their peers with cerebral palsy. The handbook consists of activities that involve
researching on the internet and then summarizing information in their own words; therefore, it is
suitable for children from grade four and older. Also, two activities in the handbook include
physical activities that involve functioning with one hand and using a wheelchair; it is
recommended that these two activities are used for students from grade six and older. It is also
recommended that teachers don’t stop with these lessons. It will be beneficial if they speak to the
students at regular intervals in order to foster social acceptance of students with cerebral palsy
during class time and especially during breaks.

As schools are getting more inclusive as time passes; it is necessary that teacher training
courses include intensive special education training. Apart from that, it will also be beneficial if
schools provide regular training and workshops for teachers in order to keep them updated with new policies and techniques for inclusion.
Chapter 4

Reflection

‘Physical and social inclusion of children with cerebral palsy’ was not my first choice for the project. When I went in the school for my observations, I had a totally different topic in mind. However, a few days later I met Adam, a child with cerebral palsy. He enrolled in school part way through the year giving his teacher little time to prepare for his complex needs. His file from his previous school was sent almost 3 to 4 weeks after he joined the school. I still remember, when he was brought in the class for the first time, he was sitting at the back of the classroom with his Educational Assistant (EA) both of them were physically present in the class but definitely were not a part of it. I saw some very good efforts towards integration everyday in that classroom but there was no sign of inclusion. The other students in the class acknowledged Adam’s presence in class by greeting him with pleasantries like ‘hi’ and ‘bye’ but that is as far as they could go because they did not understand his situation any further. During breaks Adam went out with his EA and the only game he played was making donuts with his wheelchair with the puddle water on the dry land and throwing pebbles with his EA in the puddle. His classmates played on the other side among themselves. I came home that day and tried looking for research that spoke about inclusion of children with cerebral palsy in a classroom but to my surprise, I did not find anything that spoke specifically about this topic. This is when I decided that I would do my research and complete my thesis on this topic and changed my original idea. Especially because so little attention has been given to it with very limited research. I wanted to contribute to this area of research as I feel it has not been given its due importance.

I began my career as a special education teacher in India. With my experience in schools there, I can say that schools in India have to do a lot more in order to reach where schools in
Canada stand today. Private schools in India have access to better resources as compared to
government funded schools, as they have much better facilities and support infrastructure with a
strong financial backing from the parents of students who can afford it. The facilities provided in
government funded schools in India are nowhere close to those provided in the district schools in
Canada. When I was in India, I always imagined inclusive education in Canada, being a first
world country to be perfect with all the funding provided by the government. As having enough
financial resources can be directly related to the ability of the school to provide the necessary
facilities. This was one of the major issues for the government funded schools in India, where
resources were scarce, and requirement was huge.

However, my experience with this project helped me learn that even though funds are
important to provide facilities and many other things, they are not the only deciding factor
responsible to meaningfully include a child in a mainstream school. For meaningful inclusion, a
lot of emotional and psychological factors play a key role and it is important for the student to
feel comfortable and see a positive attitude from their teacher and classmates. They need to feel
like they belong in the class and be able to interact freely with other classmates whom they can
call ‘friends’. They should not experience isolation or feel ‘separated’ because of their physical
condition.

During the process of researching for this thesis, I realized that regular classroom
teachers are not fully trained to support students with cerebral palsy and understand their needs
completely. When the teachers themselves lack the training required to fully include and support
students with exceptional needs they cannot teach or model these skills to the other children in
the class. In the section ‘things you should know’ of the handbook I have included activities and
information that would have potentially benefited Adams classroom teacher prior to his
introduction to the class. The project will help classroom teachers create a friendly and supportive environment for student’s like Adam. This project aims to help classroom teachers in supporting students with cerebral palsy. It will also equip them with tools that they can use to educate all students to support their peers with cerebral palsy. With this project and the research I have done, I hope to make a small contribution to the society in my own way. Consequently, my hope is that we gain a better understanding of this topic and its important in today’s modern and busy world. Hopefully the next time someone tries to look up a research article on this topic they will find a lot more information than I could.
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Wheels on Board

TEACHER HANDBOOK FOR STUDENTS WITH CEREBRAL PALSY

by Karishma D'Silva
INTRODUCTION
This handbook is a resource to support classroom teachers in understanding a few physical needs of students with cerebral palsy in the school. It also contains practical lessons that will help teachers fill the gap between the students without disabilities and students with cerebral palsy. These lessons will help students understand and gain more knowledge about their peers with cerebral palsy. It will also help them gain empathy by simulating what students with disabilities may experience, providing tips for including all classmates, and providing some strategies for adapting games and/or activities.
WHAT IS CEREBRAL PALSY?
Cerebral palsy is an umbrella term used for a range of non-progressive syndromes of posture and motor impairment caused by damage or malformation that occurs to the immature, developing brain before, during, or immediately after birth. As a result of this, a child’s muscle tone, muscle control, muscle coordination, reflex, posture, and balance are affected.
THINGS YOU SHOULD KNOW
1. NOT ALL CHILDREN WITH CEREBRAL PALSY HAVE IQ DEFICITS

It’s a common misconception that a child who looks different has a cognitive disability. More than half of all children with cerebral palsy have an average to above average IQ. It’s important for you to understand this and not make assumptions that a child with cerebral palsy is not as academically capable as others.

2. THE RANGE OF DISABILITIES IN INDIVIDUALS WITH CEREBRAL PALSY IS LARGE

Every child is different from another. They all have different and unique needs of their own. You as a teacher must get to know the weaknesses and strengths of each child and not make assumptions.

