Participating in a Community of Learners:
A Sociocultural Approach to the Inclusion of
Students with Autism in Mainstream Classrooms

by

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ABSTRACT

The research examines inclusive practices for students with high functioning autism and Asperger’s Syndrome in mainstream classrooms, as well as the implementation of these practices.

The theoretical background of the concept of inclusive practices has been informed by sociocultural notions of learning and development and research on Autism Spectrum Disorders, in particular the implications of the condition for learning and social interactions. The concept of inclusive practices is situated in the contexts of research on special education, the practice of labeling students with special needs in schools, and the policies, concepts and practices of inclusion in mainstream schools in North America.

The primary goal of the research was to reflect on how sociocultural concepts of learning and development can help in the design of curriculum and practices that support the learning and socialization of students with autism in mainstream classrooms. The findings are evaluated also from the perspective of research on and ongoing debates concerning special education and inclusion, attempting to contribute to our understanding of issues such as the continuum of services, the principle of the least restrictive environment, and full inclusion.

Two children with high functioning autism and Asperger’s Syndrome, both fully included in mainstream classrooms, were the focal students of the research. As their regular special education assistant, I conducted a longitudinal ethnographic participant observation taking notes on the challenges and changes in the participation of the focal students in their classrooms’ academic and social activities and my experiences of designing and implementing inclusive practices for them. As well, I implemented academic activities (small group projects) for both students and some of their peers that implemented sociocultural concepts of learning in the form of the “community of learners” (COL) model, based on and inspired by Barbara Rogoff’s research and the model of Integrated Play Groups (IPG) designed by Pamela Wolfberg. The goal of this program of action research was to examine whether, and in what ways, this learning model might be an effective inclusive practice for the focal students, and how it might be implemented in mainstream schools.
Keywords: Autism Spectrum Disorders, Special Education, Labelling, Inclusion, Inclusive Practices, Sociocultural Concepts of Learning and Development, Community of Learners model, Mainstream Classrooms, Longitudinal ethnographic research, Action research
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learn according to their needs and we could foster socially inclusive and responsible communities in the classroom.

Also, I would like to thank the focal students of this research and many other students I had the opportunity to work with in schools over the years. While formally I was the one who helped and taught them, I, too, have learnt a great deal from these children and youth. I have learnt perseverance, sense of humor, creativity, and, most importantly, the courage to fight to survive in a school system that is not very forgiving with those who do not fit the square.

To my family I offer my gratitude and love. My mother has always supported my education and she has always made sure I knew she believed in me, despite the fact that I was myself a student who often did not fit the square and sometimes struggled in school. As well, her sense of social justice, empathy and encouragement to explore and question the world around me have been the foundations of who I have become and this research.

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TABLE OF CONTENTS

Approval ............................................................................................................................... ii
Abstract ................................................................................................................................. iii
Acknowledgements ........................................................................................................... v
Table of Contents ............................................................................................................... vii
List of Tables ...................................................................................................................... x

CHAPTER 1 Introduction .................................................................................................... 1
  The Concept of Atypical Development ........................................................................ 2
  Special Education Practices ....................................................................................... 3
  Labelling Practices in Education ........................................................................... 3
  The Concept of Inclusion ....................................................................................... 3
  Research on Autism Spectrum Disorders .............................................................. 4
  Sociocultural Concepts of Learning and the Notion of Inclusive Practices .......... 4
  Research Methods and Data Analysis .................................................................... 4
  Significance of the Study ....................................................................................... 5

CHAPTER 2 Literature Review and Theoretical Framework ........................................ 6
  Special Education Practices ....................................................................................... 6
  The Epistemological Foundations of Special Education and Its Critiques .......... 6
  Social Models of Disability and Sociological Critiques of Special Education .... 12
  Perspectives and Research on Labelling in Sociology and Special Education .... 17
  The Concept of Inclusion of Learners with Special Needs in Mainstream Classrooms and Schools .......................................................... 27
    The Legal Background and Models of Inclusion of Students with Atypical Learning Needs in Mainstream Schools in North America 27
    Research on the Effectiveness of Inclusion and Special Education Practices ...... 32
    Progress in the Inclusion of Atypical Learning Needs in Mainstream Schools in the US Since the LRE .................................................. 35
  Autism Spectrum Disorders (ASD) ............................................................................ 37
    The Main Characteristics of Autism .................................................................... 37
    Effective Approaches to Overcome the Challenges with Learning .................. 45
  Sociocultural Perspectives on Development and Learning .............................. 50
    Vygotsky’s Theories of Learning and Development ........................................... 51
    Further Developments in Sociocultural Perspectives on Learning ........................ 54
Contrasts between Inclusive Practices Based on Sociocultural Concepts of Learning and the “One Size Fits All” Approach ............... 59

Review ............................................................................................................................ 63

CHAPTER 3 Research Methodology .............................................................. 66
Ethnography in Sociological Research .......................................................... 67
Ethnographic Approach for an Examination of Inclusive Practices in the Collective Action of Schools ......................... 72
Data Collected on the Focal Students of the Study through Participant Observation from the Position of Student Support Worker ....................... 78
Analysis, Interpretation and Reflexivity ............................................................. 82

CHAPTER 4 Data Analysis .............................................................................. 86
Focal Students’ Learning Profiles and Needs of Support for Learning and Participation .................................................. 88
Development and Change in Focal Students’ Participation in the Learning and Social Activities of Their Classes Over Their Intermediate Years in Elementary School ....................................................... 96
Inclusive Practices to Support the Participation of the Focal Students in the Academic and Social Activities of Their Classes ...................................................... 110
Implementing Learning Projects Based on Sociocultural Concepts of Learning and the “Community of Learners” Model .......... 128

CHAPTER 5 Interpretation .............................................................................. 142
Components of Inclusive Practices for Children with Autism in Mainstream Schools from the Perspective of Research on Autism Spectrum Disorders ......................... 142
Sociocultural Concepts of Learning, Development and Instruction and Inclusive Practices for Students with Atypical Learning Needs in Mainstream Schools .................................................. 144
Participation of the Focal Students in Their Mainstream School from the Perspective of the Concept of Inclusion ................................................. 145
Moving Away from the Deficit-Centered View of Atypical Ways of Learning and Needs .......................................................... 150
Shifting Instructional Approach and Practice: Including a Wider Range of Ways of Learning and Needs in Mainstream Education ................................................. 153
Limitations of the Study .................................................................................. 158
References .......................................................... 161

Appendices .......................................................... 172

Appendix A ......................................................... 173
Appendix B ......................................................... 175
Appendix C ......................................................... 176
Appendix D ......................................................... 178
Appendix E ......................................................... 179
Appendix F ......................................................... 181
LIST OF TABLES

Table 1: Overview of chapter sections .............................................................................. 87
CHAPTER 1

INTRODUCTION

This research explores inclusive practices for students with Autism Spectrum Disorder (ASD) and Asperger’s Syndrome (AS), in mainstream classrooms and schools. Autism Spectrum Disorders is an umbrella term that includes Asperger’s Syndrome, and in the rest of the study it will be referred to as “autism”. Autism affects development, learning and socialization in complex ways. Children with this condition face multiple and significant obstacles when trying to participate in the learning and social activities of mainstream classes in public or private elementary schools as these activities are designed for the learning needs of “typically developing” children.

This chapter provides an overview of the study. First, it identifies key theoretical and contextual components of the research. These are: the concept of atypical development; the epistemological and sociological critiques of special education practices; perspectives on the practice of labelling students with special needs; the concept of inclusion of learners with special needs in mainstream schools; research on Autism Spectrum Disorders; and sociocultural concepts of learning along with the notion of inclusive practices informed by them.

Then, the other main components of the study are outlined, including the methodology, data analysis, and the interpretation of the findings from the perspective of the relevant theoretical and contextual components involved in the research, and their significance for the educational theory and practice of learners with autism in mainstream schools.

The dissertation is organized in five chapters.

Chapter 1 provides a general overview of the main components of the study, including theory, methodology and its potential significance for
educational theory and practice. Chapter 2 reviews the main theoretical and contextual framework of the research and Chapter 3 outlines the research methods. Chapter 4 presents and analyses the data on the challenges of the focal students in their mainstream classrooms, the changes in their participation in the learning and social activities of their peers, and the inclusive practices that were designed and implemented for them. The significance of the findings for educational theory and practice is discussed in Chapter 5.

**THE CONCEPT OF ATYPICAL DEVELOPMENT**

Children with autism follow developmental patterns and have ways of learning, needs and paces that are somewhat different from those of their peers, who follow what could be called the “typical developmental pattern”. These developmental differences, along with the *one size fits all* approach to education and the dominant instructional and organizational practices of mainstream schools, make these students appear less capable than their typical peers and put them at risk of missing out on opportunities of learning and participation.

This typical developmental pattern itself is understood here, of course, as a range with qualitative and quantitative differences, since any group of children — or older people for that matter — show different levels and configurations in their cognitive, emotional, social, and physical abilities and traits. However, despite these differences, in any large enough sample of a peer group, the majority is likely to be in a close range, from which students with atypical developmental patterns seem to be, more or less, and in more than one way, further apart.

My view of the circumstances of children with atypical development has been shaped by sociocultural research, which is reviewed, along with research on labeling, in the next chapter examining the theoretical background of the study. I embrace the view that the differences of these students are socially constructed to a considerable extent by mainstream instructional practices, labelling and other mechanisms inherent to the educational system. Nevertheless, based on a thorough examination of the literature, including research on autism, I recognize the fact that students with this condition have actual developmental differences from their peers, resulting in some atypical ways of learning and needs, and their inclusion in mainstream schools means more than overcoming only the effects of social construction.
**SPECIAL EDUCATION PRACTICES**
Issues around and research on special education practices constitute one of the five thematic sections of the theoretical and contextual framework of this study, examined in greater detail in Chapter 2. Special education practices are looked at from the perspective of their knowledge roots and the critiques addressed to scientific claims embedded in the epistemology of the discipline.

Social models criticize the dominance of the medical model of disability in special education, the practice of separating students with special needs from their peers, and emphasize the role of social arrangement in the construction of disabilities. Non-reductionist social models that conceptualize the roles of both impairments and social arrangements in creating disabilities are of particular interests since this study embraces a similar view of the participation of children with autism in mainstream schools.

**LABELLING PRACTICES IN EDUCATION**
The practice of labelling is the second thematic section of the five theoretical and contextual components of the research. Labelling students with atypical development is considered through the lens of sociological theories of labelling, and the critiques of and dilemmas around this practice in education. The practice of labelling has many negative effects on students influencing their identity, participation and relation with peers and teachers, which are discussed in this section. From the perspective of the focal students of this study, formal labelling is one practice among others that may negatively affect their participation and identity formation in the mainstream school.

**THE CONCEPT OF INCLUSION**
The concept of inclusion is the third of the five thematic sections of the theoretical framework, discussed in Chapter 2. The legal framework of the integration of students with special needs in mainstream schools in North America since the mid 1970s is outlined, along with competing models and conceptions of the implementation of the inclusion concept. Research on the benefits and effectiveness of inclusion of students with special needs in mainstream classrooms versus their education in separate settings is reviewed, as well as data on the state of the implementation of the inclusion model.
**RESEARCH ON AUTISM SPECTRUM DISORDERS**

The fourth section of the theoretical framework reviews concepts that describe the main cognitive processing issues and other characteristics of autism that affect the development, learning and socialization of children with this condition. Effective teaching approaches meeting the ways of learning and needs of students with autism are discussed. The research reviewed in this section play a key role in the theoretical framework by conceptualizing the ways of learning and needs of the focal students and their difficulties with participating in the mainstream classroom. The presentation and analysis of the data in Chapter 4 are organized in part in relation to the concepts discussed in this section.

**SOCIOCULTURAL CONCEPTS OF LEARNING AND THE NOTION OF INCLUSIVE PRACTICES**

The fifth section of the theoretical framework reviews the sociocultural notions of learning and development of Vygotsky, Rogoff, Lave and Wenger and other authors. The concepts of semiotic mediation, zone of proximal development, learning through transforming participation in shared activities, knowledge in context, guidance, and identity are explored. Along with research on autism, this body of research plays a key role in shaping the theoretical framework of this study by conceptualizing the inclusive practices that helped the focal students of the study learn and participate in the mainstream classroom. This line of research also provides elements of the critique this study adopts toward the *one size fits all* approach to instruction in mainstream schools, which is not inclusive of the needs of learners with autism. The concepts discussed in this section help organize and analyze the data on the inclusive practices that supported the participation and learning of the focal children of the study in the mainstream classrooms.

**RESEARCH METHODS AND DATA ANALYSIS**

An ethnographic approach using participant observation from my position as student support worker was the method of data collection. This position meant I had familiarity with the research site and with the two focal children with whom I worked for three and four years, from Grades 4 and 5 through 7, in an elementary school.
The data was obtained from two sources. My position allowed me to record and to describe, partly in retrospect, the development of the participation of the focal students in the academic and social activities of their classes, and the various practices and supports I implemented in order to help them during the time I worked with them. In addition, in 2008 and 2009 I implemented academic projects for the focal students and some of their peers for seven months, which used practices informed by sociocultural concepts of learning based on the model of the community of learners (COL), researched by Rogoff (1994, 1996), and I took ethnographic notes on the participation of the students in these activities and the practical experiences of the implementation.

The data is presented and analysed through key concepts from research on autism and sociocultural theories of development discussed in the fourth and fifth sections of Chapter 2.

**SIGNIFICANCE OF THE STUDY**

The findings of the study are discussed from the perspective of the theoretical and contextual components outlined in Chapter 2 and also their significance for broader issues of educational theory and practice. The most important conclusions of the research are that inclusive practices informed by sociocultural concepts of learning and development met the developmental and learning needs of the focal students and helped them increase their participation in the mainstream classroom. The projects using the COL model provided academic activities for the students that were socially more inclusive and met their individual learning needs more effectively than the mainstream instructional practices.

The study has potential significance in the context of the inclusion of students with special needs in mainstream schools by providing approaches and practices that effectively support the learning and participation of students with atypical learning needs in mainstream classes. Practices based on sociocultural concepts of learning and the COL model in particular, offer an alternative to special education practices that separate students with atypical needs from peers, and the one size fits all instructional approach of the mainstream class, which often does not meet these students’ needs. Furthermore, the implementation of instructional practices based on sociocultural concepts of development and learning in mainstream schools may provide new ways to respond to the wide spectrum of learning needs that characterize contemporary schools.
This chapter reviews five areas of research and theory related to the study. These are: the epistemological and sociological critiques of special education practices; the practice of labelling students with special needs in education; the concept of inclusion of students with special needs in mainstream schools; definitions of and educational approaches for Autism Spectrum Disorders; and sociocultural concepts of learning and development and the notion of inclusive practice informed by them. I will concentrate on the topics, issues and concepts within each of these broad areas that are especially relevant to the research.

SPECIAL EDUCATION PRACTICES
This section discusses the field of special education from the perspective of critiques addressed to its epistemology and views of disability that inform its practices. The elements of knowledge and disciplines involved in special education and the epistemological critiques of its practices, along with the postmodern philosophical background of these critiques, are reviewed in the first part of the section. Sociological perspectives on special education and disability are outlined in the second part.

THE EPISTEMOLOGICAL FOUNDATIONS OF SPECIAL EDUCATION AND ITS CRITIQUES
The term special education refers to the knowledge practices, professions and authorities involved in designing and delivering instructional services for learners with atypical learning needs. The field of special education has
developed over a relatively long period of time. The origins of the field go back to the 18th century in industrialized societies (Tomlinson, 1982), and as it grew considerably during the 20th century it drew upon a vast array of disciplines that are now incorporated in it, informing its methods and practices.

The knowledge roots of special education
Michael Farrell (2009) described eleven disciplinary approaches to special education. These approaches are: legal/typological, terminological, medical, neuropsychological, psychotherapeutic, behavioural, developmental, psycholinguistic, pedagogical and social. I briefly outline all but the social and the pedagogical, which, because of their centrality to this research, I deal with in greater depth in later sections.

Legal framework, typologies and terminologies strongly influence what is understood as special educational needs and different disabilities through the official definitions of laws and policies. Legal definitions change over time and from place to place, yet because of the formal authority invested in them they tend to appear as the official and final definitions and descriptions of conditions. Due to their authority, official definitions shape the whole field of special education, potentially setting limitations to knowledge of educational experiences of learners (Farrell, 2009).

The medical model interrelates with special education in complex ways, and Farrell gives the example of brain injury as a case when the model is essential in providing advice for educators on how to teach and help students with this particular condition (Farrell, 2009). While the medical model is valid in this and other cases, the use of this model for other conditions and its dominance are the source of many critiques of special education. The medical foundations of special education provide a general view that suggests that the various conditions categorized as special needs are similar to medical conditions, meaning that they are caused by factors within the individual. Also, the medical terminology — the use of terms such as *symptom, intervention, treatment or remedial learning* — along with the widely practiced approach to help students with special needs in separated settings and focusing on the perceived symptoms and causes of the disability, prevails in the field (Farrell, 2009).

Neurological research and explanations have given a great deal of insight into the functioning of the human brain, shedding light on the neurological
dysfunctions that are behind some conditions. Farrell warns, however, that explanations based on neuropsychological evidence, such as the claim that phonological processing deficits are behind reading difficulties, may sound very compelling and accurate, yet they require critical consideration (Farrell, 2009). Special education relies on the perspective of developmental psychology as a frame of reference. Atypical development is looked at and understood in relation to “typical” development (Farrell, 2009). Psycholinguistics combines evidence from psychology, linguistics and neurology, and by looking at processes of communication in relation to perception, storage and retrieval, it can help to identify where challenges with communication, which are common features of many conditions, occur. Nonetheless, as in the case of reading difficulties explained by phonological processing problems, Farrell notes that explaining communication difficulties directly with processing problems overlooks the interrelated nature of the different aspects of communication, and ultimately oversimplifies a highly complex phenomenon (Farrell, 2009).

A social perspective on disability sheds light on the contributions of environmental factors to children’s behaviours, challenges and performances, and attempts to conceptualize the relationship, or interaction, between impairments and conditions on one hand, and social factors on the other (Farrell, 2009). Since social perspectives provide a major source of criticism of special education practices, this topic is discussed further in this section.

**Critiques of the epistemology of special education**

A number of studies have criticized special education practices because of their epistemological foundations and their assumptions about children with various conditions categorized as special needs. These critiques are important for two reasons. First, they underpin some of the movements toward the inclusion of students with atypical needs and ways of learning in mainstream schools, which are discussed in the third section of this chapter. Second, along with other theoretical perspectives, these critiques inform the notion of inclusive practices outlined in the last section of the chapter.

Thomas and Loxley (2001) argued that special education is deeply rooted in educational psychology, which attaches great importance to the role of IQ in children’s academic failure. This assumption leads many special educators to overlook some important reasons behind many exceptional children’s challenges
to thrive in school. They also consider that special education programs use clinical and medical notions to a great extent, and tend to attribute behavioural and emotional difficulties of children to their dispositions and circumstances. Furthermore, Thomas and Loxley contend that research in special education makes rather arbitrary distinctions between performance and faculties, leading to simplistic and erroneous conclusions about cause-effect inferences that inform the methods and approaches of interventions and assessments used in the field. The authors claim as well that assessments of the capabilities of children with exceptionalities and the instructional methods used in special education were proven less effective than previously hoped, yet they survive and remain trusted due to scientific claims embedded in the field. Mosert and Crockett (1999–2000) made a similar point when they argued that due to the lack of awareness of the history of effective versus ineffective interventions in special education, the field is susceptible to continuously using untried and ineffective interventions.

Gallagher (1998) suggested that special education’s claim of its empiricist and scientific basis is fundamentally erroneous because human phenomena cannot be measured and predicted with the scientific method used to study inanimate objects and phenomena. Nevertheless, the methods of empiricist science are applied to the study of disabilities and special education interventions, and, according to Gallagher, these generalized authoritative scientific claims and approaches result in most, if not all, the critiques of special education that point to the field’s failures and ineffectiveness.

Gartner and Lipsky (1987) argued that special education’s practices are deeply influenced by society’s views of people with disabilities. Taken for granted assumptions, such as disabilities being biologically based and central to the disabled persons’ identity, are replicated in special education, which focuses instruction on the disability, and often trains and certifies personnel to work with specific disabilities. For Gartner and Lipsky, assumptions about the objectivity of knowledge in special education and its rationality and effectiveness to deliver special instruction also go unquestioned, and support practices that further differentiate students with disabilities by separating them from other students, excusing them from tests, and lowering expectations for them. The authors also point to the practice of assessments and placements based on psychological criteria, IQ, communication, behaviour, which are tested and measured by tools they do not deem reliable.
These critiques question the epistemological foundations of special education practices. Research on the ineffectiveness of some of these practices, which are reviewed in the third section, lend credibility to these critiques. These critiques accompanied and supported the radicalization of the concept of the inclusion of students with special needs into mainstream education from the 1980s among some scholars, professionals and advocacy groups involved in special education. This major change in the development of the field is also discussed in the third section of the chapter.

**Philosophical background of the epistemological critiques**

The movement against special education, challenging its knowledge basis, was largely inspired by postmodern philosophy in the humanities and social sciences from the 1980s, particularly the works of Jacques Derrida and Michel Foucault. Their analyses and theories gave strong intellectual and moral basis to suspicions toward claims of objectivity involved in science, language and knowledge. Also, their works provided theoretical frameworks through which social, political, professional and cultural authorities, institutions and hierarchies with legitimacies and practices based on scientific knowledge and official discourse could be henceforth critically viewed and questioned.

Derrida is most closely associated with the method of deconstruction, which is an analytical reading of philosophical and other texts in order to show how they are not coherent units, but rather they are imbued with oppositions and paradoxes. For Derrida, truths and meanings are the effects of a deeper history of the language and the unconscious. In particular, he criticized the way Western thought shaped meaning as binary opposites, such as presence/absence, being/nothingness, mind/body, and speech/writing. These differences are illusory and the meaning of a word is not conveyed by some quality of that word, but rather by its difference from other words. Danforth and Rhodes (1997) applied some elements of deconstruction to special education. They denounced the concept of disability by questioning the binary logic underlying the separation of children into categories based on ability, and rejected the political and moral hierarchy of ability and disability. They argued that the inclusionist movement had a contradictory philosophy insofar as it accepted the reality of the “disability construct” while advocating for students with disabilities to be placed in mainstream classrooms. They suggested that it is not possible to effectively
advocate for the inclusion of students with special needs without deconstructing the whole concept of “disability”, which is based on assumptions about deficiencies of certain children, and they proposed that there should be no categorical difference between the need of a student for assistance with personal care and the need of another for tutoring in a subject. Without the disability construct all these needs could be seen as authentic needs for assistance, part of being human and not the result of disabilities (Danforth and Rhodes, 1997, p. 364).

Michel Foucault, French historian and philosopher, examined the processes and conditions that opened ways of knowing, and the practices that shaped forms of knowledge regarding madness (1977), medicine (1963), the humanities (1966), punishment (1975), and sexuality (1976). He was concerned with changes in perception and knowledge, and the relationships between knowledge and power. For Foucault, rational order is recognized in any given period of time and society through sets of presuppositions (epistemes). These presuppositions are necessary to interpret reality, but they are also hidden and can be unearthed by the method he called “archaeology”, which allows examining the structures of thought prevailing in a given period of history (Foucault, 1969). One of Foucault’s central themes was “power-knowledge”; he saw power as a force permeating language and discourse, making possible and shaping knowledge this way.

According to Thomas and Loxley (2001), there are three main insights that educators tend to take from Foucault’s work in order to analyze the working of schools. The first is the concept that “scientific” knowledge and the discourses of psychology and psychiatry have structured the ways human differences are perceived. These disciplines, and the regimes making use of them in their institutions, classify and divide society, as well as construct identity through managing social relations and hierarchy. Second, differences in any form are descriptive of the nature of the systems that created them, instead of being an inherent characteristic of the group representing the difference. The third insight is Foucault’s view of power as an omnipresent and silent force, penetrating all aspects of life. For Foucault, the effects of power — hierarchies and exclusions — are impossible to escape. However, it is important to add to Thomas and Loxley’s analysis that Foucault’s ideas on power in his late works (Foucault, 1984) shifted toward the possibilities of resisting it. In the traditions of the Greeks, Romans and early Christianity he identified intellectual ways of
relating to and care for oneself and forms of self-knowledge, through which a sense of subjectivity was forged, and also in the Kantian critique he located means by which the subject of power can positively resist domination and subjection (Hartmann, 2003). Using Foucault’s methodology, Allen (1996) contended that discourses on special needs shape students’ experiences and identities in mainstream schools, making them subjects and objects of knowledge. She drew on the concept of surveillance through hierarchical observation, a process that Foucault observed in the penal system, and she contended that the higher staffing ratios in special education are an identical mechanism of control. In a similar way, Allen suggested that Foucault’s notion of normalizing judgement applies to the situation of students with special needs who are defined in relation to normality.

SOCIAL MODELS OF DISABILITY AND SOCIOLOGICAL CRITIQUES OF SPECIAL EDUCATION
Social perspectives on special education criticize the dominance of the individual approach to disabilities, in particular the medical and psychological models, which inspire the general perspective, the assessments, categorizations, interventions and practices of the field (Farrell, 2009). The medical and psychological models of disability are individual approaches because they see disabilities as the results of characteristics inside the person, caused solely by health or genetic conditions, diseases or trauma, and they propose to treat them accordingly. In contrast, the social perspective holds that disabilities are socially created as phenomena and get added to a person’s impairment (Oliver, 1990; Shakespeare, 2006). Biological or genetic conditions, or events affecting the health of people, make them impaired; however it is society that transforms impairments into disabilities.

The “culture as disability” approach
McDermott and Varenne (1995) proposed a model of “culture as disability” in order to conceptualize how culture and society make some people disabled. They distinguish this model from two others that have been designed to explain the failure of certain groups of children in school. One of these models is the “deprivation model” and it is similar to the medical model insofar as it suggests that some children fail at school because something is wrong with
them and/or their circumstances. This model was used to describe how the culture of children living in poverty, or belonging to minority ethnic groups, is responsible for the failure of these children. Applied to the situation of children with learning disability (LD), McDermott and Varenne argued that according to this approach these children cannot perform certain tasks in school due to the LD condition; hence the cause of failure lies within them.

The other model, called “difference approach”, was also developed to account for the failure of children from minority backgrounds in school. It posits that people in different groups have different ways to complete human development and they are all equally well tuned to the demands of their cultures. From this perspective, the world consists of a wide range of tasks, abilities and competences, and some do well on some of these, while other perform well on others. According to this approach, those who cannot show the required skills at the right time and in the right form will be considered as less successful or developed, and they will obtain fewer of the rewards of the wider culture and society. This model explains the low performance of certain groups in school by the discrepancy between the social and cultural environment of the school and the culture of these groups. Following the logic of this approach, McDermott and Varenne argue, children with LD can be understood only by taking into account not only what they cannot do, but also what they can. Similar to children from different cultural backgrounds, students with disabilities are short-changed in the school system that does not appreciate their abilities and competencies; therefore they end up failing simply because of their difference.

The “culture as disability” approach, proposed by McDermott and Varenne (1995), holds that every culture, as a historically evolved pattern of institutions, teaches people what to aspire to and hope for and marks off those who are to be noticed, handled, mistreated, and remediated as falling short. (p. 336). In this analysis, society and culture are not only occasions for disabilities but they actively set up ways for some to be disabled. Children with LD must be seen not in terms of what they can and cannot do, as the difference model suggests, but rather in terms of the people they interact with and the ways their activities are structured. Analysing the case of one particular child with LD, McDermott and Varenne argue that a great number of people are involved in producing situations that identify that child as having a learning problem. The culture, in
which this child attends school, focuses very much on individual success and failure, and it actively and systematically makes some children appear to be disabled. McDermott and Varenne conclude that no matter what challenges this child actually has in neurological functioning or early socialization, those challenges would not have the same impact on relationships with others without society’s focus on individual achievement and on timing of developmental milestones.

**The social models of disability in different national contexts**

Social models of disability have formed and taken different shapes in different national contexts. Systematic and explicit social approaches to disability started in Europe and North America in the 1970s under the influence of feminist studies, the civil rights movement and the dominance of labeling theory in sociology (Shakespeare, 2006). Shakespeare (2006) cited the work of Bogdan and Bicklen as example of the early social models of disability (Bogdan and Bicklen, 1993). They introduced the concept of “handicapism” that was inspired by interactionist sociology, and proposed to think about people with disabilities as socially created and not as having natural or objective conditions. Their work identified many issues that have become important elements of social analysis of disability, for example the segregation of children in special schools, labelling, prejudices in media, negative terminology, discrimination, lack of physical access, and institutionalisation.

In North America the social model approached the situation of people with disabilities as that of a minority group. Following the tradition of American political thought, people with disabilities were perceived as needing protection from prejudice and discrimination through civil rights legislation (Shakespeare, 2006). The Nordic approach, developed in the Scandinavian welfare states, considers disability a mismatch between the environment and the individual (Shakespeare, 2006). This approach sees disabilities as caused by both the individual differences of the disabled, and the environment that does not include a range of people with different abilities and characteristics. The Nordic approach also recognized that disabilities are situational and not objective situations, and it asserted that they exist along a continuum and not in a dichotomy opposed to normalcy. In other words, they may affect people to
varying degrees and the cut-off point in disability definitions is arbitrary (Shakespeare, 2006).

Britain has produced another social perspective on disability, which emerged through the work of disability organizations and scholars (Shakespeare, 2006). The British social model distinguished itself by a radical social critique, adapting the view of people with disabilities as a socially oppressed group, whose oppressed situation is caused by social arrangements and not the impairments or conditions they have.

According to Farrell (2010), the criticism that explanations of disabilities tend to be too focused on the individual within the medical and psychological models had for consequence that segregated special education started to be perceived as inappropriate by academics and advocacy groups. Since the concept that disabilities are caused by factors within the individual became contested, the concept of separated education, which was part of the medical model and used the same logic that posits that ill people need to be treated in hospitals, became questioned and rejected as well. As various social models suggest, the obstacles people with certain conditions face are the results of a socially constructed phenomenon and the removal of those obstacles would solve the problems of people with disabilities. This reasoning supports the demand for inclusion in mainstream education and the call for doing away with separate special education for children with disabilities (Shakespeare, 2006).

**Critique of the social model and attempts to overcome its limitations**

Shakespeare (2006) claimed that the initially useful social model has become ideological; its view of disability does not include impairment and tends to concern groups that are excluded due to either physical or social barriers, such as people with physical disabilities or mental health issues. Farrell (2010) also argued that the social model *can close the door on understanding of disabilities and disorders that are specific* (p. 16) because it considers disabilities as social constructions, and therefore it does not make sense from its perspective to focus on specific conditions.

Carol Thomas (1999) attempted to move forward from the conceptual impasse of the social models that minimized or did not recognize the role of impairments in disabilities. She introduced the concept of “impairment effects”
in order to account for individual limitations that arise from impairments and not social barriers.

Shakespeare (2006) proposed a “critical realist” perspective, claiming that the situation and experiences of people with disabilities are shaped by the interaction of intrinsic and external factors. Intrinsic factors are located inside the individual such as the characteristics of the condition, abilities, qualities and personality; external factors are various influences from the social context, for example the enabling and disabling conditions of the environment, reactions of others, and social, cultural and economic factors that are relevant to the disability. Another important concept in Shakespeare’s perspective is that impairments exist along a continuum and not as discrete entities. A physical or cognitive impairment can affect different people to different degrees. Impaired motor coordination can mean the lack of the ability to walk without support and challenges with cutting or coloring along a line. Impaired cognition may entail the complete inability to predict another person’s thoughts or feelings in a situation, or just a limited understanding that words have several meanings. Because of this continuum, it is hard to give a simple definition of disability since the boundary between the effects of impairment and social arrangements is flexible. When someone’s motor coordination is impaired to the point of not being able to walk without support, the impairment plays the major role in disabling the person. However, when the impairment affects only some fine motor functions, it is only selected activities, much less crucial or elementary than walking, that disable the person.

By recognizing that impairments affect the lives of people with disabilities along a continuum and that social arrangements and impairments produce disabilities by interacting with each other, Shakespeare’s model is able to conceptualize a variety of disability experiences instead of forcing all of them into a rigid, dichotomous model. Also, by not focusing solely on either the social or the biological sources of disability, as some social models and the medical model do, his perspective is not reductionist and it can effectively account for the diversity of disability experiences.
PERSPECTIVES AND RESEARCH ON LABELLING IN SOCIOLOGY AND SPECIAL EDUCATION

This section reviews research and issues around the labelling of students with special needs in education. Labelling students with atypical needs and ways of learning is an established practice of special education. It is preceded by the assessment of children’s abilities and skills, carried out usually by educational psychologists or by other medical staff, or governmental agencies, which assign labels to the students as a result of the assessment. The practice of labelling has been widely criticized in sociology and its use in education has been the target of extensive criticism as well. Labelling is not the singular focus of this study; however, it is implicated insofar as the focal students of the research were labelled and issues related to labelling affected their participation and the inclusive practices that had been implemented for them.

First, sociological approaches of labelling are reviewed, followed by an examination of the issues around and criticisms of the practice of labelling of students with special needs in the second part of the section. General problems with the effectiveness and accuracy of special education labels, and evidence and controversies around their effects are reviewed, and their role in the identity formation of students with special needs is discussed.

Perspectives on labelling in sociology
Labelling perspectives in sociology have emerged from the work of a number of researchers around the middle of the last century. Edwin M. Lemert (1951) was one of the first researchers in sociology who looked at the phenomena of social deviation. His perspective was rooted, partly, in the sociological conceptions of Emile Durkheim and Robert Merton, from whom he borrowed the concept of *anomie* to reflect the understanding that the increasing differentiation of societies throughout history had led to the marginalization and segregation of certain groups. The other central element in his perspective on social deviation is his concept of *societal reaction*. Lemert argued that the reactions of others play a crucial role in which particular behaviours, habits and lifestyles come to be seen as deviant. Societal reaction is the interaction of deviation and the norms and rules of the group that are violated.

Lemert distinguished *primary* and *secondary deviation* in order to differentiate between the original causes of a deviant behaviour and its later
causes that include societal reaction. Deviations, he argued, often start out as single acts that can be rationalized and kept consistent with a socially accepted role. At this level it is a case of primary deviation. However, if the acts become repetitive, are socially highly visible, and provoke a strong societal reaction, they become secondary deviations, in which societal reaction already plays an important role. He criticized the effects of what he called societal control culture and the control agencies that are supposed to rehabilitate, repress or help the individuals and groups engaging in deviant behaviour. These agencies, he contended, often contribute to push back or to keep in the deviant lifestyles those whom they purport to help or rehabilitate.

Kai T. Erikson also started his analysis of social deviances by referring to the classical conception of Durkheim, who had considered deviations as a “natural” part of social life (Erikson, 1966). Rejecting the assumption of some sociological and psychological explanations of his time, Erikson argued that there was no essential difference between the deviant and the rest of society, and the ways society filters those who become labelled as deviant constitute an important aspect of the phenomenon. Like Lemert, he was critical of institutions supposed to discourage or treat deviant behaviours, and claimed that they tend to perpetuate deviance.

In Erving Goffman’s work, the central concept of *stigma* refers to the sign that certain social categories, criminals and slaves, had to wear in Ancient Greece (Goffman, 1963). Although stigma referred originally to a visible sign inscribed onto the body, Goffman’s theoretical concept includes situations where there is no visible sign, but a person’s attributes, if known, may lead to stigmatizing effects.

According to Goffman, stigmas in the modern age have the same sociological features as they had in Ancient Greece insofar as they have an important impact on the social relations of the individual. They determine how the person is perceived and treated, they lead to assumptions of other imperfections based on the stigma, they tend to question the humanity of those who bear them, and they limit their life chances by the discriminative practices they set in motion. The reaction of society can be so limiting, as Goffman showed in the case of some physical disabilities, that people perceive both the stigma and the responses of stigmatized people to their situations as the expressions of the stigma.
Goffman stressed that stigmatization, even when the stigma is completely hidden from the outside world, has a huge effect on the identity of the stigmatized individual. Identity management and acceptance are serious challenges to many stigmatized people, stigma affecting very negatively the emotional well-being of many of them by causing shame and self-hate. Another important aspect of his work is the analysis of social interactions that give stigmas their reality; he showed that the meaning of stigmas depends on the relationship between the stigmatized and the rest of society and it is not an attribute of the sign itself.

Howard Becker (1963) researched extensively communities that were considered deviant by either law or the views of mainstream society. He synthesized his findings into an elaborated theoretical framework. His main thesis is that deviance does not come from the quality of the act itself, but rather from the interaction of society with the person labelled deviant. Becker worked out this theoretical position by rejecting the medical metaphor, which located the cause of deviance in the individual and, obscuring the fact that the judgment of society becomes part of the phenomenon. Becker contended that the tendency to deviance is not a unique quality of those only who become labelled as deviant, but it is present in many individuals who end up conforming to the rules and hence not becoming labelled.

Becker examined critically society’s role in creating deviances by looking at its different levels and mechanisms. The crucial moment of the deviant’s career, he argued, is when someone gets caught and labelled officially, as this means a drastic change in the individual’s public identity. Another mechanism of societal reaction, which Becker paid special attention to, was the differential access to power that some groups or individuals have to define deviance. He suggested that the variation in attitudes toward rules within a society shows that some social groups or individuals have more power than others to define deviance. Moreover, the manipulation of definitions of deviance and the practice of labelling as a smooth and cost effective way to dominate and control society were significant phenomena, and he considered the role of rule creators and enforcers as an important aspect of modern society.
General problems with labelling in special education
Labelling of students with atypical ways of learning and needs by special education services and by other educational or governmental authorities has been a common practice. Classifying, categorizing or labelling various forms of atypical development and needs have been taken for granted due the medical model of disabilities that dominates the epistemology of special education. Although the effectiveness and consequences of labelling and classification in special education have been widely criticized, the practice survives in most schools and districts.

Analysing the practice of labelling of students based on behaviours schools perceive as non-compliant or aggressive, Sohbat (2003) concluded that behaviour problems have no ontological reality; rather they are socially and culturally constructed by institutions that made an idea into a discourse. This discourse, supported by the underlying medical model and adapted by schools, transforms some students’ differences into problem behaviours, reduces these students to the perceived symptoms of those behaviours, and refuses to look at their meaning and the context.

According to Michael Farrell (2010), the general problem with classifications is that continuously distributed characteristics get compartmentalized into such categories as “under-age” or “over-weight” and the cut-off points affect the categorized individuals in terms of legal status, health care considerations, identity and self-perception. In the area of special education this issue arises with the importance attached to IQ tests in assessments. Intelligence is a continuous characteristic, and the scores obtained on IQ tests influence the label and the support that students receive. Also, as Peter Farrell (2001) argued, when it comes to specific conditions the difficulties children have spread across a continuum from mild to severe, and professionals often label some on a somewhat arbitrary basis. Furthermore, most children with disabilities move along that continuum of difficulties as they develop, but once they are labelled, the categories stick with them and do not express substantial changes that may occur in their abilities and thus categories tend to impose a static frame of reference.

The co-occurrence of different conditions is yet another issue complicating the use and effectiveness of special education categories. According to Farrell (2010), children with ADHD often have oppositional or conduct disorder as well, and disorders affecting the writing and numerical abilities of some
children are related to reading difficulties. Hence, the neurological characteristics underlying various conditions are not strictly compartmentalized by the boundaries of those conditions as defined by medical terms and descriptions, making the separation of categories somewhat arbitrary and their use possibly misleading. As Farrell (2010) contended, the validity of categories is questionable for this reason, and other or broader categories may be more helpful. As well, he suggested that the similarities and co-occurrence between categories undermine the claim that different categories require different provisions. Peter Farrell (2001) had a similar argument when he stated that although disability categories suggest the need for specific interventions for each condition, the same interventions often work for different categories. Thus the uncertainty of the categories leads to uncertainty of the special educational practices based on the categories.

**Meanings and effects of special education labels**
The main reason for criticism of special education categories are their effects on the labelled children. While the literature discussed above concern the effectiveness or usefulness of the practice of labelling, this concern with effects on learners has ethical implications. Teachers and caregivers may start perceiving a child through the label, and all their interactions may become influenced by this perception (Farrell, 2010). When children are labelled, even if the condition affects only a limited part of their functioning and abilities, their overall personalities may become perceived through the label, and this might end up affecting their self-concepts and identities.

Peter Farrell (2001) argued that some categories lead to lowering teachers’ expectations and the identification of the problem as lying in the children reinforces the view of the medical model of disability. Bianco (2005) examined how the “learning disability” (LD) and the “emotional and behaviour disorders” (EBD) labels influence special and general education teachers when making referrals for students to gifted programs. Both groups of teachers in her study were less willing to refer students with disability labels to gifted programs than identically described students without disability labels. The labels led the teachers to focus on the limitations of these students and on the importance of remediation, and to dismiss signs of giftedness. Sohbat (2003) identified a similar misrecognition based on labels when she argued that one of
the consequences of labels referring to behavior problems is that the real needs of students with these labels are not understood and met.

Bromfield, Weisz and Messer (1986) documented labels’ negative effects on the attributions and judgements of typical children with regard to the label “mentally retarded”. This label may have been replaced with others that are more politically correct and have less negative connotations; nevertheless it had been used until quite recently and, as Farrell’s research (Farrell, 2010), which is discussed further, shows, the negative attributions and judgements associated with it accompany other special education labels as well. Bromfield et al. (1986) also argued that labels lower teachers’ expectations and lead to underachievement by students.

Karagiannis’ study showed (as cited in Vlachou, 1997) that being labelled means vicious circles for children with special needs because labels impose negative stereotypes on them. The stereotypes influence the interactions of others with them and reduce their chances to participate and prove that the stereotypes are not true. Similarly to Karagiannis, Thomas (1978) looked at the effects of labelling at the micro level of interpersonal behaviour, and, taking an interactionist position, argued that the self and social roles are formed by the responses of others to us. He applied the concept of primary and secondary deviance to the situation of children who are labelled, and suggested that the “primary deviance” of the difficulties of interpersonal relationships of children with special needs deriving from impairments are accompanied by stigmatization and stereotyping, which are the “secondary deviance”.

Farrell (2010) analysed the terms used to identify reading problems and found that the Greek word “dyslexia” suggests a medical character of reading difficulties, implying that it is an illness that needs to be diagnosed and treated, rather than a literacy problem that can be helped with reading instruction. He considered the term “reading disorder”, used in the US, somewhat more appropriate, because, despite medical connotations, it appropriately suggests that the problems associated are in excess of the typical reading difficulties some children have. Norwich’s research (1999) supports this argument. Evaluating the attitudes and perceptions of pre-service and in-service teachers, and educational psychologists, he found that medical labels, such as “deficit”, “impairment” and “abnormality” had clearly more negative associations
compared with the terms of “special educational needs” and “learning difficulties”, which inspired more positive attitudes.

Farrell (2010) also analysed how the terms to describe disabilities changed historically in different places like England and India. He found that while various authorities tried to change the language to get rid of the negative connotations of earlier terms such as “imbecile”, “crippled”, “idiot”, “retarded” and “educationally sub-normal”, which once were commonly and officially used, society’s negative attitudes toward disabilities infused new terms with negative meanings as well.

**Dilemmas around the use of categories and labels in special education**

Besides the documented negative effects and dangers of labelling children with atypical ways of learning and needs in the education system, there are also other perspectives on the issue. Some authors (Gottleib, 1974, 1986; Kurtz, Harrison, Neisworth and Jones, 1977; MacMillan, Jones and Aloia, 1974) pointed to research and advanced arguments that are inconclusive about the effects of special education labels, question their negative effects, or even suggest that they may have positive impacts.

Farrell (2010) argued that the accounts emphasizing the negative effects of labelling of children with special needs do not capture the whole picture, as the phenomenon of labelling is more complex in terms of its effects. Shakespeare (2006) recognized as well that the situation is complex. On one hand, he reminded us that medical labels have been shown as causing negative perceptions of those who are labelled, and cause “identity spread”, which is the overall perception of the person through the label. On the other hand, he cited literature according to which medical labels are also welcomed by certain groups, for example dyslexic people, because they help them to see themselves as having a brain difference and not as intellectually limited. He also cited Fox and Kim (2004) who argued that groups, which are in the emerging stage of disability, meaning that a condition has not yet received a medical recognition and definition, welcome designations because they mean medical acceptance. Peter Farrell (2001) suggested that besides the well known negative effects, labelling helps to understand the needs of children who have atypical ways of learning. He also claimed that it is a practice that helps to orient families and
Literature Review and Theoretical Framework

educators toward appropriate services and resources to support the learning and development of children.

Others questioned the claim that labelling causes the negative effects attributed to it, and even propose that it may have positive consequences for the situation of children with special needs in educational settings. Based on a review of the literature on the possible negative effects of the label “mentally retarded” in the areas of self-concept, vocational adjustment, peer relations, attitudes of family and the expectations of teachers, MacMillan, Jones and Aloia (1974) concluded that there is little support for the argument that labelling leads to stigmatization. Gottlieb (1974) found that academic competence influences the perception of middle class children more than the label attached to a child. In another study he argued that observable behaviour can lead to rejection by peers no matter if the child, whose behaviour is different from the typical, has a label or not (Gottlieb, 1986). Kurtz, Harrison, Neisworth and Jones (1977) compared labelled and non-labelled preschool children and found that when the child had a disability label it led to less distance shown by the teacher.

Vlachau (1997) criticized some of the above discussed perspectives that considered the practice as neutral or positive in terms of its effects. She argued that apologetic approaches to labelling are fundamentally mistaken because they do not pay attention to the social roots and ideological assumptions and implications of labelling, nor to the reasons for the labelling. She suggested that even if labelling cannot be directly linked to negative effects as some studies have claimed, and even if some positive effects of it can be pointed out, it is still erroneous to conclude that the practice of labelling is either neutral or positive, because a thorough look at the history of it reveals that this practice was indeed responsible for creating “institutional climates” that meant negative situations for many labelled students.

Labels and the dynamics of identity formation of children with special needs
In addition to the above discussed criticisms, the relationship between labels and identity is an issue that is worthy of further consideration. Both deviance and special education labels can affect negatively the perception of labelled groups by others, through imposing stereotypes and negative images on them. Through imposing a public identity, labels lead to influence mainstream
society’s perceptions, attitudes and expectations toward, and interactions with labelled groups or individuals. The public identity that labels impose, and the perceptions, attitudes and interactions they entail, inevitably affect the self perceptions of those who are labelled in a negative way.

Yet the relationship between labels and identity can be more complex than a simply oppressive and deterministic relationship. As Kelly’s (2005) research shows, even if dominant negative discourses impose categorical identities on labelled children, that does not prevent some of them from being competent social actors who resist those dominant discourses, and create their own discursive spaces based on their own analyses and experiences. She drew on Davies and Jenkins’ research, which looked at how young people incorporate the categorical identity of having learning difficulties into their self-identities. They found that those who were given explanations about their situation by caregivers were able to understand and articulate it, while those who had no or only partial information about their condition had more idiosyncratic understandings. Citing Priestley’s study, Kelly (2005) claimed that children with disabilities are able to resist and reconstruct discourses about themselves to fit their own experiences.

However, Kelly (2005) also pointed to research that claims that children with disabilities are often restricted by power relationships, disabling and discriminatory structures from negotiating their self-identity. She cited Davis and Watson’s work, which recommends that adults working with children with special needs should communicate more with these children, explain their actions and consult them in everyday practice. In line with these ideas, and other studies pointing to the same direction, Kelly (2005) suggested that adults should create space for children with disabilities to explore impairment and disability if they want to do so.

The ability of individuals to resist labelling and the dominant discourses accompanying it, and to take an active role in constructing identity, has been shown in another context as well. Kaufman and Johnson (2004) researched the process of identity formation among gay and lesbian people. Using Goffman’s (1963) concept of stigma, they looked at the different processes their respondents went through while dealing with their stigma. These authors argued that earlier conceptions of identity development relied too heavily on linear and stage models, and oversimplified the problem by overlooking the
complexity in the possible variation of social-psychological processes that might affect the ways someone deals with a stigma. They used the concept of reflected appraisals, borrowed from Burke (1991) in order to conceptualize the potential active role of the individual in constructing his or her own identity by selecting responses from the surrounding social world.

Kaufman and Johnson pointed out that the early works by some of the symbolic interactionist theorists, like G. H. Mead (1934) and H. Cooley (1902) had shown the social nature of the self and the importance of interactions in its formation. However, Kaufman and Johnson agreed that further developments of the perspective were needed so that an active role for the individual could be conceptualized within the original interactionist framework. They noted that early researchers had a limited understanding of the classic conception of Cooley, who worked out the concept of looking glass self in order to explain the shaping of identity by the responses from others; insofar they assumed an overly passive role of the individual in the process of identity formation. The authors argued that a re-examination of Cooley’s work and further conceptual development, such as the reflected appraisals by Burke, have been more in line with the dynamic view Cooley articulated. Following this line of research they used Burke’s concept in order to capture the complexity and individual agency amid the process of identity development among gay and lesbian people.

The reviewed research show that, while labelling can be negative by imposing limiting stereotypes and shaping attitudes, expectations, self concepts and interactions, the individual has the ability to be an agent and shape his or her identity against the powerful symbols that labels are, and to resist the authority of discursive practices. This is an important point in the context of the bulk of research that emphasizes the limiting and deterministic effect of special education labels. Holland, Lachiotte, Skinner, and Cain (2001) used Bakhtin’s and Vygotsky’s work to conceptualize the agency of people negotiating their identities. The most current research is significant as it reveals the potential of human agency even when such oppressive practices as labelling and stigmatization, enhanced with the power of institutions and other institutionalized practices, limit and constraint the individual’s freedom to shape his or her identity.
THE CONCEPT OF INCLUSION OF LEARNERS WITH SPECIAL NEEDS IN MAINSTREAM CLASSROOMS AND SCHOOLS

This section focuses on the concept of inclusion of students with special needs in mainstream schools. First, the legal background of inclusion in North America is reviewed and various models and practices are discussed. The literature on the effectiveness of the concept for the education of students with atypical learning needs is discussed in the second part, and the success of its implementation is examined in the third part.

THE LEGAL BACKGROUND AND MODELS OF INCLUSION OF STUDENTS WITH ATYPICAL LEARNING NEEDS IN MAINSTREAM SCHOOLS IN NORTH AMERICA

The first part of this section looks at the integration of students with special needs into mainstream education in the North American context, focusing particularly on the shifts in the understanding and practices of inclusion. While the legal background of inclusion both in the US and Canada is reviewed, the discussion draws mostly on the American experience and research. The development of the legal background and educational practice of inclusion in Canada has followed, to a great extent, the development of these areas in the US. Also, the bulk of the available research and literature concerning inclusive practices originates from the US; therefore the majority of the sources of the review and discussion of issues related to inclusion are necessarily American and pertain to the American education system. However, due to the similar legal backgrounds, they are relevant and meaningful for the Canadian context as well.

The legal backgrounds of the inclusion of special needs in mainstream schools in the US and Canada

The major breakthrough toward inclusion of children with special needs into mainstream education in North America was the implementation of the Education for All Handicapped Children Act (PL94-142) in the US, which began in 1975 and required the mandatory identification of students with exceptional needs and the use of non-discriminatory assessment. As well, this Act provided the right of children with disabilities to individualized education programs and the right to be educated in the least restrictive environment
The policy of the least restrictive environment (LRE) implied that students with disabilities were henceforth to be integrated among peers in mainstream classrooms as much as their needs and abilities made it reasonable and possible, and separation from typical peers was acceptable only when the educational or developmental needs of students justified a different setting.

In Canada, unlike in the US, there is no federal law regulating the education of children with special needs as education is the responsibility of individual provinces and territories. Canada responded to PL94-142 in the US by moving toward the implementation of inclusive practices in education for students with special needs (Edmunds, 2008; Winzer, 1990). The legal source of guarantee against discrimination in Canada is the Charter of Rights, and its Section 15, added in 1985, has made illegal discrimination based on mental or physical disability. Due to the impact of the PL94-142, private litigation and parent militancy, legislation with respect to the rights of children with exceptionalities accelerated in the late 1970s and the 1980s in Canada (Winzer, 1990). Until the mid 1980s most special education services were provided in segregated settings, but since then almost all Canadian provinces and territories have embraced the philosophy of inclusion (Edmunds, 2008). Although with different wordings, they adopt inclusion into mainstream classroom as the first placement option for children with special needs (Edmunds, 2008).

The provisions and the ideal of the LRE meant that the public education system in North America has begun a long and tumultuous journey toward the inclusion of students with atypical ways of learning and needs in mainstream classrooms. Numerous initiatives and models have been tried with varying success since the policy of the LRE has been implemented; this action research project is an attempt to contribute to our understanding of practices that effectively implement the ideals of this policy.

**Concepts of and approaches to inclusion in the US since the LRE**

Since the policy of the LRE took effect, different approaches have been taken to implement inclusive educational models. As Fuchs and Fuchs (1994) demonstrated, the directions of reform in the US varied, in part, according to the particular interests of professional and academic groups involved in the process, during which the understandings of the goals and forms of inclusion...
of learners with atypical needs in mainstream schools shifted. Fuchs’ description of the radicalization of the concept of inclusion, and of the underlying dynamics among interest groups, ideals and goals, reveals that the concept of the LRE was susceptible to diverse interpretations even amongst the advocates of the groups who were all concerned and served by it (Paul, 1997). The policy itself was a defining historical step toward the desegregation of education based on abilities and needs; nevertheless it turned out that it was not evident, and has not been since then, what least restrictive means in practice, and how to apply this rule to include everybody to the greatest possible and reasonable extent. Indeed, the principle of LRE has not been translated into policy and practice easily because how to apply and interpret it for all learners with special needs, whose individual situations and needs often greatly differ from one another, has not been straightforward.

The implementation of the LRE in the US required the rapid and intense growth of the special education profession within the public education system. Wang, Reynolds and Walberg (1988) described it as a second system, and its independent functioning from mainstream education stirred some criticism, which pointed to the importance of meaningful connection with mainstream education practice (Behrmann, 1992; Hales & Carlson, 1992). In 1986, Madeleine Will, then-Assistant Secretary for the Office of Special Education and Rehabilitative Services at the US Department of Education, proposed the Regular Education Initiative (REI) in a paper, as a response to concerns about the negative effects of special education practice that had been perceived as disconnected from mainstream education (Will, 1986). The report suggested pursuing greater efforts to educate ‘mildly’ and “moderately” disabled students in mainstream classrooms, and establishing greater cooperation between special and mainstream education, with the latter taking more responsibility in the education of students with special needs. The policy of the LRE had been implemented for about ten years by that time, and the Assistant Secretary’s report gave official sanction to the critics contending that the lack of cooperation between special and regular educators was the cause of persisting problems that interfered with the goals of the policy.

Fuchs described the REI as a set of reform movements that aimed at integrating special and mainstream education. One tactic to reach this goal was to seek waivers from state and federal authorities to realize mergers by putting
special education resources to help both students with disabilities and others identified as underachievers in mainstream classes, working in cooperation with classroom teachers (Reynolds, Wang & Walberg, 1987). Other approaches proposed varied modifications to the continuum of instructional services (Fuchs & Fuchs, 1994, p. 297). The continuum of services from segregated to inclusive encompasses special schools, self-contained classrooms and resource rooms in mainstream schools, and mainstream classrooms. Some proposed to realize inclusion while keeping the continuum; others supported the elimination of parts of it (Reynolds, 1989; Reynolds, Wang and Walberg, 1987).

Despite some successful initiatives, the REI has remained a controversial program (Lowenthal, 1989) and, as Fuchs and Fuchs (1994) argued, it did not reach its main goal, which was to integrate special and general education students, because of resistance of some professional groups in both mainstream and special education. The late 80s and early 90s produced another wave of reform initiatives, the inclusive schools movement, which somewhat radicalized the concept of inclusion and the goals for students with disabilities (to be explained below).

While the REI wanted to realize inclusion by merging special and mainstream education, in the new rhetoric doing away with special education all together was identified as desirable (Fuchs and Fuchs, 1994, p. 300). This meant that the continuum of services and placements, which was part of the concept of the least restrictive environment, was to be eliminated, special education deconstructed, and all students were to be placed in mainstream classes. In this radicalized version of the concept of inclusion, all students were to be fully integrated within mainstream classes, with supports delivered there. Special placements and any form of labelling were considered as antithetical to inclusion. This movement received a great deal of support from the criticisms of special education identified in the first section of the chapter. Besides eliminating special education, the second goal of the full inclusionist movement was to enhance students’ social competence and change teachers and peers’ perceptions of and attitudes toward students with disabilities. In contrast with this emphasis on social competence and attitudes, REI advocates’ primary focus had been strengthening the academic performance of students with disabilities (Fuchs and Fuchs, 1994, p. 301).
As Fuchs’ analysis suggests, these shifts in the methods and goals of inclusion reveal the differences in the interests and positions of the different groups of students, as perceived and represented by various professional groups advocating for them. The heterogeneous population represented by the Regular Education Initiative included students with moderate or mild intellectual disabilities, who often had ambitious academic goals, and who could be relatively easily integrated in mainstream classrooms in the spirit of the LRE, even if the continuum of placements and services was still in place. The more radical movement, speaking for the interests of students with severe intellectual disabilities only, aimed for full inclusion, to enhance the social competence of these learners and to change attitudes in peers. These advocates perceived the LRE and the continuum of placements and services as obstacles to the integration of these students in mainstream classrooms, and they considered that academic goals and progress were not realistic objectives for them.

The policies and positions advanced by this radical version of inclusion have been rejected by some special needs interest groups, and even by some advocates for children with severe disabilities. It appears that there has been a relatively strong and general opposition to the idea of eliminating the continuum of placements and services, because many groups and advocates considered that students with atypical needs require these in order to progress (Fuchs and Fuchs, 1994, p. 304). Thus the existence of the continuum has been regarded as securing effective education for some, whereas for others it has appeared as an obstacle. This particular issue is discussed further in this section, in relation with the data on the effectiveness of inclusion for students with special needs in mainstream classrooms.

Another important element in the philosophy of the radical inclusionist movement has been the rejection of standard curriculum (Stainback and Stainback, 1992). The advocates of this movement consider curriculum as another major roadblock that hinders the inclusion of special learning needs in mainstream classrooms. In their view, standard curriculum does not integrate the diversity of experiences and backgrounds of all learners, and when teachers are constrained by it they cannot shape their programs and instructional methods in ways that would equally include all ways of learning and needs. Standard curriculum means the de facto exclusion of some children from the learning process because it reduces their chances to participate and progress according to
their own needs and abilities. Instead of standard curricula, they advance a holistic, constructivist and process-oriented instructional practice that would teach all learners through real-life projects and activities, where all backgrounds, abilities, needs and interests would be integrated, and where children learn in context instead of practicing skills on standard worksheets in isolation form that context (Fuchs and Fuchs, 1994; Stainback and Stainback, 1992).

**Research on the Effectiveness of Inclusion and Special Education Practices**

There are compelling arguments that inclusive settings are generally more beneficial than special placements for many children and youth with atypical ways of learning and needs; evidence that is indirectly backed by other research questioning the effectiveness of segregated special education practices. Moreover, all the moral, ethical, and philosophical support, which comes with the term “inclusion” as opposed to the term “segregation”, gives further strength to the claim that inclusive education is “good”, while special placement of students based on ability or needs is, at least, suspicious, questionable, and demands justification.

Yet, available research and existing views in the field on effective educational practices for students with atypical ways of learning and needs are far from being conclusive or unilateral regarding whether mainstream or special classroom placement works better for these learners. Since the LRE took effect in the US, and especially since the radicalization of the concept of inclusion, there have been various voices of concern regarding inclusion in general and the full inclusionist approach in particular. I will now look at research on inclusive and segregated special education practices and show that while inclusion has received strong support from research as a beneficial approach for many students, other data reflect the controversies in the field and among advocacy groups concerning inclusive and segregated special education practices.

**Research supporting inclusive practices**

As Katz and Mirenda (2002) have shown, when included, learners with special needs demonstrate more academic, social, and emotional progress than their peers with atypical development educated in segregated environments, and
there are positive outcomes for their typical peers, too. Positive outcomes for peers in terms of understanding and acceptance of differences were supported by the findings of Staub and Peck (1994-1995) and McGregor (1993) as well. Research by Madden and Slavin (1982) found that full or part-time placement of students with academic handicaps in mainstream classes brought positive outcomes academically, emotionally, and also in terms of behaviour and self-esteem.

Alongside the data on the benefits of inclusion, some research cast doubts on the effectiveness of special education delivered in segregated settings. As Reynolds (1988) pointed out, efficacy studies of special education, generally speaking, suggest no advantages for segregated placements. The research by Madden and Slavin (1982), referred to above, also reviewed full time special education programs, and found no consistent positive outcomes for students participating in them. Another study (Bloomer, Bates, Brown, and Norlander, 1982), made in the state of Vermont, showed that nearly half of the participating students, labelled as learning disabled, did not realize the expected progress from segregated special education. Furthermore, the National Association of State Boards of Education in the US presented findings, in 1992, that pointed to the general lack of evidence that segregated special education provided effective education for youth with disabilities.

**Research and voices from the field criticizing inclusion**

As early as in 1980, the meta-analysis of fifty research studies on special versus general education placements by Carlberg and Kavale (1980) reached the conclusion that mainstream placement worked better in terms of progress for children with certain forms of exceptionality, while others with different challenges thrived more in special settings. In particular, they found that some children with below average IQ benefited from the mainstream classroom more than from the special education environment, meanwhile others with learning disabilities, behaviour and emotional problems, did better in special classes.

Tornillo (1994), president of the Florida Education Association United, formulated concerns that inclusion pushed too far would leave classroom teachers without the resources and supports necessary to teach students with disabilities, and lead to a situation where the needs of children with special needs would not be met, while, on the other hand, the instruction of typical
children would be disrupted. Similar concerns from mainstream education teachers were expressed as well (Sklaroff, 1994), indicating that inclusion efforts often fail for lack of resources, funding and training for teachers in mainstream classrooms, and as a result, the American Federation of Teachers (AFT) urged for a moratorium on full inclusion (Leo, 1994). Leo also mentioned the suspicion of the AFT and others that full inclusion had been pursued by school administrations for cost saving reasons as separate special education services were seen as more expensive than inclusive settings by some administrators and researchers. Regarding this aspect of the debate, Sklaroff (1994) cited inclusion supporters’ argument that when inclusion is implemented responsibly, with supports delivered in mainstream classrooms instead of just putting children with special needs together with the general population, the inclusion concept is actually not less costly than segregated special education services.

Special education advocates and professional groups have been cautious with the rush toward inclusion and the full inclusionist movement in particular. Thus the main concern of these groups has not been the concept of inclusion itself, but the full inclusionists’ agenda as it has meant the elimination of other options beside the general classroom placement. As it was noted earlier in relation to Fuchs and Fuchs’s study, the elimination of the continuum of placements and special education services, proposed by the full inclusionist movement, was met by opposition from some stakeholders — professional and advocacy groups — involved in the education of students with special needs.

The authors mention two major groups speaking for students with learning disabilities, the Learning Disabilities Association and the National Joint Committee on Learning Disabilities, both of which made public statements in 1993 about the needs of students with learning disabilities for instructional approaches that are uncommon in mainstream classrooms. Also in 1993, The Council for Exceptional Children (CEC), a large international organization of special educators, parents and advocates for the disabled, formulated a similar position, supporting the continuum of placements tailored to each student’s needs, and it was only after that endorsement that the statement addressed inclusion.

However, the group that may have been the most critical of inclusion was the deaf and hearing impaired community. Cohen (1994) argued that inclusion
is inappropriate for students with hearing impairments because cognitive and
social development involves communication, which is sign language for these
students. Even when a sign language interpreter is available in a school,
students with hearing impairments still miss out on many educational and
social opportunities, and cannot take advantage of the supports provided to
other students with special needs. Citing research that point to the advantages
of special schools as opposed to mainstream school placement for the hearing
impaired, Cohen suggests that a community of the similarly disabled is a better
educational setting for these students.

**PROGRESS IN THE INCLUSION OF ATYPICAL LEARNING NEEDS IN MAINSTREAM SCHOOLS IN THE US SINCE THE LRE**

Since the public education system in North America embarked on the journey
of integrating students with atypical ways of learning and needs in mainstream
schools, it appears that some progress has been made in providing the least
restrictive environment for these students. However, there are multiple
methodological difficulties involved in evaluating this progress. Available
studies are hard to compare because they focus on different concepts of
inclusion due to the previously discussed philosophical differences among
scholars and professional or advocacy groups in this regard. Difficulties are
also related to the methodological dilemmas in assessing the diverse initiatives
that have appeared since the LRE. Furthermore, some studies look at only
specific disabilities, limiting the possibility of interpreting their results in terms
of general progress in inclusion of special needs in mainstream schools. As a
few but representative studies show, although progress has certainly been
made in desegregating public education based on ability and needs, it remains
quite hard and controversial to evaluate with any measure of accuracy or
objectivity how much the least restrictive environment is now assured for
students with atypical ways of learning and needs.

Some data is reviewed here briefly in order to give a general idea of the
progress made in the area of inclusion of students with special needs in
mainstream education in North America. The sources continue to be mostly
American since the legal framework of inclusion, the policy of the LRE, which
has been the inspiring model for Canada as well, was designed and
implemented in the US, and the overwhelming majority of available data also
originates from there. Nevertheless, as the interpretation of the findings of this study will point out, the data and issues related to the state of inclusion of special needs in mainstream education in the US are very relevant to the Canadian context as well.

**The successes and shortcomings of inclusion**

Using data from the Department of Education, McLeskey, Henry and Hodges (1999) analyzed the progress made in inclusion of children with special needs in mainstream schools in the US after the implementation of the LRE. They found that between 1988 and 1995 school districts were relatively effective in moving students with disabilities out from separate institutions but they were less successful in including them in mainstream classes with typical peers.

Smith (2007) analyzed the figures obtained by the US Department of Education, and looked at them from a perspective of full inclusion to see the percentage of students with intellectual disabilities who spent at least 79% of the time in mainstream classes. He looked at all fifty states and compared the 2002-03 school year with the same kind of data from five and ten years earlier in order to determine how the numbers changed over time. He found that from 1993 to 2003 the percentage of students with intellectual disabilities receiving their education in mainstream classes for more than 79% of the time rose by only 3.84%, which means that the increase in some states did not even reach the level of statistical significance. According to Smith, the numbers also indicate that close to 90% of these students spent a substantial amount of their time outside of mainstream classes. Moreover, he found that in the recent five years of the data (between 1997-1998 and 2002-2003) the number of students with intellectual disabilities fully included in mainstream classes went down 5.01% overall.

These data put the preceding parts of this section in perspective. As it has been pointed out, the road from an education system segregated in terms of abilities and needs toward an integrated system where all learners are educated based on their abilities and needs in the least restrictive environment, has been neither easy nor direct. Changing perceptions of students’ needs across disability groups, shifting understandings of the goals and the forms of inclusion, as well as conflicting evidence on the effectiveness of inclusive and
special education practices all contribute to the complexity of determining optimum arrangements.