3. PHYSICAL ACCESSIBILITY FOR CHILDREN WITH CEREBRAL PALSY

As mentioned in the definition, a child with cerebral palsy has problems with muscle tone, muscle control, muscle coordination, reflex, posture, and balance. Therefore, you need to make sure that the class is organized in a way that gives them enough space to move around with their wheelchair/walker and not be locked in one corner.
4. CHILDREN WITH CEREBRAL PALSY NEED TO BE ACTIVELY INCLUDED

A child with cerebral palsy is mostly at risk of exclusion. As a teacher, it is your responsibility to make them feel like a part of the class. You need to take active steps to help include those who are likely to be excluded. You can try:

a. calling on a child during discussion
b. pushing them to participate in everything
c. assigning a leadership position
d. starting small and structured group activities and requiring all to participate
e. instituting a mix-it-up day during snack and lunch breaks, requiring every student to sit with someone they have never sat with before during the lunch period

5. BULLYING OF CHILDREN WITH CEREBRAL PALSY

Bullying is a problem for everyone, not only for children with cerebral palsy. However, children with cerebral palsy are more likely to be bullied due to their differences. Things that you can do include establishing and enforcing rules in the classroom and intervening immediately when bullying is observed.
PHYSICAL ACTIVITIES

It is important that students with cerebral palsy are provided with the opportunity to take part in sport and physical education together with the rest of their peers. With some preparation and modifications to the activity, a student with cerebral palsy can participate and achieve success during sport. Playing with peers gives a chance to the students to be active and also helps build on their social skills.
Ideas to consider:

Involve the child in deciding how an activity can be modified in order to best suit their strengths and weaknesses.

Provide verbal prompts/motivation or hand over hand assistance

Modify equipments if needed. For example, the ball can be stabilised (suspended or placed on a tee) or modified (consider size, weight, firmness): add extra grips to the handle of a bat/ racket to make them easier to hold.

Always speak to the school physiotherapist before making such modifications to seek guidance and inputs.

The movement in the activity can be modified so that it is harder for students without exceptional needs. For example, in the game ‘stuck in the mud’, running can be replaced with skipping; students can take turns being disadvantaged in some way—such as wearing a blindfold; tying their legs together.

The field of play can be reduced for students who get tired easily. For example, make boundaries with cones.

Modify rules of a game if necessary.
Scoring system can be modified or simplify. Sometimes you can avoid keeping scores.

Pair the student with cerebral palsy with a regular student who can assist them in carrying out the skill. For example, the buddy can push the wheelchair in a relay or race.

Pair the student with cerebral palsy with a regular student who can assist them in carrying out the skill. For example, the buddy can push the wheelchair in a relay or race.

If a game is too tough, you can still make the child a part of it by making him a referee or scorer.

While selecting an equipment for a child with cerebral palsy, analyze if they would find it comfortable to play with considering their walker, wheelchair or the time frame they would have to stand with it.
Activities

In order to understand peers with cerebral palsy, students need to understand and be aware of how they feel. Below mentioned are few activities that can help you do that with the regular students in your class.

**Using one hand**

**Materials needed:**
Shoes with open laces (students can use their own shows), unpeeled banana, water bottle with screw on lid, ball, paper, pencil

**Steps**
Arrange all these materials on desk (except the shoes). The students would keep their untied shoes next to their feet. Instruct the regular students to decide which hand they would be using for the whole activity and that they are only allowed to use that hand. No switching allowed.
Ask the students to start with eating the banana.
Then opening the water bottle and drinking water.
Then the students need to put on their shoes and tie the lace.
Then direct the students to wash their hand. Again only using the selected hand.
Once they are back ask students to write a reflection about their experience. You can also have circle time and discuss about the difficulties they faced in each task.

You can also modify this activity by making students just have their lunch or snacks with one hand followed by circle time for discussion.
Wheel the obstacles

Materials:
Wheelchair (can be borrowed by the school nurse), cones, hoops, balls.

Steps

A wheelchair is placed in the start point, followed by cones (obstacles) that are placed with distances that would fit a wheelchair.
A bucket of balls is placed after the cones followed by a hoop at a distance.
A student sits on the wheelchair and has to zigzag around the cones, making sure that the cones don’t move.
Once that is done they reach the bucket of balls. There they have to pick a ball and have to aim to throw the ball in the hoop and then return to their spot.

This activity can also be modified by turning it into an obstacle relay. Where two teams compete with each other.
Understanding one another

Materials: printed worksheet with an image of a boy or girl, colours, pencil.

Steps:
Distribute the sheets as per the gender of the students. Around the image the students will write about their different traits and needs. Once they finish, students would pair up with another student in the class and discuss each others sheets. Once they finish discussing this they will colour a small part of the other students image in the worksheet. This way they move around the whole class till they have met each peer. An EA or the teacher can accompany a student with cerebral palsy during this task.
My role

Materials: projector, laptops, internet access, crayons, colour pencils, poster paper.

Steps:

As a class watch ‘Katies disability awareness video’ on youtube.com (https://www.youtube.com/watch?v=B4frsp-rR6c&list=PLAJPfhAOG3ScIvNshmIvesc7ilsH1rS5)

After the video talk to the class about their role as peers towards inclusion.
Ask the students to then explore the internet and make handmade posters or online pamphlets about ‘how to be a good friend to their peers with cerebral palsy’. You can also ask children to choose another disability they have come across and make a poster on that. Once you have a few posters, they can be displayed outside the classroom or different areas of the schools for the other children in the school.