The issues and controversies around inclusion are relevant for the situation of learners with autism. As it is discussed in the next section, this population represents the diversity of the needs and challenges children with disabilities in general, insofar as autism can affect all areas of development and to varying extents. Therefore, learners with autism, as other groups of children with atypical development, benefit from inclusion in mainstream educational settings to varying degrees depending on their abilities and needs, with many of them fully included in mainstream classrooms, while for others the concept of the continuum of placements and services seems to respond to their developmental and learning needs.

**Autism Spectrum Disorders (ASD)**

This section of the chapter reviews research on Autism Spectrum Disorders (ASD). First, the main cognitive processing issues and characteristics of autism are described, and educational approaches for children with autism are discussed.

**The Main Characteristics of Autism**

Autism is commonly considered a spectrum disorder, affecting all areas of development. The physical basis of autism is attributed to atypical development of the brain. The exact causes of autism are still unknown, but there is ample evidence that genetic and environmental factors alter the development of the connections among different parts of the brain and result in a general under-connectivity, which disrupts or impairs the cognitive processing mechanisms that would typically develop. This impaired cognitive processing causes the various symptoms of autism, which can be observed in the behaviour, social interactions, communication, ways of learning, emotional and sensory functioning, and motor skills of people with autism (Grofer Klinger, Klinger and Pohlig, 2007; Kana, Keller, Cherkassky, Minshew and Just, 2006).

It is quite common for labelling practices and professionals to distinguish between low or high functioning autism (Williams, 2007). Low functioning means having a below 80 IQ, severe cognitive impairments and, generally,
symptoms that interfere greatly with the abilities and skills to function independently in everyday life; high functioning autism refers to above 80 IQ, milder symptoms, allowing the individual to learn many skills necessary to independent everyday functioning (Williams, 2007). This terminology is used in this section to describe the symptoms of autism as it is practical for the purpose of a quick overview, although I am aware that this classification has been criticized by professionals and people with autism as oversimplifying the complexity of the condition by reducing it to IQ (Williams, 2007). Asperger’s Syndrome (AS) is a mild form of autism and, despite being identified as a separate condition and diagnosis; it is commonly accepted as a form of autism (Judd, 2007). As the cases of the two focal students of the study illustrate as well, the line between AS and high functioning autism is very uncertain and the two labels are interchangeable indeed.

Cognitive processing issues in autism: executive function, theory of mind and central coherence

Impaired executive function, one of the main cognitive processing dysfunctions common in autism, may be caused by damage to the frontal lobe. Executive function is responsible for the control and coordination of action, thoughts and attention (Doherty, 2009). This function is crucial for humans to carry out complex tasks that require the coordination of thoughts, information processing, focus, memory, and physical action in the midst of distractions. Strong executive function is especially important for multitasking and action in novel situations. The children’s game “Simon says” is a good example of executive function at work: children need to use their working memory to remember the basic rules, use their set shifting skill to know which rule is relevant, process language and use motor skills, and coordinate all these abilities simultaneously (Doherty, 2009). There is extensive evidence that children with autism have impaired executive function in varying ways, depending on which executive function skills are affected, and to varying extents, related to their level of functioning (Ozonoff, South and Provencal, 2007; MacKinlay, Charman and Karmiloff-Smith, 2006).

Another main cognitive processing dysfunction in autism is the lack of or impaired theory of mind. Doherty (2009) explains that Premack and Woodruff (1978) introduced this term to describe the ability to impute mental states to the
self and others. They defined it as a theory because states of mind are not directly observable; hence the system of inference that makes predictions of the intentions, thoughts, emotions and actions of others works as a theory. The theory of mind, like the executive function, includes a set of cognitive skills required to be able to take others’ perspective, infer what others may feel, think or plan to do under certain circumstances. The theory of mind is the cognitive function inherent in empathy, and it is involved to a great extent in communication and social interactions; it is the capability that constitutes the fabric of social life, so to speak. There is extensive evidence showing that children with autism have impaired or lacking theory of mind (Baron-Cohen, Leslie, and Frith, 1985), although they can acquire it if it is specifically taught to them, and also that the levels of the impairment of this cognitive ability vary among children with autism (Doherty, 2009).

The notion of central coherence describes another main cognitive trait of autism. Frith (1989) argued that typical people tend to try to understand the general meaning of things and get the “whole picture” by considering all the available information. In other words, central coherence means the attempt to make sense of events, situations, stories, or a picture, in a holistic way by taking into consideration all or most of the details. People with autism, however, tend to go somewhat the opposite way and focus on certain details that often seem meaningless or unimportant to typical people (Frith, 1989). The observation that people with autism process information in very literal ways also indicates the lack of central coherence in Frith’s analysis (Frith, 1989). Happe (1997) used Frith’s concept in a reading test for children with autism. The children had to read sentences that included words with different possible pronunciations and the context of the sentences was supposed to be used to choose the right pronunciation. The children showed a weak central coherence because they didn’t use the sentence context to pick the right pronunciation for the test words and they often pronounced the words incorrectly, making the sentences meaningless.

Symptoms, implications and consequences of autism
The literature on autism posits that the atypical development of the brain of people with autism causes under-connectivity among different parts of the nervous system (Grofer Klinger, Klinger and Pohlig, 2007; Kana, Keller, Cherkassky, Minshew and Just, 2006). This in turn results in cognitive
processing dysfunctions that lie behind the various symptoms of the condition. Autism is generally recognized by atypical ways of learning, particular intellectual challenges and abilities, odd communication, social relations and interactions with others, repetitive behaviours, frustrations and temper tantrums, atypical sensory needs and sensitivities, and motor skills. People with autism show all or most of these symptoms to varying degrees and in different combinations. I will rely partly on my experiences working with children who have ASD to give examples in an indirect and general way and use this anecdotal information for illustration of certain symptoms as the literature tends to be relatively general, technical and limited in terms of concrete examples.

Learning
The under-connectivity in the brain of children with autism produces a number of specific challenges for learning and cognition that are the concrete consequences of the impairments of executive function, theory of mind and central coherence. Koshino, Kana, Keller, Cherkassky, Minshew and Just (2008) showed that cortical under-connectivity in the brain in people with autism affects linguistic and visual processing since language and spatial centers are not as synchronized as in the brain of typical people. Their experiment showed that people with autism rely on visualization when processing information more than do typical people. The same research team found that the neural basis of altered cognition involves a lower than typical degree of the integration and synchronization of information across certain cortical areas affecting the way people with autism process language (Kana, Keller, Cherkassky, Minshew and Just, 2006; Just, Cherkassky, Keller, Kana R. K. and Minshew, 2007).

Another characteristic of learning in autism, also a consequence of the atypical and dysfunctional cognitive processing abilities, is the lack or limited implicit learning (Grofer Klinger, Klinger and Pohlig, 2007). Implicit learning
refers to the learning that takes place when children pick up skills, abilities, and understand things without being explicitly taught. This issue is discussed further in relation with the effective teaching approaches for children with autism.

**Joint attention**
Besides challenges with the theory of mind, socialization and participation in some learning activities of children with autism are hindered by their difficulties with another set of social skills and abilities, called *joint attention*. Joint attention is the capacity of individuals to coordinate attention with others in relation with an object or event (Mundy and Thorp, 2007). This capacity comprises a set of skills, just like the main cognitive processing abilities. It emerges as an early developmental process that underlies higher level cognitive processing abilities such as the executive function, theory of mind and central coherence. Joint attention starts with the coordination of overt visual attention when, for example, the child shows a toy to a caregiver or follows the gaze of the parent, and it evolves into elaborated coordination of covert aspects of attention when people direct their focus to psychological phenomena, discuss ideas or emotions, or work together on a project. The skills involved in joint attention are crucial developmental milestones in early childhood. Some of the early signs of autism are children's lack of initiation and response to joint attention in the way typical development entails. Evidence shows that children with autism do not perform joint attention skills, although there are differences in the intensity and profiles of the deficiency (Mundy and Thorp, 2007; Dawson, Toth, Abott, Osterling, Munson, Estes and Liaw, 2004). Implicit learning that involves conversation and focusing on the same subject with someone more knowledgeable, following classroom instruction or discussion, and participating in a small group projects all rely on joint attention skills.

**Sensory issues and needs in autism**
Another set of symptoms of autism pertain to the sensory system. People with autism experience the world through their senses as do other people, but their sensory functioning is usually imbalanced to some degree. Sensory imbalance means that they can be either overly sensitive to certain stimulations and
cannot tolerate some sounds, smells, tastes, textures, or be on the other extreme when they need more of certain forms of sensory input than typical children do. Balance and pressure are two more sensory systems often affected by autism (Judd, 2007).

These sensory imbalances cause children with autism to appear, to borrow the title of a relevant book on autism (Kranowitz, 2005), as if they were “out of sync” with the world around them. They can be very sensitive to some forms of noise and able hear certain sounds that typical people do not even pick up. Certain places or events can be intolerably loud for them, while on the other hand, some children with autism produce various noises to feed their need for auditory input. All other sensory realms of human functioning can be similarly imbalanced and produce a great number of possible behaviours that help these children to cope with sensory over or under-stimulation.

Working with children with autism in schools and other settings, I have observed that lights and colors can be overwhelming and extremely distracting to some, while food textures can be so intolerable that some children cannot swallow certain vegetables or fruits. Other children with autism tend to put objects in their mouths and chew on them to get stimulation. They can be very sensitive to smells and many cannot tolerate the typical school lunchroom. Some children cannot tolerate certain tactile sensations when touching materials or putting on a piece of clothing — the label of a t-shirt can be extremely bothering to them, while others will seek out touching or rubbing certain materials.

Persons with autism may be very fearful of stairs and swings if their sense of balance is affected by over-stimulation; but when it is under-stimulated they look for opportunities to swing endlessly, rock on chairs and sit on bounce balls. They may want to avoid any type of physical pressure to the point of refusing any body contact, or they may want to seek out deep pressure by hugging others, pushing themselves to objects, lying on the floor, hitting their chest. Some children with autism sense their own bodies differently from the way typical people do; they are often not aware of their bodies in space, so they do not realize when they bump into others, or they need to flap or shake their hands because they simply do not feel them, and they need to produce sensory input in order to do so.
Behaviour
Cognitive processing dysfunctions and sensory imbalances cause children with autism to engage in atypical behaviours as described in the preceding section. Other typical autistic behaviours are not caused by sensory needs, or not only by them. Due to cognitive processing impairments, the world for children with autism can be a very confusing, overwhelming and unpredictable place. Therefore, they like and need routine and structure. Changes in simple daily routine can make them very confused, frustrated and anxious to the point of throwing temper tantrums and getting panic attacks. Their need for routine, structure and predictability is often not met in schools, and as I observed while supporting these children, this can make them frustrated, lose emotional control, and act out intensely and sometimes violently. On the low functioning end, children with autism may refuse to go home by a different route by throwing themselves on the ground or screaming. On the high functioning end, more complex social situations can be similarly challenging, such as the confusion caused by the lack of understanding of the rules of a game, the change of the daily schedule or of the terms of a project, an unexpected obstacle like a homework left home or a locked classroom door.

Speech and communication
The main cognitive processing issues, challenges with the theory of mind and joint attention in particular, as well as atypical sensory functioning, contribute to difficulties with verbal communication. In terms of receptive language, children with autism may not be able to process the same amount of words, or process verbal communication at the same speed, as typical children do, meaning that they often hear things selectively. They may have difficulties using certain grammatical structures as well as reasoning or expressing ideas in socially accepted and expected ways. Some children with autism use language in ways that sound very dysfunctional to typical people, repeating certain words or series of words, talking constantly about the same subject, or repeating the same information, questions and patterns of sentences with minimal or no engagement in a mutual conversation.

Sensory dysfunctions can result in atypical intonation, pace or volume of speech. I observed several children with autism who spoke faster or louder or softer than typical children do. Autism can affect expressive language abilities
through impaired motor coordination as well, making it hard to pronounce certain sounds or to form combinations of sounds that words are composed of. On the lower functioning end of the spectrum some children with autism cannot speak at all and are referred to as non-verbal, while others use and understand language in limited ways, and many children with no or little spoken language appear to understand language more than they can express it by verbally engaging with others. Children on the high functioning end of the spectrum are often creative and sophisticated verbally; however, their atypical cognitive development affects negatively their participation in spontaneous conversations with peers. Furthermore, verbal creativity and sophistication may be accompanied by the mild impairments of their ability to regulate tone of voice, volume, and pace of speech, expression, and articulation of certain sounds; impairments that make many children with high functioning autism and Asperger’s Syndrome appear bright and awkward at the same time.

**Social interactions**

The skills and abilities involved in the theory of mind and joint attention constitute the basis for any social interaction, and, as it has been discussed earlier, children with autism have difficulties in these areas. On the low functioning end of the autistic spectrum, there are children who do not or only minimally interact and communicate with others either verbally or non-verbally, and those who interact and relate to others in very limited ways — with little or no mutuality in conversations, narrow, unusual and seemingly obsessive interests, repetitive patterns in speech and topics. On the high functioning/Asperger end there are those who have subtle interventional differences, such as strange choices of subjects, excessive interest in and knowledge of certain topics, little interest in what others say, difficulty in maintaining, joining and initiating conversations, poor timing, and off topic or seemingly insensitive remarks. These subtle symptoms of autism often come across as shyness, awkwardness, rudeness, or arrogance, and, in my experience, they present considerable challenge in the social interactions and integration of children with high functioning autism in schools.

Shyness and awkwardness make children on the high functioning end particularly vulnerable to victimization in the social world of the school yard and unstructured activities. My experience working with youth who have AS and high functioning autism is that a significant proportion of these children
get bullied in mainstream schools. Being perceived as different, strange and awkward, and having poor social skills, makes them stand out as easy targets for victimization in the competitive and hierarchical world of peer dynamics.

When victimization is not an issue, another risk children with autism face is isolation and marginalization within the learning and social activities of their peers, another pattern I often observed in schools. Since typical children develop ever more sophisticated social skills as they grow, participation in peer groups, either in structured settings like an academic project or in unstructured play during recess, requires interactional abilities that children with autism lack or struggle with.

**Motor skills**
Autism affects the development of motor coordination for many children to some degree. They may have trouble coordinating and timing their movements, and using the appropriate level of force when performing a task. When their gross motor development is affected, dribbling or kicking a ball or handling a racket can be challenging, whereas problems with fine motor coordination result in difficulties using a pencil to trace or color a shape, or cutting with scissors. In my experience working in schools, motor coordination difficulties are another set of obstacles when children with autism try to participate in some learning activities and unstructured sport activities during playtime.

**Effective Approaches to Overcome the Challenges with Learning**
Approaches that have been shown effective in teaching children with autism address the specific challenges with learning that is inherent in ASD. These challenges revolve around these children’s difficulty with implicit learning. The studies reviewed below suggest that different approaches may be successful; however research has demonstrated that following a few key principles is important to make any of these strategies effective.

**Compensating for the challenges in implicit learning**
From the point of view of learning and development of children with autism, the lack of or limited implicit learning presents the main challenge; this is the area a variety of educational approaches target. Grofer Klinger, Klinger and
Pohlig (2007) proposed that through implicit learning children understand the relationships that exist between different parts of the stimuli in situations and across different experiences. As they grow, children have more and more experiences with other people, situations and events, and they learn from these experiences about the effect of their behaviour and actions on others. They also begin to perceive patterns between things, situations or events. This implicit learning helps people to understand and navigate in the social world and to interpret experiences in ways that will allow them to use that knowledge to respond to similar experiences. The core of this learning process is the understanding of relationships between stimuli, which means practically anything that is experienced. Grofer Klinger et al. (2007) cited research that shows that people with autism have difficulties attending to stimuli; they do not orient, disengage and shift their attention the same way as others do. These difficulties with attention contribute to difficulties in the ability to perceive relationships between stimuli and across experiences.

Happe’s research (1995) found that children with autism, who had high vocabulary skills, used effortful, verbally mediated processes when solving tasks that required theory of mind, which typical children solved automatically, without effort and verbal mediation. Grofer Klinger, Klinger and Pohlig (2007) also cited research on people with autism using explicit problem solving approaches and learning strategies to make up for their challenges in implicit learning. They also point to findings showing that children with autism tend to withdraw when they are in unpredictable situations whereas they engage more with others when events are predictable. Based on this observation, they hypothesize that repetitive behaviours and restricted interests may be attempts by children with autism to create an environment that is predictable and explicit.

**Educational approaches and practices for children with autism**

Educational approaches for children with autism target their challenges with implicit learning. Since the problem is poor perception and understanding of the complex relationship between parts of the stimuli in different situations and experiences, as well as across experiences and situations, different educational approaches attempt to make that relationship explicit in different ways. This following section reviews some of the most known and used approaches to teach children with autism.
Applied Behavior Analysis (ABA), the best known and most used intervention for children with autism, uses the strategy of making the relationships between stimuli more salient than they first appear to children with autism. In order to do that, ABA breaks down complex skills and abilities to their components and helps the children to acquire those in a clinical setting. Dr Ivar Lovaas designed this type of intervention in the early eighties and had a huge impact on the field of autism education. The effectiveness of this approach has been documented (Lovaas and Wright, 2006) but its claims have been criticized as well (Gresham and MacMillar, 1998).

ABA is based on the behaviourist philosophy of learning and behaviour, where it is proposed that children can be taught skills, abilities and appropriate behaviour when the expected responses are systematically reinforced through rewards. Once the skills, abilities or behaviours are mastered, they can be generalized in other settings and the reinforcement can be phased out so the ability becomes an “automatic” function. Skills are broken down into small steps and taught separately in the format called “discrete trial”. The basic discrete trial format consists of a stimulus, which is usually an instruction from the therapist or parent, followed by the response from the child, and ending with possible reinforcement if the response was the desired one (Judd, 2007).

Another intervention, social stories, was devised by Carole Gray to help children with autism navigate and act appropriately in social situations (Gray and Garand, 1993). In a specific format, social stories describe social situations in terms of cues and the perspective of others, and also suggest appropriate behaviors. There are few and conflicting findings concerning the effectiveness of this type of intervention (Sansosti, Powell-Smith and Kincaid, 2004), but it is generally recognized by educators working with children with autism as useful. The approach of social stories may be effective since it responds to the needs of children with autism to use verbal and visual mediation and explicit learning strategies to make sense of complex situations, in which they would otherwise not be able to attend to and interpret the relationship between stimuli.

Relationship Development Intervention (RDI) model, developed by Dr Steven Gutstein (2001), and Developmental Individual-Difference Relationship-Based (DIR) model, also called Floortime model, designed by Dr Stanley Greenspan (Wieder and Greenspan, 2001), both target the emotional and social development of children with autism.
The RDI model focuses on the building block of social interaction such as referencing, sharing emotions and experiences by building a guided participation type of relationship between parent and child. The goal of RDI is to teach dynamic intelligence, which means thinking flexibly, taking others’ perspectives, coping with change and processing information simultaneously; in other words it aims to build the main cognitive processing abilities that are affected by autism. Since the process of acquiring dynamic intelligence through interaction with others breaks down in children with autism, they develop a static and rigid view of the world and relationships to others. Therefore, RDI proposes to rebuild the process of guided participation and interaction through a slow paced, step by step, and explicit manner (http://en.wikipedia.org/wiki/Relationship_Development_Intervention).

The DIR/Floortime model focuses on the areas of emotional sharing and interactions as well. Following children’s interests and emotions, this model, also using a guided participation type of relationship between parent, or caregiver, and the children, helps to build social and communication capacities by engaging the children in more and more complex interactions, problem solving, and challenging them toward greater and greater mastery of social and intellectual capacities. Following children’s lead by using their interests and emotions is essential in this approach and so is the individual developmental level of children. Also, this model is very sensitive to children’s sensory needs (S. I. Greenspan, S. Wieder, 2006; http://www.icdl.com/dirFloortime/overview/index.shtml).

Research on the effectiveness of educational approaches for children with autism
Prizant and Rubin (1999) reviewed and synthesized data on the effectiveness of various educational approaches used to teach children with autism. Their review suggests that a range of approaches with different underlying philosophies and practices are effective, and there is no evidence that one approach would be more effective than others. This latter point is backed by the review of Ospina, Krebs Seida, Clark, Karkhanek, Hartling, Tjosvold, Vandermeer and Smith (2005) as well. This study recommends that decisions about educational approaches should be guided by the individual needs of children. Moreover, the authors argue that efficacy studies in general are filled
with methodological problems because most of them do not consider variables outside the intervention package they focus on. Other learning experiences that may affect the subjects’ response to a specific intervention, fidelity of the intervention, and family variables are often not taken into account. Furthermore, they found that there is some overlap between approaches that are identified as having different philosophies.

As for best practice, Prizant and Rubin’s study suggests that all approaches must be individualized to match children’s current levels of development and learning profiles since there is remarkable heterogeneity in autism despite the similarity of developmental challenges. They also argued that all interventions should take into consideration the research on child development, from the 70s and 80s in particular, which conceptualized the crucial role of social-emotional reciprocity and communication in the development of cognitive abilities. This line of research also emphasized that children are not passive learners, they must be engaged and their lead should be followed in the learning process. Moreover, communication must be adjusted to children’s capacities and the teaching approach should use “scaffolding” as an instructional technique. Best practices for children with autism also address its core characteristics of autism, for example providing opportunities to learn and strengthen joint attention.

Research on social skills interventions for children with autism
There are various approaches and interventions designed specifically to teach social skills for children with autism. These programs are not reviewed here as there are quite a few of them with different focuses and designed for different settings, but available research offers relevant insight into the general principles of their effectiveness.

Comparative research studies on different social skills interventions suggest that, in order to be effective, the specific goals of programs should be determined based on the assessment of the children in natural settings so that the objectives and the scope of the intervention are adapted to respond to the individual needs of children (McConnell, 2002; Rao, Beidel and Murray, 2008), and they match their actual skill deficits (Bellini, Peters, Benner and Hopf, 2007). Interventions to develop social skills are more effective when there is support for generalization and maintenance of those skills in natural settings as
opposed to interventions delivered in clinical or other pull-out environments (Bellini et al., 2007). It is also helpful when the natural settings and the structure of activities children with autism participate in prompt and support interactions; facilitation and predictability are important for the children to be able to use the learned skills (McConnell, 2002). Teaching social skills to children with autism is also more successful when peers are involved and all children are prompted to use the learned skills in situ (McConnell, 2002; Rogers, 2000). Furthermore, social skills interventions work better when extended to other settings and times (McConnell, 2002), and school personnel find opportunities to teach and reinforce social skills as often as possible (Bellini et al., 2007).

Numerous methodological problems were noted regarding the research studies on particular social skills interventions (Bellini, Peters, Benner and Hopf, 2007; Williams, White, Keonig and Scahill, 2007). These issues are similar to methodological challenges of the studies on the efficacy of different teaching approaches for children with autism: small samples, lack of control groups, unclear definitions of intervention goals, no reliable data or no data at all on the generalization of learned skills outside of the intervention setting, etc.

Despite the complex methodological issues involved in these efficacy studies, Rogers (2000) concludes in her meta-analysis of different social skills interventions that children with autism respond to a wide variety of approaches targeting their challenges with social skills, and also that these interventions help them in other areas, such as language and behaviour, thus there is some evidence of a spillover effect. Rogers also notes that inclusive schooling is an important condition for social skills interventions to be effective, yet physical inclusion alone does not foster integration. This analysis remarks also that adapting social skills interventions seems to be a significant challenge for educators.

**Sociocultural Perspectives on Development and Learning**

This section reviews sociocultural concepts of learning and development that are central to my research and the notion of inclusive practice. The first part deals with key theories of Vygotsky, in particular the theories of semiotic mediation and the zone of proximal development. The second part considers
theoretical concepts developed by Rogoff, Lave, and Wenger, and sociocultural perspectives on identity. The third part is an examination of inclusive practices based on sociocultural concepts for students with autism in mainstream classrooms and an analysis of the concept of the one size fits all approach to instruction in mainstream schools from the perspectives of sociocultural concepts of learning and research and students with atypical needs.

**Vygotsky’s Theories of Learning and Development**

Vygotsky developed his theories of learning and development in the Soviet Union in the 1920s and 30s, focusing mainly on language learning and literacy. His theory of the interactive development of language and thinking, called *semiotic mediation*, is discussed in this subsection. I also discuss the concept of the *zone of proximal development*, which is a key notion in sociocultural perspectives on learning.

**The concept of semiotic mediation**

Vygotsky’s findings on the development of language and thinking are referred to as the *theory of semiotic mediation*. This is a theoretical model that describes and explains humans’ linguistic and cognitive developments by stressing two points: the primary role of social sources — interactions — in early language learning, and the interactive relationship between developments of language and cognition. Vygotsky, using his own and others’ findings, argued that the development of language use and thinking become connected and start to interact at a very early age in humans (Vygotsky, 1962, 1999). Human thinking and language use begin as two separate developmental mechanisms, and, similar to apes, human communication has a limited function until approximately two years of age. By this time, humans learn — typically — that words have symbolic functions, they refer to things, and after reaching this level they start seeking out meaning and trying to understand more and more words. This is how language and thinking become connected and start interacting in an increasingly complex process.

The basic mediating sign between language and thought is the word. All human cognitive ability — becoming able to form and understand concepts and other forms of complex thoughts — starts with the understanding and use of words that give meanings to things. As children grow up, they use more and
more words in more and more generalized ways; they become able to master increasingly complex forms of meaning (Vygotsky, 1962). Vygotsky defined words as acts of thinking. This first simple act of thought and meaning is the most important stage in the unification of language and thinking. Vygotsky, indeed, suggested that this is the essence of human cognition; thinking occurs through semiotic mediation starting with simple word meanings.

Throughout the process of development of language and thinking, from early childhood to young adulthood, new concepts are formed based on the already acquired meanings of other concepts. Problems and challenges to understanding provide the opportunities to increase cognitive and verbal activity. As for the process of cognitive development itself, Vygotsky suggested that its most important dynamic is the movement of thought back and forth between particular and general meanings. From using simple and direct meanings of single words, humans develop mastery of highly generalized and complex meanings and concepts. Hence, fully developed conceptual thinking is the outcome of a long process of learning.

Vygotsky’s analysis reveals the deeply social aspect of human development. This process of linguistic and cognitive development is generated and guided socially as it is interactions with others that children have opportunities to improve their understanding and use of words, and, as a consequence, their ability to think as well. Language appears first as an external social activity in interaction with others and later is gradually reconstructed into an internal one — thinking. This applies to other mental functions as well, such as memory and attention. All these cognitive functions and abilities are internalized from and through interactions; they are experienced and used with others before becoming abilities performed by the child (Vygotsky, 1978). Wertsch (1985) also noted in his analysis of Vygotsky’s work that the process of getting from simple word meanings to more complex forms of meanings requires active communication, and this active communication and interaction give a quasi-social character to it. This way, social interactions give the first word meanings; then these interactions help children acquire generalized meanings, and the ability to categorize things and to use abstract concepts.

The concept of semiotic mediation posits that thinking and language develop interactively, by language operating as mediating symbols for cognition to take shape and grow. Vygotsky’s perspective also implies that the
process is highly social since meanings in language are shaped by society, and also because language and thinking are generated socially from the very beginning, and continue to depend heavily on social interactions for development.

The concept of the zone of proximal development
Besides language and thinking, Vygotsky’s sociocultural theoretical framework also concerns learning. In his view learning depends on and happens in interaction with others and throughout these interactions activities and roles shift, as does control of the learning activity as well, with children gradually increasing their responsibility over it.

The central concept in his theory of learning is the zone of proximal development (ZPD). This zone refers to the space between a child’s actual level of ability to solve problems independently and the child’s potential of problem solving under the guidance of a caregiver or more capable individual (Vygotsky, 1978). Vygotsky elaborated this concept in part to overcome basic problems of testing and evaluation used in education in his time. He criticized testing methods that assumed development was what children could accomplish alone, and he proposed a quite different way of looking at the level of development. He reversed the perspective by directing his attention to the potentially reachable level, which, as he suggested, can predict the potential level of the child’s ability to do tasks independently, supposing that the child receives guidance from caregivers or more capable peers. In other words, Vygotsky worked out a concept of learning and development that does not rely solely on the achieved level of abilities, but, while taking into consideration the achieved level, it puts the focus on the next level, or course of development, that can be determined as probable. The idea of the ZPD suggests that teaching and learning should take place in this space between independent abilities and abilities with guidance. In other words teaching ought to be adjusted to the individual level and needs in order to be effective and use guidance to lead the learner to acquire more independence.

Cole studied the concept of development in the ZPD from the perspective of similar ethnological and anthropological concepts, and the concept of activity worked out by Leont’ev (Cole, 1985). Leont’ev aimed to define a unit of analysis for research and this unit is activity, understood as a system of human actions, coordinated by the system of social relations. Activity is a larger unit
than single individual actions and it expresses more systematically the context of society and culture with their constraints and goals. Cole argued that Leont’ev’s concept is quite similar to the aims of some anthropologists, who wanted to grasp the condition of the whole in a unit of analysis when they chose to describe events or contexts while studying different ethnic groups. According to Cole, Vygotsky’s concept of ZPD reflects this orientation in method and perspective because it involves looking at development and learning as taking place within activities. Vygotsky saw learning as a process of growing into the intellectual life of the group, where the zone of proximal development extends throughout all the interactions the child can experience.

The theoretical background of the concept can be also traced to Vygotsky’s position on other schools of psychology of his time. Concerning ZPD, Cole commented (1985) that it reflects Vygotsky’s objective to reconcile the difference and separation between psychological and social levels of analysis of cognition that had been assumed by Wundt and other psychologists as well at his time. Wertsch (1985) also noted that Vygotsky was openly critical of the psychological conceptions of his time because they started their analysis with the individual level of cognition, which were for him only the secondary problem in the process of internalization. The concept of learning, which looks at the process of learning that takes place in the ZPD, expresses clearly his critical position on psychological theory during this time.

**FURTHER DEVELOPMENTS IN SOCIOCULTURAL PERSPECTIVES ON LEARNING**

Developing Vygotsky’s sociocultural perspective, Rogoff (1994) and Lave and Wenger (1991) proposed to define learning as participation in the sociocultural activities of the community, in shared endeavours with others. In their analysis, development and learning occur in and through activities with the gradual transformation of the participation of learners and the increasing understanding and mastering of roles and responsibilities by them within those activities. Understanding is a critical aspect of learning because it is not only skills children learn when they develop, but also, at a more fundamental level, they understand the meanings of the activities and practices.
The concepts of Rogoff, Lave and Wenger

Rogoff (1990) cites extensive research showing that children’s learning is more about acquiring the ability to interpret things, rather than absorbing the knowledge or information about those things. This emphasis on understanding meanings leads to another important element in the sociocultural theory of learning: the active role of the learner in the process. Increasing understanding makes possible an increasingly active role, going from observing to questioning, gradual participation, to taking on responsibilities in activities, and to actively seeking information for better understanding and to independent participation.

As the wide range of findings that she draws on show (Rogoff, 1990), learning supposes and relies on intersubjectivity and sharing — an area where children with autism often have difficulties — as well as on the interest and engagement of learners. Reviewing these findings, Rogoff suggests that in many areas, from language learning to the ability to reason, remember and plan things, the active involvement of the learner enhances learning more effectively than building those skills and abilities while remaining passive in the learning process. Therefore, understanding, participation and active involvement in interaction with others, or, in other words, shared thinking and problem solving have critical importance in the process of learning from a sociocultural perspective.

Lave and Wenger (1991) proposed a similar view of learning in the concept of legitimate peripheral participation, which, too, considers increasing participation and activity to be critical elements of effective learning. They defined learning as a model of apprenticeship; a practice-based activity. Their model adopts a concept of cognition that situates knowledge in concrete contexts, instead of seeing it as skills or information with no connections to practical activities. They are critical of the Cartesian view of the mind that saw learners as neutral units absorbing objective knowledge through cerebral processes, in a rather mechanic way, with no active role of construction.

Lave and Wenger’s (1991) conception of knowledge as inseparable from broad social practice is the basis of their critic of the teaching curriculum taking precedence over the learning curriculum. According to this analysis, learning should follow the interests of the learner — the learning curriculum — and be immersed in the social relations and practical contexts of the community, instead of imposing resources, perspectives and concepts through mostly passive cognitive processing activities — the teaching curriculum.
Rogoff’s studies on learning in environments that are different from the typical North American school provide perspectives similar to those of Lave and Wenger (Rogoff, Matusov and White, 1996). Rogoff and her associates, too, were critical toward what they assessed as narrow notions of knowledge and learning represented in mainstream schools. The prevailing notion of learning is reflected in what she calls the adult-run model, which holds learners in a passive and absorbing role by transmitting to them inert ideas and skills and using external rewards — grades — to motivate them. Rogoff et al. argued that the child-run model is the opposite of adult-run learning because it gives all control in the learning process to learners and suppresses any influence or guidance from the teacher. Compared with these models, sociocultural models of learning are based on sharing of control and responsibilities, shared decision making in groups where adults guide the learners who take an active role in the process: they make choices, decisions, and monitor their own activity. Rogoff argued that learning based on sociocultural principles assigns no passive roles to either children or adults, and no individualized learning either, because guidance through interactions and shared problem solving with more knowledgeable adults and peers are the most effective settings for learning (Rogoff, 1990, 1994, 1996).

One particular educational practice embracing sociocultural concepts and extensively studied by Rogoff (1994, 1996) is the model of the community of learners (COL), implemented in the Salt Lake City Open School. The dominating instructional method in this model is guidance. Teachers instruct students only for short periods, and most of the time is spent with the students working on projects in small groups, assisted and guided by parent-volunteer educators and the classroom teacher. (The model requires extensive parental involvement.) Children are guided to become actively involved in their learning at all steps, from deciding about the topics and goals for projects to planning the desired outcome and the resources to be used. In this model, the learners are guided to gradually increase their responsibilities and roles, monitor their own progress, plan together, and modify their plans when needed. The main principle is learning through activities that have meaning and context, by actively participating and increasing ownership in the learning process, led and assisted by educators.
Compared with COL, teaching in mainstream classrooms relies to a greater extent on direct instruction; the teaching of information and skills is less embedded in context and has less relevance for learners. Students are not required and led to get actively engaged in their learning as much as they are in the COL model, in which they learn through projects that they are led to “own” and to which they form a deep commitment. Beside personal engagement, the COL model also prioritizes participation, communication and interaction more than the practices in mainstream classrooms, where learning is more of an individual process through which children absorb knowledge and acquire skills from the teacher-led instruction. Mainstream instruction is designed to teach all learners the same content in the same way and with the same standards and expectations for all; compared to this one size fits all approach COL can integrate a variety of instructional approaches and ways of learning, and differentiate learning goals for the participants in the same activity or project.

The role of identity in development
Sociocultural theorists are centrally concerned with identity. They see identity as multiple, interacting and flexible (Wenger, 1998, Holland, Lachiotte, Skinner and Cain, 1998). In Wenger’s analysis, identity is a pivot between the social and the individual within the self because our experiences with others take shape and meaning through the formation of identity. Through social encounters people get certain meanings of who they are and some of these meanings may carry different kinds of information, but they all reflect their perception by others. These different interpretations and understandings coming from others may be filtered and rearranged, leaving room for agency and for individuals to play active roles in shaping their identities. This possibility to shape our identity has been analyzed by Holland et al. (1998) who showed that identity can be flexible and multiple, depending on the demands and challenges of particular situations in which the individual uses socially and culturally constructed discourses and practices as tools to express his or her self. These sociocultural conceptions of identity, as well as the research discussed earlier in relation with labeling and identity (Kelly, 2005; Kaufmann and Johnson, 2004) recognize the role of social and cultural influences on the way people perceive themselves, but at the same time they acknowledge the possibility to negotiate and shape identity.
Toohey’s study (2000) of children who learn English as second language in a school where it is the language of instruction and the first language for most of the students shows the conceptual and analytical importance of identity for an examination of learning and development in schools. She emphasized the crucial role of school identity in shaping the academic and social future of children within the school and classroom community. Children build up school identities during their school years from the meanings they encounter during their interactions with teachers and peers.

School identity, like identity in general, is multiple and flexible as the positions children occupy within the hierarchies of the school community can be multiple and change over time. There are different hierarchies that form in schools along various criteria and these hierarchies impose less and more desirable positions to the children. This positioning supports and reinforces certain student identities. Toohey pointed out that, most typically, the positioning according to academic competence plays a defining role in the shaping of self-image of children. As a result, the official ranking by school may assign positions and identities to students that are not accurate reflections of their abilities and competences. The problem this mechanism of assigning positions and identities poses from the point of view of learning and development is the potential limitation of learning opportunities by assignment of certain positions and identities. Undesirable and subordinate positions may well entail limited access to participation and other resources, and, if the student gets stuck in such a position over a long period of time, the ranking and identity imposed by the position may easily set in motion a self-fulfilling prophecy: identity affects self-confidence, interactions and academic achievement.

Hence, rankings used by the institution, and also by peers, based on criteria such as academic performance, behaviour, physical presentation are all involved in the process that produce school identity. And, since some of the typical instructional and testing practices used in schools notice and reward certain ways to perform while they ignore others, some students become marginalized in the system by being placed in undesirable and limiting positions, affecting negatively both their self-image and learning. As Wenger (1998) argued, not only participation but non-participation, too, plays a role in the formation of identity. By not participating in an activity we still
build a sense of self: being left out or marginalized reinforces certain meanings and understandings of our place, abilities and social acceptance and value (Wenger, 1998).

**CONTRASTS BETWEEN INCLUSIVE PRACTICES BASED ON SOCIOCULTURAL CONCEPTS OF LEARNING AND THE “ONE SIZE FITS ALL” APPROACH**

The sociocultural concepts of learning and development, in particular those of Vygotsky, Rogoff, Lave and Wenger, played a major role in shaping the theoretical perspective of my research and the concept of inclusive practices I adopted. Here I consider how educational practices informed by sociocultural theories can meet the learning needs of children with autism and help them increase their participation in academic and social activities in mainstream classes. In addition, I outline how sociocultural concepts and research contributed to the critical perspective on the one size fits all instructional practice of mainstream classrooms.

**Sociocultural concepts of learning and the notion of inclusive practices**

Educational practices based on sociocultural concepts of learning have the potential to fit the learning needs of learners with autism in more than one way. The concept of the ZPD posits that learning should be based on the individual needs and levels of ability of learners. This is critically important for children with autism in mainstream classes where instruction is designed to fit the needs of typically developing children, but not those of learners with atypical development.

The concept of learning central to the theory of ZPD, and also those developed by Rogoff, Lave and Wenger, refer to a process that is more inclusive of different ways of learning than the learning process in mainstream classes, which relies heavily on direct instruction as well as the attention span, sensory, cognitive and communication abilities of typical children. As has been discussed in this section, sociocultural perspectives emphasize the importance of learning based on practice, that knowledge should be situated in context, and that intersubjectivity and shared thinking among members of the learning community, as well as increasing participation of learners should characterize the learning process. These elements can make the learning process inclusive of a variety of ways of learning, resources and activities. Also, in my experience,
using children’s interests to guide them to become engaged in the learning process is effective for children with autism, whose difficulties with implicit learning and cognitive processing can be helped by engaging them through topics and subjects they are knowledgeable about and interested in.

Guidance is the key instructional approach in sociocultural perspectives. Guidance can respond to the need of students with autism to learn certain skills and abilities through explicit teaching. Guidance can provide extensive interaction that can include modeling, scaffolding, and providing regular feedback, cues and other tools to make instruction explicit, thus addressing these learners’ difficulties with implicit learning. Compared with guidance, typical classroom instruction is characterized by rigid, limited and hierarchical communication between teacher and students, and mostly individual work, and thus intensive interactions and opportunities to make the learning process more explicit are provided to a much lesser extent. Vygotsky’s concept of semiotic mediation, conceptualizing the development of language and cognitive capacities in interaction with each other, relies on guidance as well. Children with autism have difficulties with cognitive processing abilities and abstract language, and guided and focused interactions based on this concept seem appropriate in helping them in these areas.

Practices embracing sociocultural concepts generally favour group work and projects as opposed to individual learning. Active participation, interaction and shared focus with other learners, as well as engagement in practical activities, underlie a learning process that is shared with and involves others. Learning in groups can enhance the opportunities of children with autism to learn and generalize those social skills and abilities with which they often struggle, since in this setting, participation, shared thinking, problem solving and intersubjectivity can be facilitated and supported through guidance. This particular developmental and learning need is hard to attend to in the unstructured, child-run social activities, and mostly individual learning activities of mainstream classes.

In sum, practices drawing on sociocultural concepts can potentially meet the learning needs of children with autism by adapting academic content and instructional strategies to their ways of learning and needs, as well as by enhancing their opportunities to participate and interact with typical peers. This analysis is supported by some studies that pointed out the effectiveness of
sociocultural concepts and practices for students with special needs. Campione, Brown, Ferrara and Bryant (1984) and Brown and Ferrera (1985) underlined the importance of interactive learning environments for children with special needs, as many of these students need more guidance and input in order to learn than their typical peers do. They also need assistance in order to transfer and generalize learned skills in other situations and settings. These researchers pointed out also that static learning tests looking only at what children are able to do independently and unaided, can drastically underestimate these learners’ potential. Their research revealed that students performing poorly on standard tests can do much better when appropriate intervention is provided.

While sociocultural concepts provide various tools to teach skills, develop abilities, and support participation in the mainstream classroom, they can be implemented as comprehensive academic activities as well. As discussed earlier, the model of the community of learners (COL) studied by Rogoff is an example of the systematic implementation of sociocultural principles in the form of academic projects for all learners. The learning process in the COL model is based on guidance, and the learning activities are inclusive of a wider range of ways of learning than ordinarily implemented in the mainstream classroom. Hence, in academic activities based on the COL model adapted learning for students with autism could take place in highly inclusive settings, where learning in the zone of proximal development could take place through participation in shared activities with others. In contrast, the instructional practice of the mainstream classroom does not usually provide learning opportunities and settings in which adapted learning based on individual needs and facilitated participation and social interactions can be integrated to such a high degree.

**Perspectives on the “one size fits all” teaching approach of mainstream schools**

Rogoff’s description of the adult-run learning model and the concept of teaching curriculum versus learning curriculum, elaborated by Lave and Wenger, both describe the approach to teaching dominant in schools across in North America, that has been referred to in this study as the one size fits all approach to instruction. This term is appropriate from the perspective of this inquiry because the essential characteristic of the instruction in mainstream schools that I have observed is being based on the presumed development, ways of learning
and abilities of typically developing children, being designed to fit their needs, and used more or less indiscriminately for all learners. Since this approach often does not fit the learning needs of children with atypical development, who are the focus of this study, I take a critical perspective on this dominant teaching approach of mainstream schools.

Although Rogoff, Lave and Wenger’s concepts are critical of the dominant approach as well, it is important to note that their criticism does not come from the exact same perspective as mine. These authors critique dominant approaches not because they impose a single model on all learners, but because, this dominant model is based on questionable concepts and assumptions about learning. They suggest that it does not provide effective and authentic learning for any learner, not only for those who do not fit patterns of typical development. In other words, these authors hold that the dominant teaching model of mainstream schools is not the best teaching practice, not only for some, but for anybody.

However, this line of sociocultural critique and my view are not contradictory; they only represent different points of view. From the perspective of students with atypical ways of learning and needs, the dominant teaching approach in mainstream schools hinders their participation and learning because it is designed to fit the presumed developmental and learning needs of typical children.

Other authors formulated similar criticisms as well. Toohey’s research (2000) on English learners in a mainstream school described how mainstream teaching practices start individualizing the learning process very early through their structures, instructional practices and methods of evaluation. The rules of working individually with one’s own resources and ideas, and participating in only accepted forms of communication lead many students to undesirable rankings, positions, and identity, as well as to missing out on participation and learning opportunities. Varenne and Mc Dermott’s work (1995), discussed earlier in relation with the sociological models of disabilities, pointed out similar mechanisms when they looked at the interaction processes that make certain abilities and lack of abilities visible. They showed how certain set-ups and interactions make some students look disabled.
Literature Review and Theoretical Framework

**REVIEW**

This chapter discussed the main components of the theoretical framework and the context of my research. This section briefly reviews each of these components and their significance for the study.

**Special education**

The field of special education is an important part of the context of this study insofar as it is formally recognized to educate students with special needs. Its perspectives and practices, informed by the medical model of disabilities, have been widely criticized from epistemological and sociological perspectives. Sociological approaches are of significance for the study as they conceptualize students with special needs as partly created by social and cultural arrangements. Furthermore, sociological models of disability that balance the dichotomy of biological impairments and social and cultural arrangements are particularly relevant as they do not reduce the phenomenon to social factors alone. I find such models most useful and compelling because they view the participation of children with autism in mainstream classes as affected by atypical development and learning needs on one hand and instructional practices and arrangements designed for the needs of typically developing children on the other hand.

**Labelling of students with atypical needs in education**

Labelling students with atypical learning needs in education is a pervasive and established practice, and another main component in the context of the research. The practice has been extensively criticized, inspired in significant part by sociological analysis of labelling. The rejection of the medical view inherent in the practice, the concept of societal reaction, and the effects of labels on individuals’ identity and social relations are the main elements of the sociological critique applied to the analysis of the situation of labelled students in schools. However, there are controversies around the effects of labels used in education and research shows also that labels do not necessarily have a deterministic effect on the identity of students with special needs. Goffman’s analysis of stigma conceptualizes the labelling mechanism without labels. Similar to Gottlieb and Toohey’s studies, his perspective shows that formal labelling is not the only practice in education that leads to exclusion and other
negative effects associated with labelling. Goffman’s analysis also stresses the importance of interactions between labelled individuals and others in order to reduce the negative effects of labels, suggesting that inclusive practices in schools might have a positive impact as well in this regard.

**The concept of inclusion of students with atypical needs in mainstream education**

The concept of inclusion of students with special needs in mainstream schools has been shown as generally beneficial for these learners as opposed to special education practices that tend to teach these students separately from peers. However, diverse populations benefit from inclusion to varying extents. The policy of the *least restrictive environment* in the United States and similar laws in Canadian provinces and territories provide the legal background for the mainstream classroom as first placement option for students with special needs. This legal framework and the continuum of services helped institutional education in North America move toward the desegregation of schools in terms of abilities and learning needs. Yet, as the full inclusionist movement and data on the inclusion of students with special needs in mainstream schools show, the implementation of the policy has encountered problems. These problems and the debates between various stakeholders in the field, as well as the shifts in the concept of inclusion, reveal that integrating students with atypical needs into the practice of mainstream schools cannot be done through a general policy. In this context, my study attempts to contribute to our understanding of practices that help the learning and participation of students with atypical needs in mainstream education.

**Autism Spectrum Disorders**

Autism Spectrum Disorders are associated with atypical development in certain parts of the brain, which results in difficulties in cognitive processing and significant challenges with academic and social participation in mainstream schools. Educational practices specifically designed for learners with autism are systematic, consistent; they address their challenges with cognitive processing and implicit learning, and are adjusted to their individual learning levels.
My research recognizes the physiological aspects (under-connectivity between certain parts of the brain) and neurological aspects (difficulties with cognitive processing) of ASD; however, based on the data collected for this research and inspired by the studies of Varenne and McDermott (1995), Happe (1999) and Grandin (2006), I take a perspective in which the medical view of autism is not central and which is not focused on deficits. From this perspective, people with autism have unique brain architecture that entails both challenges and benefits in terms of abilities, learning and participation in the world designed and organized by and for “neurotypical” people. I discuss this perspective further in the last chapter from the point of view of its implications for educational practice.

Sociocultural concepts of learning and development
Sociocultural concepts of learning emphasize the importance of the zone of proximal development that includes learners’ individual ability and skill levels, ways of learning and needs. Engagement, interest, active and increasing participation, shared focus and the identity of learners are central in this theoretical framework. Knowledge and learning are rooted in context and social practice in this perspective, which uses guidance as instructional approach. Guided participation and interactions characterize the learning process.

Practices based on these concepts hold great potential for meeting the developmental and learning needs of students with autism that are not commonly met in the one size fits all instructional setting. The community of learners (COL) model suggests possibilities for meeting the needs of learners with autism. The sociocultural concepts and research of Rogoff, Lave, Wenger, and Toohey provide a critical perspective on dominant instructional approaches and practices of mainstream schools in North America. Their work contributed importantly to the conceptualization of the present study on strengthening the educational experiences of two children with autism in a mainstream school.
CHAPTER 3
RESEARCH METHODOLOGY

To examine inclusive practices that I employed in my efforts to increase the participation of the two focal students of my study, I conducted an ethnographic participant observation and action research in my position as the full-time, regular student support worker for the focal students. This period of observation and action research lasted two school terms (seven months) from September 2008 to March 2009. During this time I observed and recorded data on the participation of the focal students in the academic and social activities of their classes and on the various practices I implemented to help them. As well, I introduced an innovation implementing academic projects based on the model of the *community of learners* (Rogoff, 1994, 1996) for the focal students and some of their peers. The goal of this action research was to observe how this particular teaching approach and setting, systematically integrating sociocultural concepts of learning into a comprehensive practice, might support the academic and social participation of the focal students, and how it could be implemented within a mainstream school.

The first section of this chapter reviews the ethnographic approach to research in social sciences. The aspects and methods of ethnographic approach that were appropriate for the research site and my position as researcher are discussed in the second section. The third section reviews key components of the process of the data collection, specifically the position of the student support worker, information on the focal children of the study, and the types of data collected for the research. The fourth section discusses issues pertaining to the analysis and interpretation of the data, particularly the dilemmas associated with my dual positioning as researcher and student support worker. This section also examines issues of reflexivity, which were critical to reduce the effects of potential sources of bias in the analysis and interpretation of the data. These sources of
bias were the social processes that shaped my perception and access to the data, as well as the epistemological and theoretical components of the research.

**ETHNOGRAPHY IN SOCIOLOGICAL RESEARCH**

This section focuses on ethnography as an approach to research in social sciences. Qualitative methods in social sciences are briefly discussed first, then ethnography, understood as an approach to and methods of research are defined. The last part of the section reviews critiques of the ethnographic approach, focusing on post-modern criticism in particular as it has particular relevance for the study.

The importance of methods in social sciences

The disciplines that have society and culture for objectives of inquiry — sociology, anthropology (or ethnology), and, more recently, feminist and cultural studies — were born after two main groups of disciplines were already established: the humanities and the natural sciences. Brewer (2000) argued that the social sciences took some elements from both groups as they modeled their research methods on those used in natural sciences, while their subject matter was closer to the field of interest of the humanities. Research methodology became the distinctive feature of social sciences as it offered formally accepted scientific legitimacy. As Brewer put it, method had come to be a critical element in the identity of social sciences. Therefore, the debates around research methods in social sciences concern both the legitimacy and the epistemology of these disciplines.

The ethnographic method of research was developed by two main sources, the works of British anthropologists like Malinowski (1922, 1967) and Evans-Pritchard (1937) who studied people in the colonies of the British Empire, and the Chicago School of Sociology that used qualitative methods to research marginalized groups of the modern, industrial and urban society (Brewer, 2000). Hence, the ethnographic method has been used by researchers to study their own societies from the beginning, and it did not remain limited to inquiries involving groups with languages and cultures outside of Europe and North America.

Early sociology in Europe had engaged in qualitative, ethnographic type of inquiries with the works of Max Weber (1968) and Georg Simmel (1980) in
the 19th and the early 20th centuries. Weber’s sociology is commonly defined as comprehensive sociology, meaning that it aims to comprehend the meanings attached to social phenomena by the individuals involved in and affected by them. In contrast, the sociology of Durkheim, another important figure in early European sociology, is referred to as explicative sociology as it focused on explaining social facts by going beyond the meanings and understandings of lay people in order to discover structural causes that are either inaccessible for or are distorted in the understandings and meanings of the lay person (Aron, 1967). Thus a close look at the history of the discipline reveals that the limitations of quantitative methods were expressed from early on. It was present in German sociology in the classical period of the discipline and it appeared in modern sociology in America to become an important tendency represented by symbolic interactionism, ethnomethodology, feminist and ethnic studies.

Ethnography as approach and methods
According to Brewer (2000) ethnography studies people in their natural settings, it uses techniques that capture social meanings and ordinary activities and involves the direct participation of the researcher in the setting and the activities, and it requires systematic data collection with no external meaning imposed on it. Brewer also argued that ethnography is a style of research as opposed to being a method, pointing out that ethnography has its distinctive objectives on one hand, and its own approach to collecting information on the other hand. Thus, according to this definition, ethnography is more than a particular technique to collect data; it is also a methodological framework incorporating theoretical perspectives on what should be studied and how. In Hammersley and Atkinson’s (1995) view, ethnography is a set of methods, which typically involve that researchers participate for some time in the groups they study, either in an overt or covert manner, observing the everyday life of the members, listening to them, watching them and communicating with them in order to collect any available data that is relevant for the focus of the research.

Brewer (2000) argued that the terms of ethnography and ethnographic method have come to refer to a set of methods and a general approach to research and understanding society. He also pointed out that participant observation, qualitative research, and fieldwork are all used as synonyms of
ethnography. Therefore, the term ethnographic approach in the broad sense described above is used here, and ethnography is understood as a general and distinctive approach to study the social and cultural world, and a set of methods that are the appropriate tools for this approach.

Critiques of the ethnographic approach
The ethnographic approach to research has stirred criticism from several directions. Besides simplistic and common-sense views that compared ethnography with journalism or storytelling, there have been two main and more serious critiques of the approach. One line of criticism came from social science researchers embracing quantitative methodology and the other has stemmed from postmodern philosophy (Brewer, 2000).

According to Hammersley and Atkinson (1995), positivism in philosophy, and the movement of “logical positivism” in particular, had significant influence on social sciences, advancing experimental and survey research and quantitative forms of analyzing data. Mainstream sociology that used quantitative methods questioned ethnography on three main points (Brewer, 2000). First, the role of the researcher in ethnography involves participation, which is the opposite of the neutral and detached role claimed by natural scientists. Second, data collection in ethnographic research is less structured, more flexible and open-ended than in quantitative research. Finally, ethnography describes and analyzes social phenomena by using natural language, considered subjective by quantitative research, which aims for neutral and objective terminology. This opposition between quantitative and qualitative techniques was not present in social sciences from the beginning Hammersley and Atkinson (1995) argued, citing nineteenth century researchers and the Chicago School that used quantitative and qualitative methods side by side. Nonetheless, ethnography was put on the defensive and had to address the issues raised by the critiques.

There were two main directions in the responses by ethnographers to the critique formulated by quantitative social science researchers. Some researchers (Denzin and Lincoln, 1998; Fetterman, 1998) reacted by refining the rules of ethnographic research so they are more in line with the scientific rigor of natural sciences. This scientific approach to ethnography proposed to move from the flexible set of rules that characterized the ethnographic approach until
then toward formalized procedures of ethnographic data collection and analysis. The other reaction — *humanistic ethnography* (Hughes, 1990) — was the opposite of the first one and asserted that ethnographic methods are appropriate tools to understand social and cultural reality. This assertion implied a philosophical view, represented by researchers such as Blumer (1969), Goffman (1961) and, more recently, Holstein and Gubrium (1998), claiming that humans are active and knowledgeable in constructing their world.

I take the latter perspective in my research and reject the former approach, which claims that ethnographic research must use formalized procedures instead of flexible set of methods in order to produce valid results. I consider that in qualitative research particular methods can and should be used flexibly because research projects can be very different one from another in terms of settings and populations, the relationship of the researchers to these, and the nature of the issues that are investigated. In other words, the diversity and complexity of the social and cultural aspects inherent in any ethnographic research actively shape the relationships between the researcher on one hand and the population he or she studies and the settings where the investigation takes place, on the other hand. These complex relationships produce a great variety of situations where obtaining relevant information requires flexibility in the choice of methods, sources of data, approaches and the design of the research process, and resist formalized or predetermined procedures of investigation. However, I also recognize that qualitative research, including ethnography, needs to work toward the validity of its results, even if not through formalized procedures of research, but rather through reflexivity. I discuss reflexivity further in the chapter in the context of my research.

The other critique of ethnography was inspired by the postmodern philosophies of Lyotard, Foucault and Derrida (Brewer, 2000; Aunger, 2004; Davies, 1999). Postmodern criticism of ethnography was more fundamental than that of the quantitative social sciences insofar as it has rejected the whole dualistic model of humanities versus natural sciences. The postmodern critique deconstructed the dichotomy of these traditionally opposing models of knowledge production to show that numbers and meanings are not incompatible, and, as well, it rejected both the humanistic and the scientific approaches to ethnography (Brewer, 2000).
The scientific approach to ethnography is problematic for postmodern thought for its claim to produce objective knowledge. On the other hand, from the postmodernist point of view, humanistic ethnography cannot claim a privileged access to the social and cultural reality of those whom it studies, a position Hammersley (1990, 1992) called “naive realism”. The attempt of ethnographers to describe and analyze social and cultural worlds from inside is questionable for the postmodern perspective, because this intent neglects the theoretical biases embedded in the assumptions and choices of the researcher, and also the social processes that necessarily affect the research. Drawing on Dey (1993) and Hammersley (1990), Brewer argued that researchers produce their data by making choices regarding the setting, methods and approaches of their research, thus they are not neutral or detached, and, therefore, all ethnographic investigation is subjective and influenced by cultural and personal constructs.

Authors such as Clifford (1983) and Geertz (1988), whom Aunger (2004) referred to as “textualists”, were inspired by the hermeneutic and deconstructionist traditions of European social theory and looked at classic ethnographies as texts in order to examine how these documents create objective representations of remote cultures that are unfamiliar to the readers. Exploring the ways in which classic ethnographers’ experiences with the groups and settings they observed were constructed as ethnographic reports, they found that these ethnographies used linguistic tools to obscure the uncertain or subjective nature of the accounts of the researchers (Aunger, 2004, p. 4). Ethnographers responded in a variety of ways to the postmodern critique; some produced individually highly reflexive works to account for the subjective experience of the fieldwork, while others made efforts to minimize the authorial voice over their research by making their interpretations appear as just one perspective with no claim to validity, using transcripts extensively, or by including multiple perspectives through the presentation of sources such as photographs and poetry without ordering or evaluating these sources (Davies, 1999, pp. 15–16).

Despite these attempts to overcome or fix the shortcomings of ethnography in terms of its ability to describe and analyze cultures, the postmodern critique has successfully undermined ethnographers’ claim of authority to represent a hegemonic truth about the phenomena they study. Geertz concluded (as cited in
Aunger, 2004) that ethnographic accounts “are the describer’s descriptions, not those of the described” (Geertz, 1988, p. 143) and Clifford (1986) suggested that single viewpoints on culture are necessarily contradictory since ethnographic reports are determined by the cultural, institutional, political and historical contexts and the rhetorical tools of their authors.

Postmodern criticism of ethnography led to what Brewer (2000) called the crisis of representation and Aunger (2004) termed the crisis in confidence provoked by the questioned ability of the ethnographic approach to describe and analyze its objects in a way that produces valid knowledge. Further developments of the discipline reveal that ethnography has overcome postmodern and other criticisms by adopting a critical approach, principles of rigorous practice, reflexivity (Brewer, 2000). The post-modern critique of ethnography is relevant for my study as theoretical biases and social processes could potentially affect the research. Reflexivity was applied to reduce their effects on the findings and their interpretation. Reflexivity is further discussed in relation to the topics of data and interpretation that are dealt with in the last section of the chapter.

**ETHNOGRAPHIC APPROACH FOR AN EXAMINATION OF INCLUSIVE PRACTICES IN THE COLLECTIVE ACTION OF SCHOOLS**

This section discusses three key components of the procedure of the research. First, I examine the process through which the focus of the inquiry — inclusive practices for learners with atypical needs in mainstream schools — was formed. Then the settings and timeframes of the data collection — the unit of analysis — are described in theoretical terms and in the case of this research. The last part of the section focuses on participant observation, which was the specific ethnographic method used to collect data.

**Foreshadowed problems and research questions**

As in any research, the first step is formulating some questions or issues that need to be explored by the methods chosen for their appropriateness to the research objective. Using Malinowski’s term of foreshadowed problems, Hammersley and Atkinson (1995) argued that knowledge of the theories and problems of a field is a good starting point, and this does not necessarily mean that the researcher has preconceived ideas. While the authors focused on broad issues of ethnography, their argument is considered here in the particular
context of the school, with its unique placement in the larger society and its own daily organization and practices.

The ethnographic approach was originally designed for outsiders to explore a group with whom they had no previous knowledge or experience. This conception may have worked in the early period of ethnography when pre-industrial cultures were explored and neither previous knowledge, nor experiences were present to complicate the position of the researcher. However, in most cases today this is no longer the situation given that a great deal of information and theory has been accumulated by anthropology and sociology. It is also impossible to remain unaffected by this body of knowledge when someone decides to do ethnographic work since this decision is usually taken as part of academic studies.

When undertaking this research, I was already familiar with a number of theoretical models and concepts that explain different aspects of the phenomena that I studied, and with the school site itself. Theoretical immersion and experience in a field does not make research problematic as long as it is taken into account appropriately, both at the beginning of fieldwork and after, when the data is analyzed. Hammersley and Atkinson (1995) suggested that foreshadowed problems must be turned into research questions, a process that can be done in two ways. They cited studies that started out from theoretical problems and went on extending and refining theories in a new context, and other research that went from the phenomenon to theory. In their analysis they call concrete problems substantive or topical and theoretical problems formal or analytical (Hammersley and Atkinson, 1995, p. 24-30). Hammersley and Atkinson argued that one can go in either direction in order to formulate research questions.

My inquiry incorporates both ways of formulating research questions. My interest in education started with analytical problems. During my undergraduate studies in sociology in France, I became interested in the concepts and theories of Pierre Bourdieu concerning the role of the education system in reproducing social inequalities. At the same time, I always felt that Bourdieu’s conception was limiting insofar as it is too focused on sources of educational inequality that are based on social class and structure, such as the lack or possession of appropriate cultural and symbolic capital. I considered that Bourdieu’s theory did not account very well for the difficulties of some students, whose educational careers cannot be explained solely in terms of social
structure. Later, during graduate studies in the US, symbolic interactionist and feminist sociological theories further shaped my thinking by providing another set of theoretical frameworks that helped me conceptualize dynamics affecting students in institutional education. After returning to my home country, Hungary, I started working with teachers in a teacher education program and with children in an elementary school. This experience led me to formulate new questions that were substantive, although they were also framed by symbolic interactionist theory. These questions revolved around educators and schools’ roles in constructing and reproducing social and cultural reality and shaping students’ identities. Further experiences with children with special needs in schools and other settings, and sociocultural perspectives on development and learning, helped me refine my interests and formulate questions that were both substantive and analytical, leading up to the focus of this research.

**Unit of analysis: activity**

In ethnographic investigation researchers always have to choose settings and timeframes for data collection and it is critical that these units or segments of reality contain the information necessary for analysis. The concepts of Leont’ev presented by Cole (1985), Becker (1963) and Mehan (1979) provided a theoretical perspective on the unit of analysis that is appropriate for a research conducted in school.

Leont’ev analyzed the problems of method and analysis in the ethnographic work of Russian researchers who tried to do ethnographic studies among different ethnic groups living in the Soviet Union. Cole (1985), discussing the work of Leont’ev, argued that he proposed different activities of the group for the focus of ethnographic research in order to retrieve systematic and useful data that could be the basis of comparative research. Leont’ev’s concept of *activity* refers to a system of actions coordinated by the system of social relations revealing the condition of the whole (Cole, 1985). Activities that are relevant give insights in the structures, hierarchies, roles, dynamics, meanings, interests and values that define the group. The logical consequence of Leont’ev’s concept is that some units of analysis may not reveal certain important characteristics of a community, thus they may fail to capture the system of social relations that characterizes the group as a whole.
Research Methodology

Becker (1973) had a similar conception when he suggested that the object of sociology should be *collective action* (Becker, 1973, p. 182-189). He emphasized both words of the term as they represented an important shift of interest from earlier objects of sociological research. Becker, whose theoretical background was symbolic interactionism, was interested in studying interactions understood as more than exchanges of individual actions; he wanted to look at the ongoing negotiations and regulations of socially and culturally constructed meanings in interactions in order to understand how collective action shapes social meanings. For Becker, as for symbolic interactionists in general, the most relevant unit of observation and analysis is in the realm of the collective: collective meanings, public rituals of conversation and behaviour, the workings of institutions, identities, and processes of negotiation of meanings. The emphasis on action is not less important and it expresses Becker’s position within the methodological debate of social sciences. For symbolic interactionism, as for anybody embracing an ethnographic approach, relevant information about communities and culture comes from the dynamics of actions and communications among its members instead of static and structural characteristics of the group or individuals.

Mehan’s ethnographic approach was based on yet another similar idea; he argued that ethnographic research in schools should study the *social structuring activities* (Mehan, 1979). He found that earlier research had tried either to describe recurring patterns of action as in field studies, or to capture correlations as did quantitative research. He wanted to go beyond simple description of patterns and capturing of correlations; he sought to explore the ways in which activities in schools make social constraints come about. Mehan argued that although ethnomethodology had rejected sociology’s earlier exclusive interest in structures, it also went to the other extreme and looked only at practices, accounts and meanings. Mehan proposed to overcome these two extremes by what he called *constitutive ethnography*, and to carry out ethnographic research in schools in order to reveal structures and structuring together instead of separating them.

These concepts are helpful both as a theoretical perspective on institutional education and for ethnographic study of the activities and practices of educational institutions. Institutional education is an activity (Leont’ev) or collective action (Becker), structured and shaped by modern societies. Also, this
collective action structures its community — the students — through its various practices as Mehan claimed. The activity of institutional education expresses the important ideals and values of society, its dominant views and models of development, learning, knowledge, education, as well as its organizational structures and hierarchies. It may be, therefore, that in the activity of schooling one can grasp the conditions of the whole community, as suggested by Leont’ev.

These perspectives offered a conceptual framework to analyze the activities of schools and classrooms, and analyze how these support or hinder the participation and learning of students with atypical ways of learning and needs. The concepts of these authors also provided a framework to examine how other practices could be implemented within the activity of schools that supported the participation of the focal students who were often driven to the margins of learning and social activities in the mainstream class.

While activity is recognized in this study as a useful and appropriate unit of analysis for ethnographic research, it is important to note that it makes data collection in a school site somewhat problematic. Since the activity in school lasts all day, researchers have, typically, to find segments within the activity that are representative of the whole. Mehan (1979) selected about fifteen hours of observation that were reduced to nine hours and divided into *lessons* as units. As his example shows, choosing sub units in the overall unit of analysis can be done without losing relevant data, but it must be done carefully. He decided to choose lessons for units in order to take into account the perspective of the participants, thus following an important principle of ethnographic approach.

Finding units of research that reflect the unit of analysis — the activity of schooling — may be difficult when researchers spend only limited amounts of time in schools. However, in this research this was not an issue as I worked full time at the site. I still had to make sure that the sub units that I observed and where I took data within the overall activity represented a balanced picture of all the activities and settings the students were involved in, including instruction, different academic activities, unstructured times such as recess and lunch, and tests.
**Participant observation**

Observation is the most typically used method in ethnography (Brewer, 2000). Researchers can observe settings by taking on different roles that can range from remaining a complete outsider and observant only, without any interaction with the members of the group, to becoming an insider and fully participating in the community. In most cases there is some level of participation and the role is somewhere between these two extremes. Participant observation gives the opportunity to watch and talk with members of the group, to discover their interpretations and the meanings of their activities by experiencing and sharing their life.

Brewer warns that it is important to maintain a balance between two extremes, becoming a complete insider in the group on one hand, and remaining an outsider, on the other. The first extreme can lead to losing the perspective of the research; the second can keep the researcher away from important information. Brewer classifies the different roles researchers can take on according to whether the setting and the role are familiar to them. Pure observant participation in his classification means that the setting and the role are familiar to the researcher or when an existing role is used to research a familiar setting. This is the role I took on as researcher since I was familiar with the research site and had an existing role that did not change with the research. My formal position as student support worker, from which I collected the data, is discussed in the next section.

Doing research in a familiar setting as pure observant participation has some limitations (Brewer, 2000; Hammersley and Atkinson, 1995). Brewer said that the limits of the role set limits to the observation, too, and Hammersley and Atkinson suggested that in complete participation — which corresponds to Brewer’s pure observant participation — it is hard to suspend one’s preconceptions, whether they originate from social sciences or experience. For Brewer, another difficulty is that research done in this role can be highly autobiographical as it involves an existing and familiar role and setting. Nevertheless, generalizations still can be made if the autobiographical element is recognized, and the grounds of generalizations are properly identified through reflexivity.
DATA COLLECTED ON THE FOCAL STUDENTS
OF THE STUDY THROUGH PARTICIPANT OBSERVATION
FROM THE POSITION OF STUDENT SUPPORT WORKER

This section describes the three main aspects of the participant observation
collected for the study. First, the role of the student support worker is
discussed as data was collected from this position. Relevant basic information
on the focal students of the research is reviewed in the second part of the
section. The third part describes the data gathered in the study.

The position of the student support worker

As a student support worker (SSW), I belong to the “support staff” category
within the school system, working with classroom and resource teachers to
help students with special needs to follow their individual education plans
(IEP). This position — as its title suggests — is an assistant position, meant to
help students under the directions of resource, special education and classroom
teachers. Employees in this position are called “special education assistants” in
many school districts, although the specific job title may slightly vary from
district to district.

Certificate programs to train special education assistants in certain
colleges are available in British Columbia. Due to the high demand for special
education assistants, school districts are not always in the position to require
training and hire candidates who have completed only part of such a program
or have other related training or experience. I have completed most of the
coursework of the “Special Education Teacher Assistant” program at Capilano
University, located in the Lower Mainland of British Columbia. This particular
program takes two years and offers a wide range of knowledge and skills
related to various special needs, developmental conditions, their implications
for learning, development and socialization in general and in schools, and the
different supports children with special needs require. The programs in other
colleges that train special education assistants are similar in terms of course
content and length. The courses in the program at Capilano University put
great emphasis on the importance of inclusion, and it also had a separate
course dedicated to Autism Spectrum Disorders in response to the growing
number of students identified with this condition in recent years.
The main responsibility of special education assistants is assisting and supporting students and teachers with everything they might need to learn and teach, including preparing, adapting and designing learning materials, tools and activities; teaching students one on one or in small groups; supervising and “shadowing”; facilitating peer interaction and participation; and also providing health or personal care if needed.

Special education assistants are usually involved in the construction of the IEP by providing input and feedback to teachers, who ultimately are responsible for writing them. Specific tasks vary according to the needs of the student and the goals and strategies outlined in the IEP. In my case, because both of my students were in the French Immersion program, my knowledge of French was essential in performing my work. The role of special education assistants vary in terms of levels of autonomy and responsibilities. In some positions they execute tasks under close direction and supervision of teachers, while in other positions they are expected to be more independent and creative, and take on more responsibilities. The variation in levels of autonomy can be explained, again, by the student’s needs and IEP, but also by the philosophies, values, and styles of cooperation of the teachers and administrators.

This position offers great opportunities to effectively facilitate the participation of students with atypical needs and ways of learning in the academic and social activities of their classes, and to explore inclusive practices and their implementation. While duties and responsibilities may vary depending on the needs of the assigned student, during my experiences in several schools and assignments over six years, I saw that many special education assistants had the opportunity to be creative, take on responsibilities and initiatives, and make a difference, even if they did not have any formal decision taking or leadership role.

The leeway to be creative comes from several structural factors shaping the everyday work of special education assistants. The main one is that schools have inadequate funding, time and resources to dedicate to individual students, and, as a consequence, many assistants must be resourceful, creative, and initiate and educate themselves to design support. Also, they are the ones who spend extensive amounts of time with the students, whereas special education or resource teachers may see the students only an hour or two a week, and the classroom teachers’ time and energy are directed primarily to the class as a whole.
The focal students of the research
The focal students of the study — Robert and Sarah — attended the French Immersion program of their mainstream neighborhood elementary school when I conducted this research. I started working in the school as their regular student support worker in September 2006 when Robert started Grade 5 and Sarah started Grade 4. I supported them to the end of Grade 7. They were in two separate classes and I shared my time between them. Robert was diagnosed with high functioning autism and Sarah with Asperger’s Syndrome. Robert was new to the school, his family just moved to BC from another province. Neither he nor Sarah had IEPs in place; Robert because he was new to the district and Sarah because she had only recently been given support.

Longitudinal data
The length of the time I spent with the focal students — from Grades 4 and 5 to 7 — and the intensity of our relationship, sharing my time and attention between them every day from the start to the end of the school day for years, made it possible for me to engage in longitudinal research by collecting a great deal of information. I recorded various aspects of the students’ difficulties, ways of learning, participation and progress in forms of case notes and documents to communicate with teachers and parents in order to share information, discuss issues and incidents, reflect on and brainstorm goals and supports for the focal students. Thus the data I collected recorded the various difficulties the students had participating in the academic and social activities of their mainstream classrooms, the changes in their participation and the progress they made in various developmental areas, as well as the support and inclusive practices I designed and implemented to meet their needs and help them learn and socialize.

The study is based on two sets of data. One describes the general development of the focal children throughout the entire time when I supported them. It outlines how they progressed in different academic and developmental areas, how their participation changed and independence increased, their ways of learning, strengths, interests and the challenges they had, and the different supports and practices I implemented to help them. This general overview relies on my recollections, case notes and communications created over the course of the three and four years I spent respectively with Robert and Sarah.
Since I supported these students for a long period of time, I grew quite familiar with them and I could closely observe their participation and progress on a daily basis. I was involved with designing their IEPs, I communicated with their parents about their needs and progress, planned with the classroom teachers for their support, adapted learning activities and designed various academic and socialization activities to support their participation and learning. I was also extensively involved in monitoring their progress, communicating about it with the teachers and the parents, and recording it for their report cards. When I began working with them in 2006, I already knew that, at some point, they could become the focal students of my doctoral research. This anticipation and my intensive involvement in their lives at school made me able to establish, along the way and retrospectively, the general overview of their participation and progress, and use this data as recorded in case notes and various communications with teachers and parents for the research.

The other set of data consists of my ethnographic observations from September 2008 to March 2009. During this period I took notes on a regular basis of my efforts supporting the focal students through various practices that responded to their needs, ways of learning and aimed to help them participate and learn, as well as cope with the challenges school presented. Also, during this time I began a phase of action-research in which I implemented academic projects based on the community of learners model for them and some of their peers, and I observed and recorded in ethnographic notes how this model worked out for the students. This particular model is discussed in detail in the second chapter and its implementation is the central focus of the research.

These two sets of data, one on the students’ general development and the second with a more specific focus on support and the COL model and their responses to these, provided information to analyze and interpret, and to reach my goals for this study. The two sets of data are similar insofar as they are based on ethnographic participant observation inspired by the same questions and interests, but they are different from the point of view of the timeframe of the dynamics and patterns they describe and the amount of details they provide, as well as on my shifting activities as participant observer/action researcher. The general overview of the focal children’s progress throughout the years captures my view of long term processes and dynamics, while the
ethnographic notes encompassing two school terms give closer snapshots and more details of the daily and weekly events, dynamics and processes, as well as the activities and outcomes of the COL projects I devised and implemented.

**ANALYSIS, INTERPRETATION AND REFLEXIVITY**

This section discusses issues relating to the analysis of the longitudinal ethnographic data of the research. The procedure of analysis is briefly outlined and explained in the first part of the section, along with questions and dilemmas relating to the role of interpretation in qualitative research. The importance of reflexivity in general terms and in relation with this study is discussed in the second part.

**Analysis and interpretation of ethnographic data**

The data is presented and analyzed in the next chapter through sociocultural concepts of learning and those relevant to autism. These two areas of research provided the theoretical and analytical frameworks that helped conceptualize the challenges of the focal students with learning and participation in the academic and social activities of their classes, their development in these areas, and the practices that were designed and implemented to support their participation.

The observations that provided the data, their presentation and analysis through the relevant conceptual frameworks in the next chapter, as well as the reflections on the significance of the findings in the last chapter from the perspective of the key contextual and theoretical components of the study (outlined in the second chapter) are based on interpretation. Interpretation plays a varying role in the different stages of the research.

Qualitative research, including ethnographic approach, accepts interpretation and hermeneutics as useful and necessary methods to analyze ethnographic observations or discourses in interviews. As Fuchs (1992) explained, hermeneutics in social sciences has become stuck in the methodological debate, whereas in philosophy and other branches of the humanities it is accepted as the primary method for investigation and reflection. He cited Heidegger (1962), who had considered interpretation as the practice of the Being, meaning that hermeneutics is based ontologically and not methodologically. This position has implications for methods and analysis:
interpretations and meanings are not just indicators of a deeper social reality, but they are reality. Rejecting the positions of behaviorism considering interpretations and meanings as shadowy products of the black box of the mind, and also rejecting the Durkheimian tradition of sociology that regards interpretations as distortions of an underlying reality of social facts, Fuchs proposed to take interpretations seriously, and consider hermeneutics as a life form of social sciences rather than a methodology. It is important to make interpretations more reliable and less subjective by various tools and tricks as he suggested; nonetheless, he suggested as well that these tools and tricks we use to make interpretations more reliable should not be any different from those we use when we try to understand a person.

This study embraces the theoretical position of Fuchs on interpretation. The overall process of investigating the participation of the focal students in the activities and practices of mainstream institutional education and the practices that helped their participation relied on interpretation as stated earlier. Meanwhile, systematic reflexivity was important to reduce the potential subjectivity and bias originating from my dual positioning as researcher and support worker, the different social processes that influenced the data, and the theoretical and conceptual frameworks shaping the research questions.

**Reflexivity**
Reflexivity is a very relevant and important aspect of this research. Drawing on the classification of Stanley (1996), Brewer (2000) distinguished between descriptive and analytical reflexivity. The former means the awareness of and reflection on the social processes that influence data collection and, consequently, analysis. Reflexivity can counterbalance those effects by taking them into consideration so the potential sources of bias in the data and the analysis are minimized or eliminated. Reflexivity has become an important element in social research with the postmodern critique, and in ethnography it is especially important because it helps to respond not only to postmodern criticism, but also to the critiques that consider ethnographic research as methodologically less rigorous and reliable. Brewer argued that while descriptive reflexivity has become a norm of most ethnographic study, the other type, analytical reflexivity, is much less practiced. Analytical reflexivity concerns the reflection on the epistemological matters implicated in the
analysis. Being analytically reflexive requires an in depth and critical reflection on the processes of interpretation and knowledge claims that inform the researcher’s understanding and explanation of the data.

My dual positioning as support worker of the focal children and researcher/action researcher can be perceived as source of bias because it involves roles that are potentially in conflict with each other. The role of student support worker involved helping the focal students while as researcher/action researcher I tried to form a balanced picture of their participation in the mainstream classroom and how various practices I designed and implemented helped them. Borrowing a metaphor from the justice system, it could be claimed that I play the roles of the prosecution, defence, the jury and the judge at the same time, since I argue for the effectiveness of some practices (based on sociocultural concepts) as opposed to others (the mainstream ones) while I collected, recorded and presented the evidence, which I analyzed, interpreted and upon which I formulated conclusions.

I applied both types of reflexivity to reduce the potential effects of bias on the findings. Descriptive reflexivity helped me to distinguish between my roles as support worker and researcher, and stay aware of how the first role could be a source of bias for the second. Due to this reflexivity, as a researcher I could take a distance with my everyday work and detect social processes that influenced both my work with the students and my perception of it. First, I kept in mind that as support worker I could be tempted to perceive and interpret my practices as helpful for the students since helping was my role. This source of bias needed to be reduced by systematically taking a critical perspective and examining my work with the students without wanting to justify it as successful. Critically evaluating one’s practices is an important part of educators’ professional role, but when someone conducts research on his or her practices with students, this critical attitude and mindset are highly important.

This conflict of roles within my dual positioning may seem as a main source of bias. However, it interfered with producing unbiased data and analysis less than might be expected from an outside perspective. Since my goal as researcher was to produce sound research of practices that are effective for students with autism in mainstream schools, it was my best interest to aim for a balanced documentation of the participation of the focal students and the practices implemented to help them.
Descriptive reflexivity helped me become aware of other, less salient, social processes that shaped my perception of the participation of the focal children. The instructional practices, structure of work and the social dynamics in the mainstream classroom shaped my perception of the needs, abilities and participation of the focal children. The extensive and longitudinal data contributed to develop reflexivity as I could observe the students in many situations, dynamics and settings over long periods of time.

My relationship with one of the focal students affected her behavior at some point to an extent that was important to be aware of in the data and analysis. This is a dynamic that often develops to some degree in the relationship between support workers and students, especially when they have a long and close relationship, but in this case, unlike with the other focal student, it contributed significantly to her behaviours. Furthermore, the cooperation with the classroom teachers and parents also played a role in my perception of and practices with the students. These issues are addressed in the data analysis and the interpretation; thus not discussed here further.

Analytical reflexivity is also a critically important aspect of this research since a number of theoretical concepts are involved in it. As it was discussed in relation with the foreshadowed problems of the research, the focus of this study was shaped from the outset by several theoretical perspectives. In addition, a number of theoretical and contextual elements, reviewed in Chapter 2, are implicated in the topic. Therefore, analytical reflexivity in this research means the acknowledgement and critical evaluation of all these theoretical and contextual elements that shaped the overall process of the research from formulating the topic to analyzing and interpreting the data. As well, the multiple theoretical perspectives helped my practice of analytical reflexivity insofar as each element in the theoretical framework was considered in relation with the others and the data. This process was crucial in order to form critical positions on issues such as models of disability, the role of labelling shaping the participation of students versus other practices in education, models of inclusion, etc. Analytical reflexivity helped me remain conscious of the knowledge claims of the theories and concepts involved in the study, and reduce their potential to become sources of bias in the interpretation and analysis.
CHAPTER 4
DATA ANALYSIS

This chapter presents the findings of my longitudinal ethnographic research on practices that I designed and implemented in order to support the learning and participation of the focal students throughout their intermediate years in elementary school. The data is organized and discussed through key notions from research on autism and sociocultural theories of learning and development, which were reviewed in the Chapter 2. Research on autism provides the conceptual framework to describe the main traits of the condition, their implications for learning and socialization, as well as the characteristics of teaching approaches for children with autism. Sociocultural concepts of learning and development provide instructional approaches and practices that meet the specific ways of learning and needs of students with autism. Therefore, the data on the participation, learning and socialization of the focal children in their mainstream classes, and the practices that were implemented to support them, is presented through the concepts of these two bodies of research. In addition, the goal of this chapter is to describe the participation of the focal children in relation to their positioning in the classrooms, their learning profiles and the mainstream instructional practices of the classes.

The first section reviews the students’ learning profiles and the areas where they needed support with participation. Changes in the focal students’ academic and social participation from Grades 4 and 5 through 7 are discussed in the second section. The third section focuses on the various inclusive practices designed and implemented to support their learning and participation in the academic and social activities of their classes. The fourth section of the chapter presents the experiences of the implementation of academic projects based on the community of learners (COL) model. The section describes the projects, the participation in and responses of the focal students.
and some of their peers, and the experiences relating to the implementation and design of them.

The focal students attended the French Immersion program of their neighbourhood elementary school. In the French Immersion program of the Canadian elementary education system children learn and use the French language full time from kindergarten to Grade 3, and half time from Grade 4 to 7. There is an opinion among some educators that students with special learning needs should not be in French Immersion. However, learning and using another language does not necessarily make participation significantly more difficult for some students with atypical ways of learning and needs, and for some of them learning another language presents an opportunity to enhance their cognitive development and ability to take other perspectives. This was the case of the focal students of this study, too, and I supported them in this area when their classes did activities in French. The support they needed to learn to handle stressful situations and to socialize with peers was delivered in English, and the language used in the COL projects was English as well.

**Table 1: Overview of chapter sections**

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Focus of analysis</th>
<th>Data sources</th>
<th>Time frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section I</td>
<td>Focal students’ learning profiles and needs of support</td>
<td>• Interests, needs and ways of learning&lt;br&gt;• Difficulties with cognitive processing&lt;br&gt;• Social participation</td>
<td>Observations&lt;br&gt;Notes&lt;br&gt;Communications</td>
<td>First few months of my work</td>
</tr>
<tr>
<td>Section II</td>
<td>Changes in focal students’ participation in academic and social activities</td>
<td>• Academic learning&lt;br&gt;• Everyday routines&lt;br&gt;• Social participation</td>
<td>Observations&lt;br&gt;Notes&lt;br&gt;Communications</td>
<td>3–4 years</td>
</tr>
<tr>
<td>Section III</td>
<td>Implementation of inclusive practices</td>
<td>Practices relating to&lt;br&gt;• academic learning&lt;br&gt;• everyday routines&lt;br&gt;• social participation</td>
<td>Observations&lt;br&gt;Notes&lt;br&gt;Communications</td>
<td>3–4 years</td>
</tr>
<tr>
<td>Section IV</td>
<td>Implementation of the Community of Learners Model</td>
<td>• Focal students’ transformation of participation&lt;br&gt;• Peers’ transformation of participation&lt;br&gt;• ZPD, guidance, shared thinking and active engagement&lt;br&gt;• Experiences of implementing COL in a mainstream school</td>
<td>Observations&lt;br&gt;Notes&lt;br&gt;Activity plans&lt;br&gt;Student work</td>
<td>7 months</td>
</tr>
</tbody>
</table>
FOCAL STUDENTS’ LEARNING PROFILES AND NEEDS OF SUPPORT FOR LEARNING AND PARTICIPATION

This section describes the learning profiles of the focal children in terms of their ways of learning, needs and participation in their mainstream classrooms. It starts with a general and narrative-like introduction that captures my impressions of them based on observations during the first months I worked with them, pre-dating the implementation of the COL projects. The narrative overview in this and the second section, which focuses on changes in their participation across the years, attempt to provide the most salient observations of Robert and Sarah in order to convey the different patterns of participation, needs, interests and ways of learning these students had.

The rest of this section and the third section are organized around particular units of activity, as per the concepts of Leont’ev, Becker and Mehan discussed in Chapter 3. In this section such units of analysis are: the students’ participation and needs in academic activities, their needs for support with handling situations that caused stress to them, and their social participation in their classroom communities. Following the theoretical approach of the authors above, academic learning and socialization are the two major units of activity that structure and organize the participation of students in schools. From the perspective of the focal students, another relevant unit of analysis is their participation in the everyday routine of school that presents many stressful situations for children with autism and can be significantly more challenging for them than for typically developing children. In a similar way, the third section describes the inclusive practices implemented for the focal students organized according to these same units of activity, depending on whether these practices aimed to support academic learning, socialization or coping with the stressful situations of school routine.

First impressions of Robert and Sarah’s participation in their classes

Both focal students came from Caucasian and middle class backgrounds with working, professional parents and one younger sibling. Their families were open and cooperative in terms of supporting their children’s education and my efforts to help their participation.

When I started working with them I had had no information on these children; Robert was new to the school and Sarah started getting support that
year for the first time, thus she had not yet had an IEP in place. Therefore, other support workers had not had any experience with them I could have relied on and I had to become familiar with their needs and ways of learning on my own.

As I arrived at the school for the first time, I was introduced to Robert’s teacher by the principal and I had the impression that Robert urgently needed support as he participated very little and was also occasionally disruptive. When I arrived to the school the very first day, I went up to the office to introduce myself and the secretary called the principal right away, who led me to Robert’s class, and explained on the way that they were very happy to finally getting a support worker in the fourth week of school, because Robert really needed help, and they were afraid they had to wait even longer since there was a shortage of support workers who could speak French. I got the impression that it was some kind of urgency. Robert’s teacher was, indeed, concerned about him, and confirmed the impression I got from the principal that they considered the situation as urgent. As I started working in the class I could see that most activities, whether in French or English, did not engage Robert. He did very little in academic activities, sometimes did not do any work or gave mock answers on worksheets. For example, when he did not know the answer, or did not want to give the answer on French worksheets, he just wrote “pas”, and often drew on the worksheets as well. He often laid down on the floor or on his desk covering his ears and eyes, other times he flapped his hands or acted out imaginary fights. These appeared to be behaviours children with autism exhibit with varying intensity and frequency to meet their sensory needs. He also acted out when he found a situation stressful, which I describe later more in detail. He communicated very little with classmates or the teacher at the beginning. It took me a few months to become familiar with him and as he was getting help he started participating and I could better understand his interests, ways of learning, strengths and needs.

During the first couple of months I was asked to help Sarah with math, taught in English, only, so I assumed it was in this subject only that her needs were very different from her peers, and during other periods she could do what the class was doing on her own. At that time Robert seemed to be having more challenges with academic participation and behaviour, therefore I spent most of my days in his class. After a couple of months, when Robert had
become more independent and did not need close and intense support any more, I started going more often to Sarah’s class and gradually became more familiar with her ways of learning and participation, needs and challenges.

When supporting her in math I had already noticed that when Sarah finished her work she took a book from her desk and started reading, most often in English. When I went to her class during other periods I noticed that she did the same thing, whenever she had completed a task, or she thought she had completed, she put her work in her desk and started reading. She did not show her work to the teacher, she did not ask for help or make sure she was done. Until the teacher checked on her, she did not have to do corrections or continue working. I also discovered that on many assignments she got things done in a minimal way; most of the time she gave an answer, which was usually correct or close to, but always very brief, and she did not develop and elaborate to the extent required.

After I observed her over several months and became familiar with her ways of learning, participation and sensory needs, and also I learned that Sarah went to school for four years without getting any support, I thought that these habits were probably coping strategies for her. Reading may have been a calming activity for her in the overwhelming environment of the classroom, an escape from challenging and daunting tasks, and also a way to go unnoticed, which, combined with doing her work minimally and not showing it to the teacher, helped her to avoid interactions and having to make corrections and further develop her work. These coping strategies interfered with her participation in the class to a great extent and it took a lot of support over several years to change these habits.

Since Robert dealt with challenges and sensory overwhelm in a more visible and, from the teachers and peers’ point of view, more disruptive way, he was perceived by the teachers and, initially, also by me as needing more support. However, after I observed and helped these students for a few months in different settings I realized that their sensory needs, ways of learning, cognitive styles, interests, strengths and challenges, as well as the practices and organization of the mainstream classroom all contributed to shaping their behaviours and participation, and these factors produced similar, yet not the exact same needs and issues for them.
Participation in mainstream learning activities with atypical ways of learning, sensory needs and difficulties with cognitive processing

Both students had difficulties participating in a number of academic and social activities in both English and French throughout the three and four years I spent with them, although they significantly increased their participation and independence during that time. Since they had high functioning autism and Asperger’s syndrome their difficulties were similar, but, given the differences of combination and degree of symptoms within this complex condition, the particular challenges these students faced and the particular support they needed in order to learn and participate were somewhat different.

In-class writing assignments, or tasks with a writing component, whether in language arts or other subjects, could be challenging for both of the students. Intermediate students are typically required to complete such assignments mostly independently within the timeframe of a period (thirty to forty minutes), to show their work to the teacher after completing each step, and to ask for help if they need it. Various tasks may involve using their imagination in creative writing exercises, collecting and organizing information for non creative writing, and organizing the output into paragraphs.

Both focal students found many of these tasks difficult. One of many typical examples of these tasks was when, in Grade 5, Robert’s class had to write about what they would do with a limousine available to them for a whole day with a driver. Robert did not write anything while most of his peers enjoyed writing down their ideas in this assignment that required creativity and organization. He experienced similar blocks in other writing assignments, where not imagination but factual information, experiences or opinions had to be put into paragraphs. On one occasion he verbalized his experience as “writers’ block” and on another, after becoming frustrated as my efforts to help him formulate and organize his ideas did not succeed, he drew a big blank thought bubble to represent how he felt. Sarah had similar difficulties with these types of writing tasks as well. She either did not write anything as one time when, in Grade 4, they had to write about where they would like to go on vacation next time, why and what they would like to do. She did not get started and became frustrated and could only complete the task by following my step by step support. Other times she provided minimal information that showed she understood the task; however the students were expected to
provide significantly more detail. In creative writing assignments this meant that she wrote down a storyline without or with very basic descriptions and details about the motivation or plans of the characters. Another assignment, in Grade 5, aimed to test reading comprehension and described the story of a girl who immigrated to Canada from Ireland the last century and wanted to return because she missed her grandmother but did not have the means for the travel. Sarah gave very short but accurate answers consisting of one or a few words to the questions although she was supposed to answer in full sentences and provide details. Some questions were harder and asked about details that were not easy to find in the text or to which the answers were only implied and Sarah gave accurate answers to those questions as well, even if she did not elaborate to the extent required. This assignment showed Sarah’s abilities and challenges in a way that I saw in many other situations as well.

With difficulties of cognitive processing inherent in autism, such as using theory of mind and central coherence as well as executive function for organization, planning, memory and attention, most of these writing tasks were quite challenging for both students. In addition, Robert had some difficulties with the physical act of writing due to challenges with motor coordination.

In academic tasks that required following multiple steps, for example choosing a particular topic within a range of possibilities, collecting and organizing information, drawing or coloring a picture, finding some visual illustration, then writing a paragraph or two, both Robert and Sarah had difficulties transitioning from one task to the next one. When the process involved problem solving or choosing from several possible steps to continue, they often stopped and needed help. The lack of structure and the need to be flexible seemed challenging for both.

The focal students had quite different ways of learning and interests. Robert was strong at and enjoyed working with structures and categories where rules were clear, he loved science and math, and he was knowledgeable and understood abstract concepts in these areas better than many of his peers. Sarah liked visual sources and pictures, and narratives were very engaging for her. She had strong reading skills, but she had difficulties with abstract concepts and categories, whether they were taught in English or French, especially in science and social studies (for example “habitat” or “government”), which were not her areas of interest.
Both children had atypical sensory needs and sensitivities that interfered with their learning and participation in the classroom. The typical noises and movements of the classroom, as well as the requirement that the students sit and maintain focus for prescribed amounts of time on forms of instruction such as listening to the teacher, following a discussion or watching the overhead projector often did not match their sensory needs and abilities, so they got distracted, overwhelmed, or lost focus.

Robert found it hard to sit on his chair for longer periods and sometimes he needed to cover his head as if to shut out outside noises and stimulation while at times he also needed to satisfy his sensory needs for stimulation at other levels — running around, playing imaginary games. Sarah was very easily overwhelmed by the level of stimulation in the classroom, she was visually very distractible and she was prone to fatigue. In Grade 4 she could get very distracted by pictures on the wall or in a book, and sometimes I had to cover pictures in textbooks to help her keep her focus on the text. When reading or looking at visuals, she often became unaware of her surroundings and did not hear conversations that took place close to her. On the other hand, when she had to complete work she was not interested in, she had trouble focusing in the classroom as the noises and movements could be very distracting for her. Over the years, as I observed her in the classroom and in smaller and quieter environments, I came to the conclusion that the mainstream classroom fitted her sensory needs less than Robert’s, and overall she had a harder time paying attention and completing work in that environment.

Their ways of learning and sensory needs shaped both children’s participation in academic activities. Since they had atypical ways of learning and sensory needs, the one size fits all instructional approach and organization of their mainstream classrooms were challenging for both of them. Yet, Robert’s ways of learning, interests and sensory functioning fitted in with the mainstream somewhat more than Sarah’s. After observing these children in different settings and activities, and getting to know them closely, I could see that they both had strengths, abilities, and interests along with challenges. However, the practices and the organization of learning in the mainstream classroom made participation somewhat easier for Robert, and consequently they made him appear and perceived as more capable.
Participating in group work in the classroom, whether in English or French, was very hard for both. Their participation was zero to minimal and they often got distracted and lost focus of the activity. Sarah often started reading and Robert engaged in behaviours such as playing imaginary games like fighting or flying a plane, or playing with other children who were distracted as well. This type of situation involved a greater than usual amount of sensory distraction with noise and movements, and also social interactions in a quite unstructured setting. Thus two extra challenges were added to their original difficulties with completing academic tasks that were not designed for their ways of learning in the first place. The participation of both focal students in group work in the class was very marginal, as the sensory stimulation and distraction and social component of the situation meant insurmountable challenges for them.

Difficulties with cognitive processing producing stressful situations in the everyday life of school
Both focal students experienced situations that were very stressful for them and they needed support to learn to cope with and respond to these. When Robert got behind or did not understand the rules of tests and games it was frustrating for him. He acted out by screaming, getting very agitated, hyperventilating, his face turning red and sometimes his whole body got very tense. English spelling tests were the hardest, when the students were supposed to write down words after hearing them from the teacher. In this highly structured testing situation, if Robert was not ready and the teacher passed on to the next word he could get very stressed and frustrated. Other, less structured tests were similarly stressful to him if he got stuck on a question and could not finish on time. Not understanding the structure of an activity or a game, either in gym or during unstructured play time when they played board games in class occasionally, and getting behind as a consequence, could also be very stressful for him. Other situations relating to structure or his responsibilities, such as forgetting to go to computer class after recess instead of going back to his classroom, or forgetting homework at home, were also occasions he took hard, causing the above described signs of stress with varying intensity.
Sarah got stressed and frustrated, sometimes extremely, with a wider range of situations than Robert. If something out of ordinary happened and it meant a problem to her, at times even minor things, it could cause her panic. For example if her cookie for snack got crushed in the zip lock bag, or if she forgot to get her hot lunch form from the teacher and had to return to the class for it, or she missed something that could be easily replaced and for other kids would have been a very minor problem, she panicked and became very frustrated. On these occasions she, too, became very agitated, talked very fast, she was at the edge of crying and repetitively stated what the problem was. She seemed very impatient and panicking. The pattern of these situations started with an incident that was out of the ordinary and meant a problem for her, which made her feel very stressed, to the point of not being able to think about or accept a solution, or get over the problem. As I witnessed quite a few such episodes through Grades 4 to 6, I observed that when Sarah was tired, or frustrating episodes accumulated, the stress was multiplied (see Appendix A).

**Social integration and interactions**
Social integration, interactions and participation in peers’ social activities presented some challenges for both focal children. As in the area of academic participation and sensory needs, these challenges were both similar and took somewhat different shape. The two classes had quite different social climates. Robert’s class was a welcoming and accepting community where most of his peers were very supportive of him. They helped him, approached him, and I could observe a non-judgemental attitude in their verbal and non-verbal communications with and around him even if Robert acted out in stressful situations or to meet his sensory needs. Over the years he had changing needs for support to learn certain forms of appropriate interactions and to participate in peers’ activities during unstructured play times such as lunch and recess.

Sarah’s class had a different social climate, with a lot of competition, issues of popularity and two rigid cliques among the girls. This created an environment that was less welcoming and accepting of differences than Robert’s class. As I saw Sarah in this and other settings in the school, which I will describe in detail later, I could observe that her needs and challenges with participation and social interactions in the class were partly related to the dynamics among her peers.
On one hand, both focal students needed some support with social skills to participate and communicate with peers; on the other hand the social dynamics were very different in their classes and played a role in their participation and integration.

**Development and Change in Focal Students’ Participation in the Learning and Social Activities of Their Classes Over Their Intermediate Years in Elementary School**

This section reviews my observations on the changes and development in the participation of the focal students in the learning and social activities of their peers from Grades 4 and 5 through 7. Some issues and topics that are briefly mentioned in this section are discussed further in depth in the next section in relation to inclusive practices.

**Robert**

*Changes in academic participation through Grades 5 to 7*

When I started working with Robert he was new to the school and the city, transferring from another district and province, and by the time the school board assigned a support worker to him — me — we were almost four weeks into the school year. The new environment without any support may have been overwhelming for him because at the point I met him his academic and social participation was minimal, often none. During the first few weeks he completed about 20–30% of the class’ workload in both English and French, he had very few interactions with his classmates, and it was generally quite hard to communicate with him. He often seemed to be shutting down, and also he had difficulties articulating his needs or challenges, especially when he was frustrated or stressed. Trying to help Robert to do the same things as his classmates did led to many frustrating situations during my first few months with him. When I tried to help him complete tasks or assignments he often got tense, hyperventilated and had hard time to articulate where he was stuck or what kind of help he needed. Once, in Grade 5, they had to choose a province to do a project on in social studies, and Robert did not get started. I approached him, trying to explain the assignment and give him ideas how to decide which province to choose. He became frustrated as he understood the project, but had a hard time to explain to me what his problem was. Later, I learned from his...
mother that he had a dilemma whether they had to research the history of the province because in that case he would have had preference for provinces he was familiar with. Apparently, it was too complicated for him to explain this dilemma, and since I did not understand his problem I could not help him, and still trying to help made the situation even more stressful to him.

Implementing supports to help him with academic activities, organization and handling stressful situations — which I will discuss in the next section — started to show results within a few months. By the end of Grade 5 Robert had learned some skills to handle his frustrations quite well, such as staying calm and searching for a solution if he encountered a problem, and his participation in academic activities increased considerably as well. Although the struggles of going through the routine of an average school day did not completely go away, he made considerable progress and needed less support by the spring of Grade 5 compared to the beginning of the school year. By that time Robert increased his participation and work completed in class to about 60–70% of the activities, more than double of what he did in the first few months of the school year, and he kept this level of participation to the end of elementary school.

His writing skills in English improved from minimal output to close to grade level by Grade 7 and to a lesser extent in French. He kept struggling with certain writing tasks, but he learned to write paragraphs and to organize his ideas into sentences and logical order with minimal support. His creative writing skills progressed as well — it was in Grade 6 when he handed in for the first time a piece of writing and his teacher noticed that he had a voice that came through in the well written paragraph.

*Increasing independence*

The level of support he needed by Grade 7 had greatly decreased. At the beginning of Grade 5 I had to spend most of my time with him and by Grade 7 he needed very little direct support with academic assignments. In Grade 5 I often sat with him or followed closely as he worked on assignments and helped him extensively to understand and complete each step. By Grade 7, the typical support I gave him was to check in with him to see if he understood what he was supposed to do and monitor from time to time to his progress by asking questions.
He showed almost no organization skills at the beginning of Grade 5. At the end of one of the very first days I noticed that when students were supposed to write down the homework from the board, he wrote down only the first letter of every line. I checked if he remembered what they meant and he did not. I had to direct him to find materials in his bag or desk when activities started; I helped him to put away what he needed to take home at the end of the day. By the end of the year he learned to use a relatively simple organizational structure: he started using color coded folders to find and place materials. He got into the habit of taking them out upon arriving in the morning, and taking them home at the end of the day, and writing down his homework from the board. In Grade 7 he continued needing some support with staying on tasks, transitioning from one task to another, or starting a new activity, but he had become able to follow multiple instructions, which was a problem at the beginning of Grade 5.

Acquiring cognitive abilities to handle the stress of participating in the mainstream school
Robert’s pattern of progress handling stressful situations was similar to that of his academic participation. As I implemented support that was tailored to his particular needs, for which his mother’s input was very useful, he gradually started coping with stressful situations better and better. As the bulk of these situations were related to tests, it was relatively easy for him to gain a new perspective on tests and acquire the ability to stay aware of his options when he encountered problems. When he got behind or stuck on a test, he learned to skip the question, ask for clarification and he kept in mind that he had the option to finish the test later or take it in a different format. At first I reminded him of these options at the beginning of each test and during if it was needed, and during the second term of Grade 5 Robert started choosing one of the options on his own. By the end of Grade 5 the frequency and intensity of Robert’s episodes of stress went down and remained very low throughout Grade 6 (couple of occasions that I observed) and he experienced none in Grade 7.

I could see that stressful situations kept occurring but that he gained abilities to cope with them, keep control and redirect himself instead of getting overwhelmed and panicking. For example, at one point by the end of Grade 5, I noticed that his face and body showed signs of stress during library class as they were sitting on the carpet listening to the teacher who was reading a story. His
face got tense and looked frustrated, his hands were in fists and he rocked his body back and forth as if trying to regulate himself. Later when I asked him what happened he told me he had realized that he had left home a book they were reading in class, but he decided to call his mother to bring it in for him. I observed another example of his ability to stay calm in Grade 7 when he took an entrance exam to a high school program, which consisted of a two hour test he had to take at the main office of the school board. I accompanied him, although at that time I was already confident he could handle the exam without my support. At some point during the test his body language showed some signs of stress, which was noticed by one of the supervisors who came up to me and asked whether he needed some help. I suggested we would give him time to handle the situation and, as I expected based on similar experiences in school, Robert remained calm and in about ten minutes his body language showed that he overcame the stress on his own and finished the test independently.

Changing social participation in relation with needs, support and dynamics of the class
Robert had become quite well accepted by his classmates and made some friends during Grade 5. His classmates seemed to spontaneously understand and accept from the beginning that he was somewhat different from them. They did this in very supportive ways, many offered to help when he needed help, they tried to calm him down if he was upset, and everybody was ready to interact with him. I observed this many times, the teacher reported it and so did other teachers who occasionally taught the class. On one particular occasion, the class made a presentation for a younger grade. Their teacher mentioned to me that Robert was sitting in the back and watching out the window, apparently distracted, but when his part came his peers reminded him to join the performance. I knew that they could easily skip his part or perform it for him and the teacher considered his peers’ way of facilitating his participation very inclusive and socially responsible.

As Robert started participating more in class toward the end of the first term in Grade 5, he began integrating socially as well, making friends and engaging in interactions with other children — which were close to zero at the beginning — he could show his sense of humour, creative ideas, good math skills and knowledge in certain areas to his peers. His social integration and increasing participation coincided with his academic progress. By the middle of
the year he actually became quite popular as I could see from the reactions of his peers to his jokes and comments in class, he started drawing comics and other kids joined in this activity with him, they approached him and played with him.

His social integration had come a long way through Grade 5; however, he continued running around on his own at recess and withdrawing in class to gain sensory balance at times when the activity was unstructured and the students had the opportunity to socialize. Though his classmates accepted him and supported his participation, his need to withdraw set limits on his engaging in peers’ activities to the end of elementary school. Another factor that set some limits to his otherwise successful social integration during Grade 5 was the widening gap between his developmental pattern and that of his peers starting from Grade 6 and becoming more marked in Grade 7. During the onset of puberty and the pre-teen years children change their interests, their social relations and dynamics become more complex, interactions and communication become more sophisticated. For Robert this developmental period seemed to make his social integration more complicated in Grades 6 and 7 than it had been in Grade 5.

It took him a long time to start eating with his classmates in the lunchroom in Grade 6. Knowing the sensory needs and the difficulties with social interactions of children with autism and having observed Robert in other settings, I thought he wanted to avoid interacting in a completely unstructured and noisy setting. He almost never joined ball games. Just as academic tasks did not always fit his needs, interests and abilities, the motor and coordination skills required for ball games, like soccer, which his classmates often played, were far from his areas of interests and capabilities, and they did not seem enjoyable at all for him.

Thus even though his social inclusion was successful at many levels and he made friends, recess and lunch, the least structured and supervised times when children do the most important part of socialization, remained parts of school life when his participation in peer activities was very low during Grade 5 and 6. In Grade 7, however, there was a change: Robert started playing cards with a group of boys from Grades 6 and 5. Apparently, this structured and quiet activity, which required little spontaneous and unstructured interaction and communication, fit well his abilities, interests and needs, and it was a clear
sign that he was ready to choose a social activity instead of withdrawing. His relationships with peers and participation changed throughout Grades 5 and 6 but, generally, the balance between withdrawal and interactions with others during recess and lunch did not change until he got into the habit of playing cards. Supporting, facilitating and fostering his relationships with his peers remained an important goal of his IEP at the end of Grade 6, but when he started to play cards during recess and lunch, it eliminated the need for support in this area.

During the Integrated Play Group program (IPG), which was implemented to enhance his play and interaction skills in Grade 6, Robert clearly benefited from this support, his engagement and participation in the group increased well, and I could see some signs of change outside the regular group meetings as well. The IPG program was well under way when, at one time, he chose to join a soccer game during a free period (not recess or lunch). The whole class played except for two girls, who also always stayed away from soccer just as Robert did before, but for the very first time he decided to play. This was a sudden change and was not sustained as soccer was very far from his interests, nevertheless his decision at that point to make an effort to play with peers, instead of staying away, may have been influenced by the IPG program.

The Quebec trip:
Participating in the sociocultural activity of the community
The weeklong fieldtrip at the end of Grade 6 illustrated well the long way Robert had come since the beginning of grade 5. The whole class went to Quebec for a week as part of the French Immersion program. We stayed in the dorms of a private high school near Montreal, surrounded by sport fields, a lake, woods and a small hill where the children spent a lot of time playing games organized by the hosts. We visited museums that were mostly interactive, participative and used multimedia to engage the children who were usually split into small groups. We visited cities, including Quebec City and Montreal, First Nation heritage sites and churches. There were occasions when the children had free time either at the home base to play games outside, or in the lounge, and also a couple of times in malls and in Quebec City, where they went for shopping and eating in small groups.
The goal of the trip was, primarily, getting firsthand experience with French culture and language, but much more transpired. The children prepared and fundraised for it throughout the year, they wrote letters to the students from the school that hosted us in Quebec, and everybody was supposed to manage their luggage, clothes, and money throughout the trip. These expectations, along with being away from family for a whole week — communication with parents was discouraged unless there was an emergency — made the Quebec trip a major developmental accomplishment and opportunity for all children.

We — the teachers, his parents and I — had not had major concerns regarding Robert’s participation because by Grade 6 he gained many skills to fully participate with his peers in this trip. We were a little concerned whether the exceptional circumstances and the possible overwhelm would make the trip challenging, but, after some planning with him and his parents, we were hopeful that he would be fine. We decided on one special arrangement for Robert: the permission to play his video game for 20 minutes in the evening if he needed it to relax. The children are not allowed to use electronics and cell phones on this field trip, and this rule caused anxiety to Robert, who got a great deal of relaxation and balance from playing videogames every day after school. So we decided he could do that and knowing this, he happily agreed to come on the trip.

Robert’s participation in the trip exceeded all expectations. He needed no extra help to manage himself and his belongings, he participated in every organized activity and game without any encouragement, he joined card games during unstructured playtimes, and he seemed happy, was independent and engaged throughout the week without any challenging situation.

He wanted to play with his videogame only once during the trip, and he played with it another time when I offered it to him, and turned it down a couple of times when I asked if he wanted to play. Apparently, participating in this intense program engaged him enough and balanced his sensory needs so his everyday need to withdraw went down considerably.
Sarah

Changing academic participation and increasing independence through Grades 4 to 7

Through Grades 4 to 7, Sarah gradually made considerable progress in the area of academic work. As for Robert, challenges remained but, overall, she increased her participation in the class’ learning activities as well as building independence and organization skills. When I started working with her she needed close support and guidance to perform most academic tasks, especially when they required multiple steps and organization, and by Grade 7 most of this support had been phased out. Sarah still needed some guidance in Grade 7, but she considerably increased her output, participation and independence in both English and French.

Math, science and social studies and abstract concepts generally remained uninteresting and not very engaging for her, whether they were taught in English or French. I observed over the years that in these areas she participated more and learned more effectively in small group settings and projects as opposed to the classroom, where she kept needing support to stay engaged and on task, even though the level of support needed decreased over the years.

Progress in her creative writing in English, on the other hand, was considerable. In Grade 4, along with the shortest possible answers on sheets, she wrote very little on creative writing tasks as well, and she used very little descriptive language and no punctuation. At that time when I asked her to add details and descriptions she became frustrated and creative writing seemed just as daunting as other academic activities. I had to support her very closely throughout Grade 4 and part of Grade 5 to ensure that she separated sentences with punctuation, used capital letters and gave more description and detail.

Her Grade 5 teacher had the class do several creative writing activities involving visuals, which matched her ways of learning and helped her to become engaged, and by the second term of Grade 5 Sarah started producing more in in-class creative writing activities. By the end of the year, Sarah started writing by herself and for her own pleasure. She had not yet used paragraphs, but she used descriptive language and details, and she had a voice coming through her pieces. One day I noticed on her desk a half page story, thick with description, called “Mean Schools”. It was written from the perspective of a girl with a physical disability who had many tough experiences not fitting into school. Very soon after, she started writing at home, too, short and longer
stories and other pieces. She got a laptop at home, and from that point she was writing on her own on a regular basis. She always was an avid reader, and she used to say she wanted to be an author even before she started writing, and ever since Grade 5 Sarah has shown great skill and passion for this activity.

After her creative writing had started to progress, I focused on helping her organize her writing into paragraphs — she produced great pieces but still tended to write everything in one paragraph. She wrote a novel with two of her friends as a project in Grade 6 (see Appendix B and C), where we could focus on sequencing and planning plots and storyline, and paragraphing. By Grade 7 Sarah wrote in paragraphs and was ready to learn further editing skills.

Her non-fiction writing skills improved, too, although she was less engaged in non-fiction writing than in creative writing. This may have been due to her lack of interest in many topics in science and social studies, because when she wrote about bullying and abuse (in English), topics in which she was very interested and personally engaged although they involved abstract ideas and categories, she wrote more and she was also willing to work on them on her own. By the middle of Grade 6 she started to give full sentences on worksheets in both English and French, and used punctuation and capitals instead of writing very succinct answers as she had previously.

As Sarah was getting support and we implemented small group activities for her from Grade 5, her participation increased and, perhaps more importantly, she started liking school and was looking forward to coming, as her mother confided. Nevertheless, the activities we implemented for her had the unwanted effect of making some regular academic activities appear negative to her. This, combined with her tendency to blame others and being negative when frustrated, resulted in some struggles when I tried to increase her participation in class activities she found challenging or did not like. Thus this was not an effect of those activities, but rather of the coping strategies and frustrating memories she had had from previous years while attending school with no support at all. I will further describe and discuss this aspect of her behaviour in the next section of the chapter. Her resistance to and negativity about participating in some routine academic activities disappeared by Grade 7, at least in school, although her mother told me in the beginning of Grade 7 that Sarah found the new teacher’s teaching style and activities hard.
Acquiring cognitive abilities to handle the stress of participating in the mainstream school

During Grade 6 Sarah gradually became able to handle stressful episodes without panicking. She has become more resistant to stressful events, more flexible to accept solutions and adapt to new situations and she could stay in control of her voice and emotions when she experienced stressful episodes. I worked intensely on teaching her various skills to handle stress — discussed in the next section — during the first and second terms of Grade 6 when she had quite a few stressful episodes between November and February. By the end of that year started showing signs of staying calm and in control when she experienced stress. She became able to verbalize the problems she had — on one occasion her parents told that at home she said, “I have a problem”, instead of becoming stressed about it. She suggested solutions — calling her mother on the phone was a possible solution to a number of problems she had and earlier Sarah often became so stressed about situations that she could not initiate to take this step toward a solution. By the end of Grade 6 she also became able to listen and accept solutions offered to the problems she had (see Appendix A). A situation at the weeklong Quebec trip at the end of Grade 7 showed the abilities Sarah acquired in the area of handling stress. At the very beginning of the trip, before we boarded the plane, she had to overcome a stressful situation with her luggage. She planned to take her suitcase on the plane so it would not get lost, which had happened to her before on family trips and was a scary possibility for her. But the suitcase was too large, so she could not keep it with her. This situation might have been caused a major stress before Grade 7, and Sarah had not faced such a challenging situation in school as risking losing her luggage. She was very stressed for a couple of minutes, but then she accepted the situation and understood that there was no option, her luggage would not get lost on a short and direct flight, and we had to leave.

It took longer for her to learn handling and overcoming stress than it did for Robert. Having seen her panicking and losing control over stressful situations for two years in different settings, I thought that the reason for this was the fact that Sarah had a much wider range of potential sources of stress than Robert did. Also it may have contributed that she had gone through a lot of stressful episodes for years while attending the school without support, the memory of which must have been a heavy baggage that probably rendered the process of unlearning her panic reaction to stressful situations more difficult.
By spring of Grade 6 she did not get stressed anymore in a way that interfered with her participation in class and ability to handle the situation, and in Grade 7 I did not see any situations in school when she came even close to getting stressed. It was interesting to see that her habit of blaming and tendency to negativity also disappeared, possibly due to her ability to cope with stress.

*Changing social participation in relation with needs support and dynamics of the class*

The different activities and settings we put in place since Grade 5 to enhance Sarah’s social participation with girls in her class other than her three close friends had limited effects. As I observed Sarah interacting with peers in the class, children from other classes in occasional school wide activities when children were put in groups across classes and grades, and with her close friends for several years, I understood that her lack of interactions with the other girls of her class was due to the strength of the clique dynamic among the girls.

However, the dynamics that isolated her gradually eased and somewhat turned around. The two rigid cliques among the girls remained the same over the years, but Sarah’s participation and interactions with other girls increased, although mostly within planned and supervised activities and spontaneously only to a very limited extent. By the end of Grade 5, the whole group dynamic among the girls of the class went through some changes although challenges remained. Overall, the class became a socially more accepting community for Sarah; our efforts with the teacher in this direction during Grade 5 — discussed in the next section — may have contributed to the fact that we no longer observed salient verbal and non-verbal negativity among the students, even if the dynamic of two cliques set limits to her opportunities to engage with other girls of the class until the end of elementary school. Changing the social dynamics of French Immersion classes is usually not as easy as in the case of English classes. Since there is usually only one French Immersion class in each grade, the administration of French Immersion schools have very little room to change the composition of French Immersion classes, except, when due to significant difference in the number of students between grades, they can choose to organize split grade classes. Thus being in French Immersion means having mostly the same classmates for the whole period of elementary school.
Opportunities to observe Sarah’s social skills and interactions outside of the class dynamic helped me to form an overview of her social integration and abilities to participate and engage with others. Based on these observations and knowing her class, I could see that her limited interactions with peers in the class were more the effect of an overall social dynamic in the peer group than an indication of Sarah’s abilities or willingness to engage with others. Her three friends interacted little as well with girls from the other group and she interacted with these close friends quite well. She always ate with them and practiced appropriate social skills of engaging with them. She engaged in conversations, she responded to their initiations, she initiated, and she showed interest by her questions and comments, even if she had a tendency of focusing on topics she was interested in. She was also responsive to classmates’ initiations. Also, outside of school she participated in social activities with these and other friends.

On a few occasions I could see Sarah interacting with children from other classes and I observed that she engaged in conversations with them and practiced appropriate communication and social skills. Once, at the beginning of the year, the students of the school participated in different activities going from classroom to classroom in groups that were mixed up by grades and classes, and Sarah had a conversation with a younger boy about Santa Claus, and whether they believed in him or not. Other times I saw her interacting with girls from the Grade 5 French Immersion class when some of them were in Sarah’s class when she was in Grade 6. These opportunities showed that Sarah could be social; she had the willingness and skills to converse with others, listen, engage and respond, and although I could see her tendency to focus on her own choice of subject or point of view, it was subtle and not obvious for others who did not know her.

Engagement and active participation in the sociocultural activity of the community

The above described situations, in which Sarah interacted with students who were not her classmates showed her more open and responsive to communication than her participation with peers in her class showed. The best example of this was her involvement in the organization of Halloween in the school with the student council in Grade 6. This whole experience was relevant insofar as it showed Sarah’s abilities to participate in more than one way.
She ran for student council representative of the class and in her speech (in English) she focused on how she would organize the Halloween day in the school. Usually when speaking in public she tended to speak quietly and too fast, but this time she did a much better job speaking with a good pace, volume and articulation. Also, she was more independent and engaged in writing her speech than in other, similar, writing tasks. She got elected and her participation in the organization of the Halloween day was very different from what I usually observed in other settings and activities. She was active and engaged in the brainstorming session with other student council members from other classes, she spoke up, commented on and complimented other ideas, again with good volume and timing. It is important to note that she did this in an unfamiliar social setting and group, which was significant given the typical challenges of children with autism. Also, she actively participated in the preparations of decorations and activities once the plans had been made.

When she missed some information regarding a student council meeting, she went to look for the teacher who ran the student council, entered her class and approached her to find out what she had missed. On a similar occasion she addressed the teacher in the hallway during recess. This was quite significant because Sarah was usually very reluctant to speak even to her own classroom teacher when she needed help, and speaking to teachers she was unfamiliar with, especially when it involved approaching them spontaneously in an unstructured setting, was a stressful and challenging social interaction for her. When she had to have such an interaction, for example when she had to talk to the parent volunteer who checked in students coming late in the morning, she was stressed by that interaction and tried to avoid the whole situation.

Sarah’s participation in the organization of Halloween at school showed her abilities to interact, engage, follow instructions, and share focus with others in a setting that was rarely provided to her in school. Halloween was her favourite holiday; every year she looked forward to it and planned her costume weeks before, and she also loved reading ghost stories and the horror genre in general. Thus this was extremely motivating and engaging for her. Furthermore, she had seen several Halloween days in school before and was familiar with the possible activities, events and decorations the council could organize and prepare. Hence, high motivation and familiarity with the activity enhanced her skills to participating at all levels: planning and interacting with others,
following up with plans, executing tasks, keeping her attention on the activity and initiating. She also transformed her participation in the process: she was active in contributing from the beginning and during the final preparations she volunteered to perform tasks the teacher forgot to assign to students.

Her participation and social interactions in this activity was in sharp contrast with what I saw from her in regular academic activities or unstructured socialization, whether in English or French. Comparing her participation in these different settings must be done with caution of course, since motivation by and expertise in the activity gave a significant boost to her participation. Nevertheless, her participation in this event showed that the various skills she was struggling with in other settings and activities were there and could become active in supportive environments and activities. One more source for me to learn that Sarah’s social skills and interactions improved was the feedback from a couple of teachers during Grade 7 who told me that she had become more responsive when they initiated conversations with her compared with previous years. One of them was the librarian who regularly engaged Sarah, both in English and French, when she went to the library quite often throughout her years in the school, and thus this teacher was in a very good position to notice the change.

The Quebec trip: Participating in the sociocultural activity of the community

At the end of Grade 7, Sarah participated in the week long field trip to Quebec, as did Robert at the end of Grade 6. I was a little concerned that the intense program, possibly challenging activities and potentially stressful situations could be too hard for her.

She fully participated in the trip and she was completely independent throughout. I checked if she knew what she needed for particular activities, just as I checked on other children and she did not need any other support. She was clearly tired sometimes, as everybody else was, since every day was full with activities, but she never complained or missed an activity.

Just as for Robert, Sarah’s participation in the weeklong field trip showed the overall progress she had made over the previous four years. While in different forms, paces and patterns, both children completed similar developmental patterns during this time. Their challenges did not completely disappear, but they both made significant progress in learning how to overcome them. Since I had first met them they came a long way in all areas of development,
Data Analysis

they overcame barriers, built skills, and they increased their independence and participation. Both moved from relative isolation and non-participation toward gradual integration into their peers’ learning and social activities.

**INCLUSIVE PRACTICES TO SUPPORT THE PARTICIPATION OF THE FOCAL STUDENTS IN THE ACADEMIC AND SOCIAL ACTIVITIES OF THEIR CLASSES**

This section focuses on the practices I designed and implemented to support the participation and learning of the focal students. It starts by discussing the need to balance the goals of learning and inclusion for these students so they could learn according to their own needs in their zones of proximal development and increase their participation in their classes’ activities. Various forms of guidance, adaptations and other approaches to support their learning and participation are reviewed, as well the strategies to teach them abilities and skills to handle stress. The last part of the section discusses the practices that supported their social interactions and participation in peers’ social activities.

**Balancing the goal of learning in the zone of proximal development and participation in the class**

The focal students were officially fully integrated in their mainstream classes and my main goal was to provide them the support they needed to participate in the academic activities of their classrooms. Given the various challenges many of the typical learning activities meant for them, I had to design different types of supports to help them participate. The primary role of the student support worker is to support the learning of the students he or she is assigned to and my objective was to do this in an inclusive way as much as possible, by helping the students to participate in the same academic activities as their peers and not separating them from their classes’ activities.

However, these goals were contradictory and often hard to adjust. To ensure that Sarah and Robert learned according to their needs, abilities and ways of learning in their zones of proximal development, I had to put in place goals and teaching strategies for them that were sometimes different from the instruction their peers received. Also, the goal for them to participate in their peers’ academic activities required some supports that were different from the support their peers needed. Thus helping these students based on their needs
and maximizing their inclusion into their classes’ activities required setting priorities and balancing these sometimes contradictory objectives.

Therefore, during our time together I focused on balancing these goals by designing and implementing practices that helped them learn skills and abilities they struggled with and which were not taught in the school, and I tried providing this support in a way that the learned skills and abilities helped them increase their participation and independence in the academic and social activities of their peers. Hence, my priorities were to help them learn according to their needs and ways of learning in their zones of proximal development, and to gradually increase their self-initiated participation in their communities.

Guidance and scaffolding to support participation and learning in the zone of proximal development

In order to help Robert and Sarah participate in various academic tasks in class, I used a number of different strategies that took into consideration their particular needs as well as the priority that they were included in the class’ activity. Most often, my support consisted of breaking down academic tasks to smaller steps, helping them plan and organize their ideas, brainstorming with them to guide them to find ideas or sources of information.

When Robert could not get started on the writing assignment, mentioned earlier, about what to do with a limousine available to him for a day, I offered him questions and options that transformed the open ended task into a more structured process. I helped him find a few ideas for places and activities he liked, such as going to Science World, swimming pool, and his favourite restaurant, and I guided him to choose an order for the activities. I led him to decide about people he would take, and through questions I guided him to think about some activities his family members — he wanted to take them — would enjoy that could be included in the program. After he had a list of activities, people who would join, and an order for the activity, I helped him to organize the information into paragraphs by quickly writing down what I would have done with a limousine in order to show him an example of logical organization of the ideas. Similar to this process, when Sarah needed help to write about where she wanted to go on her next vacation and what she wanted to do there, I helped her brainstorm ideas by having her write down places she had already visited and liked, places she read or heard about, activities she
liked to do or wanted to try, and countries or sights she wanted to see. For some of these questions I wrote a list of possible answers and had her choose, as at this particular time she was too frustrated to come up with answers to direct questions.

These strategies of scaffolding and modeling seemed to respond to their needs as the complexity of the tasks was reduced, and my guidance provided explicit directions or facilitated for them the cognitive process of figuring out the next step within tasks. This framework of close guidance by asking questions and giving them choices helped them with their difficulties with keeping their attention on the activity.

Also, guidance through modeling, scaffolding and brainstorming seemed an effective strategy as it was a format in which I could move from providing close support to the students toward looser forms of helping them as their independence increased. At the beginning, and also later when the complexity of the task, the distractions in the classroom or the level of stress of the focal students made it necessary, I guided them through tasks step by step, sometimes in a different setting one on one.

Later I gradually faded out the support and the time the students worked alone increased. I still offered guidance by facilitating and modeling the process, but they gradually increased their independence and needed less and less support. I asked fewer and less direct questions, gave fewer examples and suggested fewer alternatives. In Grade 6 Robert needed to design a poster for a book he read as if it was a movie poster, containing images, a title, short and interesting information about the story, and possibly the names of imaginary or real actors. The teacher showed a few examples to the class from previous years and I showed one of those to Robert, pointing out the main features and suggesting a few general ideas about how his book could be represented as a movie on a poster. After this discussion, which was less than 10 minutes, he got started and sketched the main picture of the poster and made up a title that was different from the original title of the book. I helped him to plan the location of the different elements on the poster and pointed out again to him how the information had to be brief, exciting and relevant when he got to that point in the assignment. In this project he was mostly independent and needed help to get started on tasks and transition from one task to another. When Sarah needed to write a story in Grade 5 based on two pictures, I had her
Data Analysis

analyze the pictures, pointed out some details on them and this was enough for her to come up with the elements of a story, which I helped to organize into a sequence and guided her to add a few further details.

Toward the end of elementary school the amount of direct support decreased further. They still needed it with certain assignments but I often moved to a role of shadowing and monitoring their participation. Thus this general practice of guidance was a flexible format that balanced the priorities of learning based on their individual needs in the ZPD and inclusion. Furthermore, when the focal students did not need close support anymore, I could help other students in the class as well, using this same strategy as some of their peers also benefited from closer guidance. Robert and Sarah’s need of this support were greater than their peers’, yet they were not unique.

Adapting the expectations, worksheets or learning sources to the focal students’ needs and ways of learning was another way to bring the learning activity into their zones of proximal development and help them participate. When the class worked on activities or projects in groups, which were extremely challenging settings for the focal students, it was very important to support them, otherwise their participation would have been close to zero. In these situations I usually took their groups to a quieter setting and provided more structure to the activity than it would have otherwise had, and guided the students through the activity to ensure Robert and Sarah participated.

Once, when Robert’s class was participating in a reading/drama activity in Grade 6, in which the students read a short story in groups of three or four, and then acted out their story, I decided with the teacher that Robert would be in a group of three so the interactions are less complicated. I took them to a small classroom — they worked on the skit for about three weeks — so we had a quiet setting with no distractions from the other students. I helped the group go over the story and select a few scenes for their skit. I made sure they all had a chance to suggest parts of the story and facilitated the discussion. I guided the activity in a way that the pace, the communication and the work was within Robert’s zone of proximal development. He understood and contributed to the storyline — which became slightly changed from the original — and he had a part that was neither too easy nor too hard for him, and I made sure the group was focused so the interactions and the whole activity had a structure in which he could get engaged and participate. If this activity had taken place in
the classroom with the other groups working around them, and in a more child-run fashion without my guidance, Robert would probably have had a much harder time to stay focused, engaged and participate.

Also, when Sarah participated in a literature circle activity in Grade 6 — reading and discussing a novel with three peers once a week and reflecting on questions the teachers gave them — it was helpful for her (and possibly for other students as well) that they had the opportunity to work in a quiet place and with facilitation. I guided the activity in a way that there was a structure and routine, and they took turns so everybody could contribute. Since the activity was semi-directed discussions about the novel, it was important to find a balance between too much and too little structure. If I had let the activity to be completely child-run — as it happened in the classroom where the teacher could participate and guide the groups for short periods only — the conversation would have possibly become too hard for Sarah to participate in. At the same time, I wanted to have the discussion as spontaneous and free flowing as possible. Therefore, we had two rules, the students had to listen to each other — no parallel talking — and their comments had to be related to the book. I encouraged through modeling to comment on and respond to each others’ comments before they changed the subject. These rules and the facilitation made it possible for Sarah to participate actively, more than she usually did in similar activities in the classroom when there was less structure and more distractions.

In order to select peers who had skills to engage the focal students and could create inclusive group dynamics, I cooperated with the teachers. Also to decide about adaptations and expectations for Robert and Sarah, I regularly planned with the teachers. They let me know about their plans for learning goals, projects and activities for the class in different subject areas before new terms started, and also along the way, so I could suggest and prepare adaptations for the focal students.

Small group work was a setting where I could model for Robert and Sarah’s peers how to engage and support them. Some children were very receptive to this modelling and showed great aptitude and skills to support them, thus helping an inclusive practice to become generalized and transferred to other times and settings. An example I described earlier, when Robert’s peers made sure that he participated in the performance they gave to another
class although they could have easily skipped his part, showed that the peers understood that even if Robert did not behave the way children typically do in a similar situation, and he did not appear to be engaged in the activity, it did not mean that he could not or did not want to participate. Possibly, it occurred to his classmates to make an effort to facilitate his participation because they knew that Robert could and usually wanted to participate, and their act of social responsibility and care may have been a result of seeing me making efforts, day by day, to help Robert participate and be part of the community.

Another example of peers learning how to engage and support was in gym, when Robert’s class played volley ball. At one particular practice, the students were in small circles hitting the ball spontaneously to each other. Robert often got distracted and lost attention to the ball and missed hitting it when it was his turn. I decided to play a little in his circle and each time the ball went toward him I yelled “Robert, it’s yours!” to get his attention, and the students continued to do after I left and the other times they played, to make sure that he participates.

A behaviourist approach
In Grade 5, I introduced a reward system to help Robert increase his output, participation, stay on task, and organize his materials. Once I knew his capabilities and he got used to me, I set up a few expectations, such as to start working on his own after a task was given, ask for help if he experienced any problem, complete a reasonable amount of work and show it to me or to the teacher when he was done. When he followed these expectations he could earn a penny for each period of the day, which he collected in a box in his desk. There were seven periods throughout the day and when he earned at least five pennies a day his mother gave him some reward after school.

I usually do not like manipulating children’s behaviour through such systems; however this behaviourist approach can be very effective with children who have autism as it helps them to develop an understanding of the relationship between behaviour and consequences through making the relationship explicit by systematically and consistently reinforcing it through external rewards. Programs of Applied Behaviour Analysis (ABA) use this strategy and its success in the long run lies in gradually fading out the reward when the child acquires and generalizes a skill or ability. Robert responded to
this motivation well, it clearly helped him to focus on the skills the expectations aimed to support and after a few months the reward system was phased out.

**Balancing sensory needs to support participation**
Throughout the years I worked with her, Sarah had a habit of going to the library to read on her own, sometimes during recess or lunch, and also after she experienced frustrating situations. Her sensory system could get easily overwhelmed and she was prone to fatigue. Possibly due to this and the fact that she ran into many frustrating situations in the school, she developed a habit of going to the library to read, which was her favourite activity at home and in school, and it was, probably, a coping strategy for her as well. The quiet and warm environment where she was surrounded with books was very relaxing for her. I observed that after 15–20 minutes in the library, Sarah was usually calmer. Since this responded to her needs and helped her through the day I let her go to the library when she needed. However when I noticed that this started significantly interfering with her participation in academic and social activities in Grades 5 and 6, I set up rules with her teacher so this practice helped her participation instead of interfering with it. There were limits on how much time she could spend in the library on a regular basis, usually 10–15 minutes twice a day, so her sensory needs were met and this habit helped her participation in academic and social activities. I had to decide about dilemmas and priorities on a daily basis to ensure that Sarah’s need to spend time on her own in the library was met while she missed out on academic and social activities as little as possible.

**Teaching in the zone of proximal development by addressing the underlying issues of stress through guidance, modeling, specific approaches for autism and cooperation**
Getting through stressful situations was a major area where both focal children needed support, especially during Grade 5 for Robert and Grades 5 and 6 for Sarah. To help Robert and Sarah with handling stressful situations, after I observed a few of them, I started implementing social stories I wrote using the format designed by Carole Gray (discussed in the fourth section of Chapter 2) in order to teach the children about the components of those situations. This strategy is meant to help them remember options to deal with problems and
stress they experienced, and become and stay aware of the perspectives, feelings and reactions of others who were involved in those situations.

Since social stories can teach about situations that are predictable in the sense that the stress or confusion is caused by well known factors, they had limitations, especially for helping Sarah. Robert’s challenges in this area were more predictable as it was test situations that usually made him frustrated, so it was easier to use a single format to help him develop a perspective and skills to cope with potentially stressful components of test situations. After he experienced a couple of stressful episodes during tests in Grade 5, I described them to his mother who talked about what happened with him, then she explained to me his perspective, perception and feelings about getting behind or stuck on tests. Based on this I wrote a social story that described the testing situation in general terms, different scenarios that may occur such as not knowing the answer to a question, forgetting something he knew, not understanding a question, and running out of time. It also acknowledged the negative feelings those situations can cause and it described different options to deal with those situations, for example going on to the next question and return later to the question he did not know or understand, asking for clarification, asking for permission to finish it later or to be tested in a different format. The social story also described the feelings of others around him when he became overly upset during a test, how it could be disruptive for the class, so Robert could develop self-awareness. The goal was that he could learn to deal with the inevitable stress testing situations mean to anybody by keeping in mind the options he had, choosing one of them when it was needed, and a way of trying to keep emotional control over the situation. His mother read and discussed the social story with him and I did, too, in school, and we went over it before tests for a couple of months, until I started seeing that he was becoming able to overcome the eventual problems he encountered during tests (see Appendix D).

For Sarah the social story format had quite limited utility since the settings, times and types of factors that caused stress to her could be very different and completely unpredictable, as I described earlier. I used social stories to help her to understand the general components of stressful situations, such as a problems arising, various possibilities to ask for help and how to keep the right perspective and avoid panicking. But due to the great variations of
stressful situations, Sarah needed other strategies to generalize her understanding of stressful situations and apply it to real life experiences.

After each situation that caused her stress we discussed what happened in a quiet setting. She needed a calm place and time anyway, and once she was ready I could use that time to guide her over the situation, her reactions to it, what options she would have had, how the situation was similar to other situations that she had experienced before as stressful. In other words, I adapted the social story format and used guidance to analyze particular situations that happened to her, and helped her to discover the patterns in those situations. I also used visuals and designed exercises as well to teach her through hypothetical situations about different possible problems, their real scope, how to recognize and avoid stress building up, appropriate reactions and possible solutions to them, hoping that these discussions and exercises would help her to build abilities to stay in control and deal with similar situations in the future. The goal of these guided discussions was to provide verbal and cognitive tools for Sarah to gain control over situations that she could potentially see as stressful.

For example, once in Grade 5 when she arrived late and found that the seating plan was rearranged in the class, it made her very uncomfortable, frustrated and she did not even want to come to class. Usually I let her know beforehand when a predictable change happened, but this time I misunderstood the teacher and I thought the change would happen a day later. Sarah was very angry because when moving the desks around she figured that other students might have touched her things in her desk or maybe something got lost. Sarah had a great sense of privacy with some of her belongings and the fact that they were involved in this situation made it much worse for her.

This was a typical situation that could stress her out, and it was an opportunity to learn skills to handle these types of stressors better. During the discussion I acknowledged her feelings and led her to understand, using a 1–10 scale to measure the gravity of problems and possible reactions to them, that while she had a reason to be frustrated, her reaction was unreasonably strong for the problem she had run into. I explained how we forgot to tell her there would be a change so she could take my perspective and understand that others’ plans and actions sometimes run into accidents, despite good intentions. As for her belongings, we discussed whether she would be interested in taking others’
belongings from their desks and if something falls out whether it could be easily found. We also discussed how it looked from other students’ perspective that she got so upset because someone moved her desk. After such situations, once Sarah calmed down a little she could be guided through these different perspectives and talk about the experience from a position where she was in control as opposed to the moment when she was overwhelmed with panic to the point of not being able to deal with the situation at all.

Another component of the support system to help the focal children deal with stress in school was communication with their parents. Regular discussion helped both me and the parents to understand what caused stress and what would be the effective ways to help Robert and Sarah. Especially with Robert’s mother we communicated a great deal in Grade 5. I described Robert’s stressful moments to her either after school or using a booklet for home-school communication, and she discussed the episodes with him. This was very helpful as in the school sometimes I could not get to the bottom of the situation due to lack of quiet place and time, or because Robert was too stressed to verbalize what had made him frustrated. Then, she got back to me and helped me understand and brainstorm solutions how to help him deal with the next test or other academic activity that was challenging and made him stressed.

Cooperation with the teachers to make the classroom and the day predictable was also important, but many of the situations that turned out to be stressful for the focal students could not be predicted (see Appendix A). Another form of cooperation that helped me support Sarah took place with a therapist who helped her, outside of school, with communication and dealing with stressful situations. I asked the therapist to share the tools and strategies she taught to Sarah so I could implement them in the school, generalizing and making them consistent. Also, it was important to cooperate with another support worker who was with Sarah in the afternoons when I was in Robert’s classroom. Sometimes when she encountered a frustrating situation in the morning and we could not properly discuss it, I followed up with the afternoon support worker so she could talk with Sarah about what happened.

Hence, helping the focal students learn to handle and cope with the stress of unpredictability and change as they occur in everyday life required a comprehensive strategy using a set of tools. These tools included techniques specifically designed for children with autism as well as guidance, and they
Data Analysis

aimed for systematically overcoming the complexity of stressful situations through explicit teaching. A consistent approach was crucial as this learning process lasted for long periods of time for both focal students and involved varying situations. Cooperation with parents, teachers, the other support worker and the therapist was an important part of the consistency.

Teaching to overcome and handle stress was an area where the priorities of their participation in the learning activities of their peers conflicted with their learning according to their needs in their zones of proximal development. Both children needed to acquire skills and abilities to handle situations that could stress them out. This skill set is not taught in schools since it is far from the developmental needs of typical children who learn this mostly outside of school. Consequently, supporting Robert and Sarah in the school meant that they missed out on some learning activities with peers when they worked on this skill set one-on-one with me, separated from their peers.

However, it was critically important that they learn to handle those stressful situations for two reasons, even if it meant spending some time away from the class. First, literature on autism, discussed in Chapter 2, strongly suggests that the challenge unexpected situations, changes and problems present for children with autism may be related to the cognitive processing issues and impaired implicit learning inherent in the condition. Second, learning skills and abilities to handle change and stress was important in the short term as well, because Robert and Sarah’s participation in the learning and social activities of their peers depended on these skills and abilities to a considerable extent. Setting time aside to help them to develop skills to handle stressful situations was, therefore, an important strategy to support and increase their independence and participation in the mainstream class in the long run.

Guidance and behaviourist approach to redirect behaviour
Sarah needed support with her tendency to blame and see intentionality in others’ actions when she was frustrated or stressed. For example, in Grade 6, when I tried to have her choose one of the routine morning tasks written on the board — the students had this routine for the first 15 minutes of the morning — she started complaining that the teacher did not let them read in the morning as they had done before, and all they did was work, and she continued bringing up similar cases from the past when they got too much homework in
Grade 4, the teacher promised they would go on a field trip in Grade 2 and they did not go, etc.

I observed this behaviour in many similar situations when she was frustrated or disappointed about something. Anything that caused her stress, frustration, disappointment, or seemed unfair, could trigger it. It consisted of putting the current cause of frustration in the perspective of other similar occurrences from the past and interpreting them as the purposeful actions of teachers or, in some cases, students. After observing the pattern of this habit in a number of situations over time, I realized that it was probably a cognitive and emotional coping strategy for her; a result of going to school for four years without proper recognition of her ways of learning and needs, and coping without appropriate support. Typical school days meant a great many unexpected situations and changes that were stressful and at times disappointing for Sarah. They also meant sensory overwhelm and workload that did not fit her ways of learning, abilities and needs, combined with communication and structure that did not provide enough predictability for her. Knowing these challenges related to autism and also those resulting from the cognitive processing issues inherent in the condition, it made sense that when Sarah experienced confusing and frustrating situations and events, she had difficulty understanding or processing the complexity of circumstances, coincidences, constraints and intentions involved in those situations and events. Attributing intentionality to others in these situations may have helped her comprehend and rationalize them as she could, meaning that she explained them as the result of purposeful actions of others, and compared them to previous situations she experienced as similarly frustrating. This strategy possibly helped her make sense of confusing situations, and also it helped her deal with them emotionally and talk out the accumulated negative feelings and stress she experienced.

In the beginning I was not able to systematically support her in this area as it took time for me to understand it and it was not a constant problem that interfered with her learning or participation. Nevertheless, when she went through a difficult period in Grade 6, this behaviour increased and it was often hard to stop or redirect her from it. I started working systematically on this issue during our discussions when we worked on stressful situations. Since this coping habit was both part and result of her stressful episodes, it made sense to target her tendency to blame and impute intentionality to others while we
discussed those episodes. Therefore, part of my strategy to help her develop an appropriate perspective on and skills to handle stressful situations was to teach her to practice “theory of mind”, and analyse the possible thoughts, plans, intentions, reactions and feelings of others involved in a situation, and understand the different possible perspectives. This way, when she learned skills to handle stressful episodes it was also an opportunity to teach her to take others’ perspectives and learn how different perspectives of others are at play in social interactions and situations, and to understand that many situations come about accidentally, without people intentionally causing them. As a result, toward the end of Grade 6 she started to develop a perspective on her blaming. On one occasion when we discussed how she had a tendency to blame certain students for causing trouble for the class and getting the whole class punished, she wrote a list of words (such as “moron”, “dork”, “idiot”, etc.) she liked to call those students. In the context she acknowledged that she can get very frustrated with others and was able to take a perspective on her behaviour. Another time when something disappointing happened and I explained her that it was not my fault she said that, “Yes it was!” in a joking way, referring to her tendency to blame.

Later, I started applying a behaviourist approach setting limits to responding to her when she started blaming or complaining because my efforts using guidance and teaching her theory of mind had a counterproductive side effect. While these strategies were helpful, engaging in Sarah’s behaviour through talking about it also reinforced it insofar as she continued it even after we discussed the issue at hand. When I noticed this dynamic I decided to try a new strategy. ABA programs use the technique of ignoring inappropriate behaviours based on the idea that any acknowledgement or engagement reinforces them. When Sarah complained or blamed others for something I listened, acknowledged her feelings and responded to her, then I systematically expected her not to continue, and when she did I simply did not respond to it. The technique appeared to work. She seemed to develop an understanding that she needed to redirect her thoughts and emotions because I did not respond to her behaviour. As I stated earlier, I usually do not choose to use behaviourist techniques in my professional practice, but, this situation was one of the very few when I felt Sarah needed a clear and systematic response or consequence from me in order to become able to redirect herself from a behaviour that had been very strongly established.
Supporting socialization and teaching social skills through guided participation in play, guided activities and facilitating peer interactions and group dynamics

As I mentioned earlier, the social climate and dynamics in Robert’s class made a positive difference for him. Most of his peers had positive attitudes to accept that he was somewhat different from them; they supported him and made efforts to engage him. Sometimes Robert could come across as rude, often when they wanted to help him with something and he responded to them in a way that appeared to be impolite as he was frustrated, or the help that was offered was not what he needed. In a number of situations I felt I needed to explain to his peers that he did not mean to hurt their feelings, although I usually had the impression that they understood this even without me telling it to them. On those occasions I also talked with Robert and sometimes used social stories to teach him about how to interact appropriately with others, and what were others’ perspectives, intentions and feelings in certain social situations.

The Friend 2 Friend Social Learning Society made an interactive presentation (in English) to the focal children’s classes about autism, so the peers could learn about how children with autism experience the world differently, what is behind some typical autistic behaviours and how to be non-judgemental and supportive with students who have autism. This organization also implemented an integrated playgroup program for Robert and four of his peers, to enhance Robert’s social interactional skills.

The model of integrated playgroups (IPG) was designed by Pamela Wolfberg (1993) with the objective of teaching skills of social interaction, engagement and communication to children with autism through structured and supported play activities with typical peers. The model of IPG is based on the concept that play is a very important area in which development unfolds, and since children with autism struggle with certain skills that are necessary for playing with others, such as joint attention and theory of mind, they need structured and guided settings that systematically teach and nurture these skills, and also support the peers to engage children with autism in mutual play.

Implementing IPG starts with observing and assessing the play and interactional skills of children with autism in order to identify their areas of strengths and challenges, and also to determine at which stage they are in the developmental course of play skills — solitary play, idiosyncratic or repetitive...
play, symbolic play, and whether they engage in mutual play with others. After the play guide — who runs the program — assesses the play skills, needs and challenges of the child, he or she selects peers for the group with the child’s parents or teacher and school support worker, depending on where the program takes place. The peers are selected based on their play skills and interests so they are a good match for the target child who has autism. Peers who show leadership skills and social responsibility are usually selected for play groups, but since in school settings the goal of the program is also to decrease the social isolation of children with autism, and help peers become familiar and supportive of these children, the play guides usually selects a peer, or two, who are not so close to the child with autism.

After the groups are set up and needs are determined, they meet once a week on the same day, usually at lunch when the program is implemented in a school setting. The play guide helps them to engage in play activities through facilitation; he or she establishes rituals to start and end the play sessions, brings toys and facilitates discussions to plan activities. The concept of IPG is informed by sociocultural notions of development, and the model is based on guided participation with the play guide leading the children to become a group that interacts, shares and plans together. The child with autism is referred to as a novice player and the peers are the expert players. As the group members become familiar with the structure of the activity, and each other if that is necessary, the play guide models and facilitates engagement and interactions and leads the group to increase their independence. The goal is that members change and increase their participation, according to their levels of play skills and needs, and the play guide gradually withdraws and phases out the guidance as the children become independent playing and engaging each other. Thus IPGs are a learning opportunities for the peers as well.

The number of children in the groups varies; usually two to three peers are included, depending on the needs and play skills of the novice player. Robert’s group comprised four peers, which made it larger than most integrated play groups. The program lasts twelve weeks, during which it is run by the play guide who helps establish a structure and routine and the student support worker learns the principles of the program. After the twelfth week the student support worker or the special education teacher takes over the supervision of the activity that continues weekly for the rest of the school year.
Robert’s group met at lunch once a week, the boys ate together in a small classroom, the play guide facilitated conversations, and then they played spontaneously with the toys brought by the guide. At the end of each session there was a discussion of what toys and games they enjoyed the most that day and they decided what they wanted to play next time. I initiated the involvement of the Friend to Friend Social Learning Society in Robert and Sarah’s classes by suggesting the presentation on autism to Robert’s mother who went to see it in another school and suggested it to our principal who was very supportive of the programs of this organization.

Sarah’s social integration in her class followed different patterns compared with Robert’s and therefore required different types of support strategies. Robert was new in the school and as he became familiar with his class, and started gradually increasing his participation in academic activities over the course of Grade 5, he integrated socially as well. I needed to mediate in a few situations as I stated earlier and give some support occasionally to Robert to use social skills, and the IPG was implemented for him in Grade 6 to boost his involvement with peers in play activities. However, neither Robert nor his peers needed further support for him to be included, accepted, engaged and make friends. Sarah’s social integration, participation and acceptance, on the other hand, seemed to be more at risk when I started to work in her class.

Sarah had a group of three close friends with whom she interacted more regularly than Robert did with his classmates. On the other hand, outside this circle Sarah had almost no interactions with other children in her class. The girls of the class were divided into two cliques, eight girls in one group and Sarah and her three friends were the other group. The two groups did not communicate spontaneously and the class climate and dynamics were heavily influenced by clique belonging and popularity, with occasional incidents of bullying. This social climate and dynamics were not forgiving with Sarah’s difference and influenced negatively her perception by peers, which I could see in verbal and non verbal communications in Grades 4 and 5. Since the norm among the girls was not to interact at all with those who didn’t belong to one’s clique, it created a structure of social interactions and participation in which Sarah did not get opportunities to move out of her close circle and socialize with peers she was not close friends with. In other words, the social dynamics
in the community did not provide her opportunities to learn further social skills, generalize skills she already had, and increase her social participation.

I noticed the negative social dynamics and climate in the class, particularly among the girls from when I first started working with them in Grade 4, along with signs of how these issues affected Sarah’s perception by her peers and her participation. The Grade 5 teacher noticed these dynamics as well, she shared my concerns regarding their negative effects on Sarah, and she was very supportive of making some efforts to change the situation. Throughout Grades 5 and 6 we implemented a few activities that aimed to increase Sarah’s participation and change the dynamics that undermined it. Since a major part of the challenge she faced was related to the dynamics among the girls of the class, we designed a few activities about and had some discussions on cliques, popularity, and indirect forms of bullying common among preteen girls. I suggested to the teacher a CBC documentary, called “It’s a girl’s world”, on pre-teen girl dynamics and she decided to show to it the parents to initiate a discussion about the social climate in the class.

Sarah participated in an IPG program with one of her close friends and two girls from the other group, and we started a weekly social activity for her and a few other girls that included cooking and other projects such as preparing decorations for Halloween. All the girls of the class had a structured sport activity once a week during lunch, called “Girls’ Soccer Club”, which was later transformed into a semi structured, then unstructured activity (see Appendix E).

I have not seen any situations when my mediation was needed so her peers did not get offended by or misunderstand the way Sarah responded to them as it happened with Robert. She had very few relations with peers outside of her circle, and later, when she had more, I have not seen her responding to them in a way that may have come across as rude, even if she was stressed. She could respond in a rude way to me or her parents; however I never saw her having an interaction with peers that would have warranted some mediation or damage control on my part. She sometimes needed some facilitation in discussions to help her with mutuality and joint attention, although I observed that when Sarah interacted with her close friends, with whom she was familiar, felt comfortable and shared interests, she practiced interaction and conversation skills much more than with children she did not feel close to. She tended to focus on the topics of
her choice and needed some help getting and staying engaged in what others had to say, especially when she was not interested in their topics.

The focal students had similar and different needs and challenges in the area of socialization with their peers. They needed very little direct support to learn social skills. Children on the high functioning end of the autism spectrum usually have basic social skills and it is mostly with subtleties such as timing, joining in and staying engaged in conversations, following covert rules of listening and responding to others and changing the subject, formulating criticism or differing opinion politely, and considering social norms when choosing subjects or disclosing information. Robert and Sarah needed occasionally some support with such subtleties, but, overall, helping them in this area meant mostly creating and facilitating opportunities for them to socialize as the regular, usually unstructured, settings of school and the dynamics of their classes were too hard for them to integrate in spontaneously.

Sarah needed more support than Robert at some point with integration in her class and interaction with peers outside her close circle of friends. However, based on the observation of their classes’ dynamics for years and her interactions outside the class, this difference was more related to the social dynamics of her classes than to her abilities or willingness to socialize. The social dynamics of the classes played an important role in shaping the participation and needs of support of these children. Robert had a supportive and accepting community in his class, and while he had friends, the differences between his and their interests and his sensory needs hindered his participation in the sociocultural activities of his peers during recess and lunch. This changed though when he found an activity in Grade 7 (card games) that matched his interests and needs. On the other hand, Sarah’s class was less supportive and accepting, along with dynamics that hindered her participation and social interactions, yet she regularly participated in the sociocultural activities of her circle of friends at recess and lunch. Thus the focal students’ socialization depended to a great extent on social dynamics and the availability of activities that matched their interests and needs, and therefore the inclusive practices designed and implemented were ultimately tailored and responsive to these different situations and not only to the needs of the students.
IMPLEMENTING LEARNING PROJECTS BASED ON SOCIOCULTURAL CONCEPTS OF LEARNING AND THE “COMMUNITY OF LEARNERS” MODEL

This section presents the data on the academic projects that were based on a community of learners model and used practices informed by sociocultural concepts of learning. First, the general structure and procedures of the projects, which were discussed in depth in Chapter 2, are briefly reviewed and the five projects that were implemented for the focal students and their peers over two school terms are outlined. The second part of the section discusses the participation of the focal students and their peers, and the third part reviews the experiences of the implementation of these projects in the mainstream school in terms of planning and organization.

In this section the data on the focal students is organized and presented according to various aspects of their participation in the projects.

Description of the projects

I implemented five academic projects for the focal students and some of their peers that followed the format of the “community of learners” (COL) model studied by Rogoff (1994, 1996). As discussed in Chapter 2, this model teaches students in small groups through guidance and activities/projects in which they are led to become actively involved, taking ownership of the learning process from the beginning, sharing decisions regarding the choice of topics, learning tools, resources and outcomes. The educators use guidance to involve the members of the group and help them increase their participation, which is one of the main goals of learning in the sociocultural theories of Rogoff, Lave and Wenger.

Following the principles of COL model, the general structure of the projects I implemented incorporated guidance for instructional practice as opposed to direct instruction, and active participation of the students in the decisions about the topics, processes and outcomes of the projects as opposed to giving the topics and determining the form of the expected outcomes, which usually happens in typical academic projects in mainstream classes. Also, the use of a variety of ways of learning and resources was supported and encouraged, as well as creativity in the forms of expression in the outcomes. The projects were based on communication and interaction among the members of the groups. I facilitated and guided the brainstorming and
negotiating of ideas at every step of the way since the students’ engagement in and ownership of the process were essential aspects and goals of these activities. In other words, they were guided to participate actively in the planning, monitoring and implementation of the projects.

The groups included three to six students and the meetings took place in a quiet environment with as few distractions as possible. I decided with the teachers about the general learning goals that had to be incorporated in the topics and expectations so the projects fit in with the grade curricula and the programs of the classes, yet the participating students had the freedom to choose topics, outcomes and resources. Some of the projects started after the participating students listened to the instruction of the teacher who introduced the concepts that were supposed to be incorporated in the projects to the whole class. This way the project activities were directly integrated into the learning of the class and I could start the projects by reviewing and following up on the concepts taught by the teacher, and guide the students from there to shape their own projects. I cooperated with the teachers to select the focal students’ peers for the groups, taking into consideration their ways of learning, strengths, challenges and interests, making sure that all participants’ learning needs could be met and the social dynamics in the groups were conducive to participation and inclusion.

I implemented these projects from September 2008 to the end of March 2009, over two school terms when Robert was in Grade 7 and Sarah in Grade 6. All the projects were in English. Robert participated in two projects, one in creative writing and another in social studies. His creative writing project included four students and the general goal was to write a novel together. The focus of the class’ creative writing program was on character development and the project embraced this focus. The class worked on this focus through reading and writing exercises that usually took one or two periods, and some short term individual writing projects the students worked on at home and in school. Our project started with creating a storyline together, which they broke up into chapters, and then assigned the chapters to the participants who wrote them at home and in school. As the writing progressed, they read the chapters to each other and decided about changes and other editing tasks. Since different parts were written by different students, an ongoing editing task was to make sure details fit in throughout the story. This project extended to two
terms and was finished by the middle of the second term. The final product
was a sixty page long novel called “Broken Bonds”, a detective story involving
young teenagers, issues of friendship, jealousy and murder.

The social studies project involved Robert and two peers who created a
map of an imaginary continent. The class learned about concepts involved in
maps and skills to read cartographic codes, signage, colors and other
information, and the rest of the class worked on a very similar project in small
groups. The students learned about the mapping concepts during class
instruction and from me when we started the project, I used different maps to
follow up on the concepts learned in class as visual and hands-on sources fitted
the ways of learning of all three students. I guided them to decide on a fictive
geographic location they could map, and they chose to create a continent with
three countries on it, one for each participant. They made up the name of the
continent that was a letter combination of their own names, they decided about
certain main features of the continent and they worked individually on their
own countries, creating cities, routes, resources and other features. At the end
they presented their map to the class as did the other students in the class.

Sarah participated in three projects, a creative writing activity, a project in
social studies and one in personal planning. In creative writing she wrote a
story with two of her close friends; the genre had to be fantasy or fairy tale to
fit in with the class’ program; and as it happened stories of this kind were of
great interest to her and her co-authors. Similar to the writing project Robert
participated in, I guided them to create a storyline and once that was
established we broke that up into chapters. They wrote the chapters, read them
to each other and edited them with my help. The outcome was a forty page
long novel, called “Secrets, Lies and Friendship”, a story of three girls who
meet and become friends in an orphanage, escape from there and end up going
through different fantasy worlds to discover secrets from their past that test
their friendship and help them to get over losing their parents.

The goal of the social studies project, in line with the class’ program, was
to learn about government, democracy and how decisions are made in a
country. Two peers participated with her, one of her close friends and a girl
from Grade 5 (there was a split class that year). This topic was very far from
Sarah’s interests so we decided with her teacher that they could do a project on
how the school was run, and the jobs and responsibilities of different people in
the school. Thus this was an adapted form of the class’ program that aimed to make the abstract concepts of government and different levels of power in a country more tangible and hands-on. I guided them to think about the school as an organization where different jobs are done and decisions taken by different people or groups of people. They made a list of people to be interviewed and they prepared questions for the interviews. The outcome of the project was a poster representing the school and the different workers from the janitor to the principal, describing the responsibilities of each.

The project in personal planning involved initially one peer, with whom they worked on the topic of child abuse, which was a subject Sarah was very interested in. They read articles and facts from various sources with the objective of understanding the various forms of abuse. The goal of the project was to learn about professions that pertain to the problem of child abuse as careers and professions were the focus of the planning program that term. However, this was suggested by the teacher and in the end it did not materialize. While Sarah and her co-worker were very interested in the topic, it took time to read and discuss material in order to understand the different types of abuse. This activity met Sarah’s needs because she could work on an abstract concept that had very many concrete forms in real life, and analyse the differences and common traits between various forms of abuse. It seemed reasonable to let Sarah work through the meanings of the concept at her own pace through readings and discussions, and engaging in conversations about the topic with the other girl, instead of rushing them through to produce a presentation or other outcome that was in line with the class’ program on professional careers. In the second term this activity continued and changed a little, and included four more girls. The group met once a week and read and discussed stories about bullying and relationship issues among pre-teens, a subject that was very relevant in Sarah’s class and highly engaging for all participants. By the end of the second term they wrote a skit together.

The participation of the focal students in the projects
Both focal students increased and transformed their participation in the projects. This section outlines how these projects allowed them to join in the shared focus of the groups and become actively engaged in the learning process.
Joining in the shared thinking of the group
and transforming participation through engagement and guidance

Overall, both Robert and Sarah showed signs of increasing participation and learning throughout their projects. In the creative writing project, Robert had initially had an idea for a story that was quite different from those of the other participants; however, they negotiated and compromised to integrate their conceptions in one storyline. In the beginning of this process he was often distracted, got caught up in details or carried away with excitement, but as the storyline progressed, his contributions showed that he joined in the group’s focus of attention more and more. A good example of this was when they decided that the protagonist of the story would get a clue through a riddle in a dream, and Robert wrote a riddle on his own on the spot that fit the story very well (see Appendix F).

I observed similar change in Sarah’s participation in her writing project. In the beginning when they were working on the main storyline, deciding about main characters, names, etc., she still had difficulties focusing her attention in discussions, and often brought up ideas or details that were off topic or had already been decided. As they got into writing the story, reading the written parts to each other and deciding about or changing some details or parts of the storyline, Sarah showed more and more signs that she joined and stayed in the common focus of attention; her comments showed that she remembered well the context of the story and the details, she actively negotiated and argued with her peers as they were shaping the story.

Increasing participation through activity with context and relations
to social practice and setting that fit sensory and attention needs

Sarah showed an episode of increased participation in her social studies project, too, when she worked on the poster representing the different responsibilities in the school with another peer. This project was less engaging for her than the others as she was not very interested in the topic. However, when the group started preparing the poster that represented their findings, I prompted her to follow the lead of a peer and get started on the poster and her response and participation was better than what I observed before under similar circumstances in the classroom.
Thus the quiet setting, the long term involvement in the project that allowed Sarah to understand relatively well, as well as the close cooperation with peers helped her participate and get engaged even if the topic was not exciting for her. When I had supported her before with similar activities in the classroom, either individually or in groups, she needed more help to stay focused and on task than she did in this activity.

**Interest and engagement in activity and facilitated setting**

**supporting social interactions and transforming participation**

The projects provided a setting for the focal students to engage in conversations with peers more easily than in other settings or activities. I observed Robert once smoothly participating in a conversation with the two other boys in his social studies project while they were working on their countries on the map. At this point of the project they did not have to communicate about the task at hand and a spontaneous chat started. Robert used proper conversation skills, commented on what his friends said, he showed interest, and I realized that I had witnessed very few such occasions during the previous two and a half years. The reason for this, at least in part, could have been that more typical settings and activities in the school were less supportive of him spontaneously engaging in conversations with peers. Here the environment was quiet, they were engaged in the same activity, and the structure of the group was not too complex as there were only the three of them.

Similarly, Sarah showed skills and engagement in conversations with her peers in the personal planning group that I had barely seen from her before, outside her close circle of friends. She turned toward the person she was talking to and reflected on what they said; she made comments closely related to the focus of the conversation. This was significant because this time she showed these skills with peers she was not usually communicating with. Thus the quiet setting, the engaging topic they were discussing, the semi structured and facilitated nature of the conversation were probably helpful to her to participate at a level other settings and activities in the school did not usually provide. Initially, when we finished meetings with that group, she tended to stay behind instead of walking back to the class with her peers — she may have wanted to avoid the unstructured setting or just did not want to go back to class. As the group got used to working together and more and more active
conversations took place with less and less facilitation on my part, Sarah started walking back with the group to class instead of staying behind.

Another relevant aspect of Sarah’s participation in her planning group was her habit of following the structure and organizational requirements of the project. I gave the participants photocopied readings each week, which they collected in a folder and were supposed to read in order to discuss it the next week. In the mainstream classroom Sarah was not very organized most of the time, she often could not find materials in her desk or folders, and when she was not interested in activities she did not care much about them, either. However, in her personal planning project she always had her folder and she had read the assigned reading, which suggested that this activity was engaging and important to her.

Learning in the ZPD through engagement in activity with context, guidance, semiotic mediation and scaffolding
The projects offered opportunities to teach academic skills and abilities to the focal students in their zones of proximal development in ways that was rarely possible in the mainstream classroom. The COL setting and practice allowed using their interests, engagement, and ways of learning and pace to meet their learning needs through guidance and activities that were tailored to them.

The planning project provided Sarah also with a learning opportunity that the typical academic activities and settings of the school did not. She faced several challenges learning abstract concepts, either in social studies or science, because they did not fit in with her interests, and/or cognitive processing abilities, and also they were taught in ways that did not fit her ways of learning. In the mainstream classroom setting all of these became distracting and overwhelming for her. In this project, however, she was very interested in the topic — child abuse — thus highly motivated and engaged, the setting was quiet, and the work was self paced and we used learning tools — reading, discussion and writing a skit — that were fine tuned to Sarah’s needs and abilities. It took a lot of discussions to understand the different meanings of the highly abstract concept and how different categories of abuse overlap in concrete cases, but these readings and discussion were an opportunity for Sarah to learn and practice the difference between the abstract and concrete meanings and I could use semiotic mediation in my guidance to lead them through the process.
Semiotic mediation meant in this activity that when we read about examples of abuse, or sometimes I described hypothetical situations, Sarah tried to put them in categories, such as emotional or physical or verbal abuse. My goal was to guide them to understand that these categories overlap, so once she categorized a case or incident as a specific type of abuse, I asked questions to lead them to see other features of the same case or incident. Through these guided discussions I expanded the meaning of terms like “verbal abuse” or “emotional abuse”. At the beginning of the process they had a relatively stereotypical understanding of these terms, identifying them by their most salient features. For example, emotional abuse meant for them parents who neglect or are mean to their children, and verbal abuse mostly meant name calling. As we discussed different situations and I challenged their understandings through questions, they became aware of the less obvious meanings of these highly abstract terms. They learned that emotional abuse can happen among friends, couples and it is often subtle, targeting the self esteem or aiming to control others. They also learned how the categories overlap, for example verbal abuse is usually emotional abuse as well, and in it is often not direct but uses sarcasm, gossip, rumours or making fun of others in seemingly harmless ways.

The creative writing project provided Robert with a setting and activity that fitted in well with his ways of learning and needs in writing, in the same way as the planning project did in Sarah’s case. When the group started writing the chapters of the novel, Robert’s pieces were too short and succinct; he wrote down the content or the summary of the part he was assigned with minimal descriptive language and elaboration and very few details. Earlier, in typical in-class writing assignments this issue had not come up to this extent as those assignments required shorter pieces of writing, and when he did not use enough descriptive language, or needed to add details, I helped him on the spot to improve his output. However, since in-class writing assignments were mostly short projects that were done in one or a few periods, we did not have the opportunity to engage, learn and practice skills in a long term writing project and strengthen his creative writing skills in a lasting way. In this activity, on the other hand, when I realized that Robert needed support to use more descriptive language and add more details, I could provide him the support he needed.
Since we had a storyline that he partly authored, his engagement and motivation were given and he knew the context of the pieces he was supposed to write. Therefore we did not need to brainstorm ideas or the content, only to work on the narration. I helped him to write the parts he was assigned by closely guiding him through the process. We looked at the end of the previous pieces that were already written, we discussed where the story was at that point, and then I modeled for him how to transform the storyline into narration. I gave him examples by writing a part, which he used as model to write his own; I wrote sentences with missing words so he had to find adjectives or verbs; other times I wrote one sentence and he did the next one.

The pieces he wrote on his own were getting longer, more detailed and elaborate. This project offered an activity and a setting where this close support could be provided at the level Robert needed it, which did not happen in the typical writing activities in the class the previous two and a half years. In this project we did not have to start each time by deciding about a topic or story as was the case in typical in-class writing activities, rather we could focus solely on his style and writing skills, and we could practice it over a period of time that was longer than the time we got in class to practice a certain skill set, thus Robert had the opportunity to receive more extensive support (see Appendix F).

**Participation of peers in the projects**

The participation of the focal students’ peers in these projects showed that these activities were learning opportunities for them and met their learning needs as well. In each project most of the peers were very motivated and engaged, sometimes more than the focal students. Having freedom to determine the topics, the opportunity to own and shape the projects, the sources and the outcomes of learning were greater than they were typically given in the classroom. These were exciting and motivating features of these activities for all participants. Also, the opportunity to interact in a structure of communication that was less pre-determined than typical in the mainstream classroom seemed to facilitate and enhance the engagement of the students. In this setting everybody could contribute according to his or her abilities and motivation to a greater extent than in the mainstream classroom. The small group setting meant less pressure and tension for some than the classroom, and
the guidance and facilitation ensured that everybody was heard and included to a degree that does not often occur in the classroom.

**Motivation through engagement in and ownership of practical activity**
The engagement and motivation of the students was well illustrated once when the classroom teacher and I were both absent, and the members of the Grade 7 social studies project chose to work on the project by themselves. It was during social studies period, but since there was a substitute teacher they could have easily skipped the work. However, the group went to the small classroom where we usually worked on the project and they continued it on their own.

**Increasing and transforming participation**
Some of the peers transformed their participation by taking on leadership roles as the projects progressed. In the Grade 7 creative writing project one boy emerged as leader by taking on responsibilities of coordination of the tasks, planning and editing the storyline, and scheduling the writing process. This writing project was planned to continue; after the novel was written it was adapted into a script and a movie was the final product. This boy, who became the leader of the group had ambitions and experiences in acting and directing, and the project relied on his leadership to a great extent.

In the Grade 7 social studies project in which Robert worked with two boys, one of them, a close friend of his, increased his participation by taking on some leadership responsibilities. This close friend facilitated discussions to find compromises, redirected the two other members’ attention when they got distracted and came up with ideas for further details that were added to the map. This boy had often had difficulties focusing and behaving in the classroom during typical academic activities; however, this project clearly engaged him. The hands-on, visual and creative character of the activity, the possibility to actively participate, interact, and take ownership of the learning process, and the opportunity to lead others were all apparently motivating for him.

Another example of leadership was in the Grade 6 social studies project, which focused on the different jobs and responsibilities in the school. Besides Sarah one of her close friends and a girl from Grade 5 participated in this project. The girl from Grade 5 was interested in politics and had strong leadership skills, and she was the most engaged member of the group actively
planning, participating all along and occasionally leading the two other participants through the various parts of the project.

The projects offered an opportunity for the peers of the focal students to develop other skills as well. A student, who participated in the Grade 7 writing project and tended to be withdrawn and did not participate actively in the classroom during typical academic activities, became engaged more actively in this setting than she normally did in the classroom. She contributed little at the beginning, but she gradually increased her participation. According to the teacher and her mother she took a lot of pride in being part of the project and enjoyed it very much. A couple of Sarah’s peers from the “other girl clique”, who participated in the planning project and were usually engaging very little with Sarah became somewhat more outgoing and interactive with her in this setting and she responded to it accordingly.

Experiences of the implementation of the projects
Beyond the participation of the focal students and their peers, these projects yielded some experiences in terms of the practicalities and organizational possibilities of implementing academic activities based on sociocultural concepts of learning in mainstream schools. Overall, the sociocultural concepts were successfully implemented in these projects and this learning experience was beneficial for all the participating students; however, some experiences revealed the need for more organization and planning with the teachers in order to meet the objectives of this practice and integrate it in the grade program more effectively.

The main issues were some tensions between the objectives and instructional style of the projects on one hand and the constraints of the class curriculum and timelines on the other hand. While the two classroom teachers understood the philosophy, practice and goals of the projects, and they fully supported them, their main concern and goal remained that the projects fit in with the grades’ curricular requirements. Fitting in with the grade curricula was also one of the goals of the projects, but we did not discuss the exact terms in detail. Due to this vague understanding there were conflicts in a few cases between the requirements that the teachers suggested for the projects and the goal of the activities to meet the focal students’ learning needs. I will discuss these conflicts further in detail in this section.
Another source of challenge was the integration of the projects in the timeline of the classes’ programs. The projects’ philosophy and practice required that the students actively participated in the shaping of the projects, which was a time consuming process especially in the beginning when they planned the topics, sources of information to be used and the outcomes of their work. This meant a different pace from that of the work in the mainstream classroom, and in some cases it ultimately conflicted with their timelines.

In the Grade 6 social studies project, the requirement that the project follow the class’ program meant that the group was supposed to work on the concepts of democracy and government. In order to adapt the highly abstract and uninteresting topic for Sarah, we decided with the teacher that they could work on these concepts through a concrete example they were familiar with. Therefore, we decided that they should do a project on how the school was run. However, this topic was still quite abstract and not very engaging for Sarah, and, on the other hand, it was already more predetermined than it should have been according to the sociocultural instructional principles and practice of the projects. The teacher also determined the process and the outcome of the project. Talking to different workers in the school was the only way to collect information for the topic anyway, so the students’ creativity and choices were limited by the narrowly determined topic itself, and making a poster to visually represent the findings of their research was also the obvious form of outcome that fitted in with the academic standards.

Due to these factors, this project ended up incorporating sociocultural concepts and practices to a much lesser extent than the other projects, and it became a rather typical academic small group project where the topic, the process and the expected outcome are determined by the teacher. It still allowed me to teach the abstract concepts of the curriculum through guidance and discussions, and we could apply them to a concrete and familiar example, and the students did a hands-on and engaging activity that allowed for some planning, interactions and active engagement. Hence, even if they could not actively shape the project and make choices to the extent that would have been desirable, they still could take partial ownership, plan and interact, and learn through a practical and meaningful activity. Although Sarah was clearly less engaged in this project than in the other two, the quiet setting and other features of the project helped her to participate more than she would have in a
similar project in the classroom, and the two other participants were very engaged, especially the student from Grade 5 who took on a leadership role and was particularly interested in the topic and conducting interviews.

We experienced and overcame some similar challenges in the Grade 6 planning project. Sarah worked on the topic of child abuse with another girl during the first term. We had initially planned with the teacher that the activity would lead to doing something regarding the professions that help with the problem of child abuse. This would have fitted in with the personal planning program of the class, which focused on careers the students envisaged having as adults. However, since the concept was highly abstract with different possible concrete meanings, it took time for Sarah and the peer to read and discuss material to the point they understood well the different, and sometimes overlapping categories of child abuse and its various dimensions. Usually Sarah was very hard to engage in discussing abstract concepts, and many science and social studies topics were uninteresting for her. However, she was very interested in this topic and she could learn thinking and analytical skills through it while engaging in conversations and discussions with a peer. Directing them toward the subject of careers and professions would have interrupted a learning process that was beneficial for her (and also for the peer) as it provided a topic and a learning format — reading and discussion — that met her need to develop her abilities to think about and apply abstract concepts. In this case, we decided with the teacher that they could continue the activity and did not have to move on to do a project on careers. The readings and discussions were academic work and included the subject of professions related to the topic.

Thus here there would not have been a conflict between the needs of the students in the project and the requirement to produce an outcome that fit in with the class’ program, if we had had more time. However, the end of the term was close and we would have needed more time to finish working on the concept of abuse before starting to work on related careers. Time management was a challenge in the other projects as well to the extent that the pace and needs of the projects were different from those of the class. When the school year starts in the beginning of September, it usually takes a few weeks until classes settle in a routine, new material is taught and academic projects can start. Since the academic activities based on sociocultural concepts of learning
and instruction include the planning and negotiation of topics, learning resources and outcomes by the students, they are more time consuming and follow a pace and rhythm that is different from the typical project work in class, which is based on direct instruction and predetermined topics, sources and outcomes. Hence, for projects that are based on sociocultural concepts of learning it is important to get started as early as possible in the term so the participating students get enough time to plan the activity. This was not however a major challenge in the other projects I implemented. Two of them — the creative writing projects — were designed to encompass two terms, thus we could be flexible with time management, and another project — the Grade 6 planning project — was adapted along the way to overcome this challenge. The Grade 6 social studies project — the topic of which was the school — did not require much planning on the part of the students and therefore it was not hard to fit in with the timeline of the class’ work, and the Grade 7 social studies project — in which the students designed a map — had a workload that could be completed by the end of the term.

My implementation of the projects during two school terms showed that this instructional practice had positive outcomes for the learning and participation of the focal students. It was successful in meeting their learning needs in ways that seemed more difficult to implement in the mainstream classroom. Furthermore, the projects offered a learning experience that was beneficial for the participating peers as well, meeting their learning needs and giving them learning opportunities that the typical classroom setting and mainstream instructional practice do not commonly or frequently provide. This experience showed also that this set of instructional practices and setting can be implemented within a mainstream school; the project fitted in with the grade curricula and the work of the classes, and the challenges and difficulties that arose during these projects could be overcome with more planning, organization and further cooperation with the teachers.
CHAPTER 5

INTERPRETATION

The findings of my participant ethnographic research on inclusive educational practices are relevant to some of the theories, concepts and research that I reviewed earlier, and also have some implications for educational theory and practice regarding students with atypical ways of learning and needs. This chapter will discuss these implications for theory and practice, as well as the limitations of this study.

COMPONENTS OF INCLUSIVE PRACTICES FOR CHILDREN WITH AUTISM IN MAINSTREAM SCHOOLS FROM THE PERSPECTIVE OF RESEARCH ON AUTISM SPECTRUM DISORDERS

My observations of the learning and participation of the two focal students have yielded some outcomes that are relevant from the perspective of the literature on the cognitive processing issues and effective teaching approaches for children with autism. The various challenges the focal students faced with learning activities and social integration in school were mostly due to their difficulties with cognitive processing abilities such as executive function and the theory of mind as well as joint attention. Atypical sensory needs were also a major factor affecting their participation. Accordingly, the strategies I implemented in order to help their learning and social interaction and integration targeted their needs and challenges in cognitive processing and sensory functioning, since the academic activities and the instructional practices of mainstream schools take these abilities for granted.

The common trait of the different support practices I implemented was that they aimed to compensate for the students’ challenges with implicit learning, which is critical in autism and underlies the difficulties with cognitive processing abilities. Using social stories (Gray and Garand, 1993) to develop perspectives on and handle social situations, the Integrated Play Groups
(Wolfberg and Schuler, 1993; Wolfberg, 2003), various forms of close guidance to break down academic assignments to smaller steps, to help them stay focused, plan, follow multiple steps and solve problems, as well as the systematic discussions of stressful situations were ways of providing tools for explicit learning. In common these involved teaching the relationships between parts of the stimuli in order to reduce the confusion and complexity of academic tasks and social situations. Also, these practices helped the students learn in their zones of proximal development (Vygotsky, 1978) where the learning goals and forms of instruction met their individual levels of abilities and needs.

I used a variety of approaches that research demonstrates to be effective for teaching children with autism. These included: a behavioural approach (ABA) and relationship based strategies (DIR/Floortime and RDI). My experiences support the suggestion of some research on the effectiveness of teaching approaches for autism that there is not a single approach that is more effective than others, but different philosophies and practices can be effective. I employed different techniques in different learning situations, and found that a spectrum of instructional practices was needed in a school setting where a great variety of learning needs must be met and very varied situations arise. Although I relied on strategies that were informed mostly by sociocultural concepts and practices, and as such they were closer to the relationship based approaches of teaching children with autism (DIR/Floortime and RDI) than to the behaviourist approach (ABA), I also implemented some behaviourist techniques as well.

My findings confirmed another conclusion of the studies on effective teaching approaches for autism insofar as the generalization of learned skills and the consistency of approaches were essential in the support system I put in place for the focal students. Due to the difficulties of discriminating between parts of the stimuli in situations and across situations, it can be very hard for children with autism to comprehend and process information in different situations and across experiences, therefore the skills and abilities taught in particular settings must be systematically reinforced over time and generalized in other settings. Research on autism reviewed in the Chapter 2 indicates that while different approaches can be effective, generalization and consistency are always critically important. My data collected across many settings, and over a long period of time, strongly suggest that the progress of the focal students...
Interpretation

may have been due just as much to the consistency of the approaches, and the efforts to generalize them in a variety of learning situations, as to the particular effectiveness of specific approaches.

**SOCIOCULTURAL CONCEPTS OF LEARNING, DEVELOPMENT AND INSTRUCTION AND INCLUSIVE PRACTICES FOR STUDENTS WITH ATYPICAL LEARNING NEEDS IN MAINSTREAM SCHOOLS**

The inclusive practices I implemented and the increasing participation and learning of the focal students suggest that the sociocultural concepts of development, learning and teaching that informed most of those practices were effective in meeting the developmental and learning needs of the focal students. The concepts of the ZPD (Vygotsky, 1978), guidance as instruction, active engagement, ownership and participation in the learning process, shared thinking and problem solving (Lave and Wenger, 1995; Rogoff, 1990, 1994, 1996), learning based on practical activities (Rogoff, Matusov and White, 1996; ) that have context and meaning for the learners (Lave and Wenger, 1995), as well as the utilization of a variety ways of learning and resources, provide a framework of practices that addresses the specific challenges and needs of learners with autism. This is the most important finding of this study.

Since the instruction and academic activities of the mainstream school take for granted cognitive processing abilities and implicit learning that routinely develop in typical children, the learning and cognitive needs of children with autism are not met, and academic participation is very challenging for them. Thus the mainstream classroom does not ensure that they learn and develop according to their individual needs and, therefore, the academic activities and instructional practice needed to be adapted so the focal students of the study could learn in their zones of proximal development. This meant that their individual learning needs, ways of learning and paces had to be taken into consideration when I adapted academic content for them. Close guidance, scaffolding, modeling tasks, relying on the interests and strengths of the focal children were effective strategies to make the otherwise challenging and meaningless activities easier and more meaningful for them, and, as a result, to teach them skills and abilities that helped them increase their participation and independence in their classes’ academic and social activities. The experience with learning projects that were based on sociocultural
Interpretation

concepts of learning and teaching and the model of the community of learners showed also the effectiveness of this philosophy and practice.

Research on the similarities of challenges between autism and other conditions and my findings on the effectiveness of the sociocultural approach for the focal students of this research provide grounding to the hypothesis that inclusive practices based on sociocultural concepts of learning and development may be effective also for students with other conditions who have atypical learning needs. There is evidence that some main traits of autism are characteristics of other conditions. Atypical development of the executive function, theory of mind, sensory functioning as well as difficulties with attention and memory affect Down syndrome, Tourette syndrome, ADHD, and various learning disabilities (Szatmari, Tuff, Finlayson and Bartolucci, 1990; Ozonoff and Jensen, 1999; Aschroft, Jervis and Roberts, 1999; Happe, Booth, Charlton and Hughes, 2006; Giaouri, Aleuriadou and Tsakiridou, 2010; Carvill, 2001). These challenges may take different shapes and affect children with these conditions to varying extents, thus their learning profiles and needs in these areas are not exactly the same as those of children with autism. Yet, the similarities in the areas of challenges suggest similarities in the learning needs; therefore it seems reasonable to think that the practices shown effective in helping students with autism may work also for students who face similar challenges due to other conditions. This is in line with the positions of Farrell (2001) and Farrell (2010) questioning the accuracy of labels and need of label specific provisions discussed in the second section of Chapter 2.

PARTICIPATION OF THE FOCAL STUDENTS IN THEIR MAINSTREAM SCHOOL FROM THE PERSPECTIVE OF THE CONCEPT OF INCLUSION

The study has implications for the concept of inclusion of students with autism and other conditions in mainstream schools, and also for the special educational practices that aim to support their participation in the learning and social activities of their peers. The practices I designed and implemented for the focal students balanced two priorities: meeting their individual learning needs and ensuring they were learning in their zones of proximal development on one hand, and supporting their participation in the learning and social activities of their classes on the other hand. These two priorities often conflicted with each other due to the atypical learning needs and ways of learning of the focal
students, which were at times very different from those of their peers. The focal students of my research both needed to work on skills and abilities their typical peers did not need to learn through explicit teaching. However, working on these skills and abilities was at times more effective in separate settings and one on one, which separated them temporarily from their peers and required them to miss out on some participation with them.

Nevertheless, to become able to increase their participation and independence in the academic and social activities of their classes in the long run, it was necessary for them to build those skills and abilities. Thus the inclusive practices I implemented included some separate activities, but only when those activities met learning and developmental needs that were crucial for the focal students. In Sarah’s case some time away from the class was also needed to balance her sensory needs and continue participating once she was rested and less overwhelmed. Overall, this strategy of balancing the two priorities with the objective of helping the focal students increase their participation in their peers’ learning and social activities seemed effective. Their participation gradually increased and the time they needed to learn skills separately from peers decreased and eventually went down to zero.

The changes in the participation of the focal children over the three and four years, and the practices I implemented for them based on the two priorities described above, suggest a concept of inclusion that is critical of some special education practices, and support the notion of the continuum of services versus the concept of full inclusion.

Special education services and practices, informed by the medical and psychological models of disability, tend to deliver instructional support in segregated settings often more than the students’ learning needs would require, and do not seek to support the participation and social interactions of students who have special needs with their peers. From the perspective of the evidence on the benefits of inclusion, segregated settings do not provide the most effective learning and development for these students because they require missing out on opportunities to socialize and learn with peers, generalize abilities in natural settings, and acquire skills to increase participation and independence in the community.

The participation of the focal students in my study in the learning and social activities of their mainstream classes was essential for them in order to
learn skills and abilities to become independent, and be able to participate in the activities and social world of their community. Teaching them in different settings was effective to help them acquire certain skills and abilities, and it would have been easier and simpler for them, for me and for the classroom teacher to teach them separately all the time rather than constantly adapting activities and planning with the teachers to ensure their participation in the mainstream classroom. However, by working separately from their classes more than it was absolutely necessary, they would have missed out on many critically important learning opportunities and chances to generalize their skills and abilities.

On the other hand, the full inclusion model, endorsed by some disability advocacy groups in the United States, proposes a concept and practice of inclusion that does not allow delivering special support outside the mainstream classroom. This way it limits educators’ ability to attend to some specific learning needs.

The needs of the focal students of my research were met most effectively by the models of the least restrictive environment and the continuum of services. These models ensured that they were included in the mainstream classroom and participated in their peers’ activities based on their abilities and needs. They could increase this participation as their needs and abilities changed and developed, and they had the opportunity to receive special support in the areas where their needs were different from those of their peers. Sometimes those needs could be more effectively met outside of the classroom.

Inclusion should not mean that students with atypical learning needs must be in the mainstream class all the time and do everything their peers do. Such a model or priority would not have served my focal students’ interests. Supporting their participation and independence in their classes’ activities meant that some inclusive practices were implemented through one on one support outside of the classroom as well.

Implementing projects based on the COL model put the concept and practice of inclusion in another perspective. The need to balance the priorities of supporting the focal students’ learning according to their individual needs and their participation in the activities of peers, as well as the conflict between these priorities, ceased to exist in these projects. The concepts and practices that these activities incorporated, such as the zone of proximal development, active
engagement and increasing participation and ownership in the learning process, active interactions and shared focus, guidance and inclusion of a variety ways of learning and paces, allowed effectively integrating those priorities as opposed to the typical activities of the mainstream classroom. The academic projects based on sociocultural concepts of learning provided topics, instructional approaches, resources, settings, and pace that fit the focal students’ ways of learning and needs. They also provided also the opportunity to learn and interact with peers in a facilitated environment.

The instructional philosophy, practice and organization of the mainstream classroom did not allow for such an effective integration of all these inclusive practices grounded in sociocultural concepts of learning.

In the context of the elimination of the continuum of services and placements as well as the standard curriculum, the full inclusionist movement has proposed that learning for all students should take place through project-based activities, so all abilities and ways of learning can be included and all needs met in the mainstream classroom. The problem with this proposition is that while it offers a seemingly effective way to expand the curriculum and make the mainstream class instruction more flexible and inclusive, it ignores that some students with atypical needs and ways of learning sometimes require placement that is different from the mainstream classroom. One of the goals of the projects in this research was to provide a quiet and self-paced setting in order to take away the level of distraction of the mainstream classroom and ensure that close guidance could be offered. The mainstream classroom, with all the students working in groups, would not have provided this setting and it would have interfered with the very goals of the projects.

Another argument against the full inclusionist proposition is that learning only in this format may be limiting for all students. For the focal students of this study, increasing their participation in the mainstream classroom was an important and realistic goal. They gradually acquired skills and abilities to participate in activities that were originally very hard for them. Learning in the projects based on sociocultural concepts was beneficial for them and met many of their vital needs that otherwise would not have been met. Increasing their skills and abilities to participate in the mainstream classroom’s academic and social activities was crucial for them as well in order to gain skills and abilities to integrate and participate in the community and be independent throughout
life. Delivering all instruction for them in the project format may not have helped them in this direction, and, for example, they may not have become able to participate the way they did in the week long field trip toward the end of their elementary school careers.

Furthermore, the full inclusionist goal to eliminate the curriculum and teach all students through projects does not seem realistic as it would involve radically changing the program of entire schools and replacing the current mainstream one size fits all instruction with another. It would not be realistic also because implementing the community of learners model, or any other similar project based learning, requires more educators than does the mainstream instructional practice. These models rely on guidance for individual students and small groups as opposed to the direct instruction of whole classes.

In contrast with the full inclusionist proposition, this study suggests making the whole system more flexible by implementing instruction based on sociocultural concepts within the existing system. Based on the findings of this research, this is both realistically feasible and it would enrich the current system’s one size fits all approach, instead of replacing it with another one.

Sociocultural concepts of learning and development also informed my strategies to support the focal students in the mainstream classroom and in settings where I worked with them individually. Using various forms of guidance to lead them through academic tasks and to teach them skills and abilities in order to gain perspective and control over stressful situations were occasions when the concepts of guidance, zone of proximal development and active engagement in the learning process were essential to teach these students according to their needs. These concepts were tools that made instruction explicit, reduced the complexity of the subject matter or task. They responded to the learning and cognitive needs typical in autism.

However, in these one-on-one contexts sociocultural practices were not integrated in a comprehensive academic activity as they were in the projects. They were used as supportive strategies to adapt academic activities of the mainstream class or to teach skills the students struggled with, whereas in the projects sociocultural principles informed the overall activities instead of being only supportive strategies.
MOVING AWAY FROM THE DEFICIT-CENTERED VIEW OF ATYPICAL WAYS OF LEARNING AND NEEDS

My observations of the increasing participation of the focal students over the years I spent with them suggest embracing the position of Happe (1999), who proposed to move from the view of autism as a cognitive deficit toward looking at the condition as a cognitive style. During my professional experiences, I witnessed many times that the dominant special education practices, informed by the medical model of disability, tend to locate causes of atypical behaviour and learning inside the children, and describing them, from the point of view of typical development, as deficits. The routine practice in education refers for assessment students who show more than typical levels of challenges with learning, social interactions or behaviour. Assessment is usually done by educational psychologists or, when needed, by other medical agencies. At the end of the process the children may or may not receive diagnoses or labels. When they do, the diagnosis and label may or may not entitle them to extra learning or behavioural support. Throughout the process the focus is overly on the lack of abilities and skills of the children, and the things they cannot do in ways that are expected from children of their age. The IEP, and the assigned support that are the results of the assessment process, focus on the perceived deficits of the children as well.

Observing Robert and Sarah’s participation in different settings allowed me to view these students somewhat holistically. I was able to consider their challenges, needs, strengths and abilities across different situations, as opposed to focusing on a limited area of abilities in one or two specific settings. Therefore, while I understood that they had challenges in many areas, I could also form a comprehensive picture of their participation because I observed that they could perform skills that were missing in one setting in another setting, and also that they had strengths besides their difficulties. McDermott and Varenne (1995) formulated similar conclusions after studying a child who had significant challenges performing in school, but did well in other contexts. Their study and my experience both show that it is important to look at the participation of children in different settings, and look at the same abilities and skills in various contexts, in order to fully understand what they can and cannot do, and where their needs of learning precisely lie.
Hence, the inclusive practices I designed and implemented were based on the observation of the focal children in different settings. This comprehensive and detailed information on their abilities, along with an understanding of their strengths and interests, were important for me to be able to support them in ways that responded to their individual needs so they could learn in their zones of proximal development. The general knowledge that Sarah had challenges with abstract ideas and concepts would not have been enough to start helping her effectively. I needed to know how her challenges in this area varied according to contexts, topics and learning resources before I was able to determine that the topic of child abuse, studied through readings and discussions, applying the method of semiotic mediation in a quiet setting, was an effective practice that met her learning needs. Also, if I had determined Sarah’s abilities in the area of social interactions by watching her participation in the mainstream classroom only, I would have missed important information that I could obtain only from other contexts. Similarly, I needed to observe Robert’s performance in a number of different academic exercises before I was able to understand the types of questions, cognitive and planning skills that caused him trouble and stress, and I needed to know his interests and strengths to build on them when supporting him with those challenges.

Therefore, in-depth understanding of the learning profile of students with atypical development seems critically important because the deficit-centered view can interfere with designing effective support that responds to the particular challenges students have. When the deficit-centered view does not take into consideration students’ interests and strengths, it misses opportunities to engage and motivate them by teaching them in their zones of proximal development, and to lead them from what they know and like toward abilities and skills they are not yet confident with. Also, when the deficit-centered view does not realize or take into consideration that the lack of performance in a specific context does not necessarily mean the complete lack of a skill, it fails to build on the existing ability to extend and generalize it in other settings and, again, it may not lead to the design of effective support strategies.

Individual Education Plans and support for learning and behaviour should adopt a comprehensive view of the deficits and skills of children in order to build an intimate understand of their learning needs and design support strategies that are tailored to their individual needs effectively. This
would require that special education assessments are based on the extensive observation of the students in various settings and discussions with the teachers, instead of solely on IQ and other tests, which are the dominant and often only way of evaluating children’s abilities and needs.

**THE POSSIBLE LONG TERM EFFECTS OF THE LACK OF INCLUSIVE PRACTICES FOR CHILDREN WITH ATYPICAL LEARNING NEEDS IN MAINSTREAM SCHOOLS**

Sarah’s coping behaviours and sensitivity to stress, which interfered with her learning and participation and took a long time for her to unlearn, underscore the importance of inclusive practices for students whose learning and participation are otherwise at risk. She had attended school for four years with no support and understanding of her needs by the staff. Coping and fitting in was very hard for her, and it probably took a toll on her that lasted a long time even after she received support. Thus the consequence was not simply that she missed out on some learning opportunities and participation while she did not receive the necessary support, but it is also possible that she suffered the consequences of the accumulated negative effects by developing coping behaviours, such as avoiding showing her work, reading during class, and becoming highly sensitive to stressful situations.

I do not claim to have the means or the data to ascertain causal relationships between the lack of support for Sarah during the first four years of her schooling and some of her behaviours and habits. However, her challenges with participating in class, the function and meaning of those coping behaviours, and the information that she had not received any support for years despite the fact that her teachers signalled that she needed help, add up to an amount of circumstantial evidence so to speak, which reasonably suggests that the lack of support played a role in those behaviours.

Another issue related to the lack of support in Sarah’s case is relevant to dynamics of labelling, stigmatization and identity. As discussed in Chapter 2, labelling of students with special needs can affect them negatively in a number of ways. In relation with Goffman’s (1963) concept of stigma, as well as research by Gottlieb (1974, 1986) and Toohey (2000), it was pointed out that negative effects associated with labelling can be the result of other dynamics within groups when formal labelling is not occurring. Sarah was not officially labelled until Grade 4, but due to her ways of learning and needs that did not
fit the instructional practices of the mainstream classroom, she was perceived as different, and participated much less than she would have been able to with support or in a different instructional arrangement. When I arrived in her class in Grade 4, it was clear that not being able to participate for years had had some negative effects on peers’ perception of and social relations with her, further reducing her opportunities to participate.

Whether students with special needs are affected by such negative dynamics due to formal labelling or other mechanisms, educators should be highly aware of the risks and negative effects of formal and informal labelling taking place in the social dynamics of the classroom. Mainstream instructional practices do not always seem account for the serious consequences of these dynamics on the learning, participation and identity of students. Even if there are no blatant signs of stigmatization in a classroom, when students cannot participate and become quietly marginalized in the learning activity of the community as Sarah did, it can have lasting negative effects on their identity, self-perception and emotional well being, as Wenger (1998) suggested. Since dynamics of formal and informal labelling inevitably occur in schools, educators’ awareness of inclusive practices are critical to turn around their effects.

**SHIFTING INSTRUCTIONAL APPROACH AND PRACTICE: INCLUDING A WIDER RANGE OF WAYS OF LEARNING AND NEEDS IN MAINSTREAM EDUCATION**

The findings of my research have implications for the theory and practice of institutional education in the larger context of the issues affecting the participation of students with atypical learning needs in mainstream schools. This larger context is constituted by the growing number of children who struggle with important cognitive, learning, and social skills needed to fit in, or show behaviours that are challenging to manage in mainstream classrooms, and issues around their learning and participation.

Some of these students who show challenges with participation get diagnosed with various developmental or learning disabilities and start receiving support, which may or may not be sufficient to help their participation and learning. As Sarah’s case shows, the process of referral, assessment and assignment of support can be very slow, taking sometimes years until support systems are put in place. Some children, who are identified by their teachers as having significant difficulties with learning, may never get
assessed, or when they are their challenges may not be deemed serious enough
to qualify for support, or only for very little. The common use of the term “grey
area students” by educators to refer to these children shows the level and the
nature of the problems that these children, and the system trying to
accommodate them, both face. The pressure of the growing number of students
who do not receive enough support, whether they are labelled or in the grey
area, is well illustrated by the fact that more support for students with special
needs has been an ongoing and major demand of the British Columbia
Teachers’ Federation in the bargaining negotiations with the provincial
government in recent years.

Insufficient funding and support for special needs is, indeed, a major
source of the pressure the education system is experiencing. However, the
participation and learning of increasing number of students with atypical
learning needs in mainstream schools has other implications as well. As the
challenges of the focal students of my study show, along with the inclusive
practices that helped them increase their learning and participation over the
years, the main challenge in the inclusion and learning of these students is
overcoming the differences between their learning needs and the instructional
methods, learning activities, expectations and curricula based on the needs of
typically developing students.

Ensuring that students with atypical needs learn and are included in the
academic and social activities of their peers is a very complex endeavour. It
requires adapting learning activities and implementing strategies to support
their participation in the learning of the class. This requires the intensive and
ongoing cooperation of teachers, support workers and special education or
resource teachers. During my work with Robert and Sarah I regularly
communicated with the classroom teachers in order to know how to balance
the two priorities of the students’ learning according to their individual needs
on one hand, and increasing their participation in the classes’ activities on the
other hand. Different subjects and different activities within subjects meant that
we needed to consider how those priorities could be balanced based on the
students’ learning needs and abilities to participate in them. Since I was
dedicated to their inclusion and learning, I ensured that both of these priorities
were followed, and the classroom teachers were very supportive of them, too.
Commitment to and understanding of the importance of these priorities helped
us establish the cooperation and partnership that were vital to design and implement the support the focal students needed in order to learn and increase their participation and independence.

However, the level of cooperation I could establish with the teachers is not very typical between teachers and support workers, nor are the systematic implementation of learning activities based on the individual needs of students with special needs and their inclusion in peers’ activities. There are several dynamics hindering intensive cooperation between teachers and support workers.

In my experience, while working in a number of mainstream classes, it became clear that many teachers are not used to closely working with support workers on a regular basis in order to accommodate students with atypical needs. The culture of mainstream schools supports the notion that special education staff works with students with special needs, and classroom teachers teach the typical students. Classroom teachers are present at the meetings about the individual education plans of the students with special needs in their classes, which usually take place once or twice a year unless issues arise and necessitate more, but most often they do not get involved on a regular basis in the planning of the students’ activities. Students with special needs are generally considered to be the responsibility of the support staff and special education teachers, and any further cooperation of classroom teacher depends on their personal and professional values and attitudes.

In my experience, and also based on the experience of other support workers, teachers, when approached, are typically cooperative to the extent of providing information about the curricula and activities they plan for their classes. Some of them, not the majority though, initiate cooperation and are flexible to change things to include students, but it also happens that teachers are uncooperative and unresponsive to support workers’ initiations and requests. Personal values, attitudes and conceptions of professional role of teachers come into play, but the overall culture of the education system supports a certain division of labour between teachers and support workers, which interferes with the level of planning that would often be needed to effectively include students with atypical needs in mainstream classes.

In addition, the one size fits all instructional practice of mainstream classes, which is another important element in the culture of mainstream
Interpretation

schools, undermine the flexibility to include ways of learning and needs that do not fit those of typically developing children. This instructional approach supports a model of teaching where students have to fit in the teaching process rather than the teaching process adjusting for them. Hence, the inclusion of atypical ways of learning and needs in mainstream classes is difficult not only because the instructional approach is based on typical children’s needs, but also because this approach does not even suppose that teaching should be tailored to learners’ needs. In other words, the dominant instructional approach is not cognizant of the possible variety of ways of learning and needs, and their importance in the learning process. Many children, not only students with identified conditions, do not fit in school because of this approach; any deviation from the typical ways of learning, cognitive patterns, attention span, sensory needs, motor skills and ability to manage one’s behaviour can easily become a factor that undermines the participation and learning in the mainstream class.

Special education practices are another dynamic that often interfere with the cooperation of teachers and support workers. By removing children who need support from the activity of the peers, and not seeking to help their social inclusion and participation in peers’ learning activities, special education practices reinforce, too, the division of labour between teachers and special education staff in a way that minimizes the need for cooperation and sharing the responsibility for the learning of students. Many students who are officially fully included end up working on separate activities with the support worker, or the special education teacher, even when they could participate in the activity of the peers. Often they sit in the back of the class or they are pulled out to work in the resource or special education classroom. In other cases, when there are not enough support staff in the school, those students with special needs who have capabilities to be on their own and are not disruptive, end up working in the mainstream classroom without any support, and consequently they drift to the margins of the activity and miss out on learning and participation.

Hence, there are several dynamics that are deeply established in the culture of mainstream schools and interfere with the inclusion of students with atypical needs. Ultimately, the implementation of the policy of the least restrictive environment, which is supposed to inform the goals and practice of
inclusion of students with special needs in North America, becomes undermined by the factory model of education and the one size fits all instructional approach on which the mainstream education system is based, and it is undermined also by the dominant medical model informing special education practices. The literature reviewed in Chapter 2 on the shortcomings of the implementation of inclusion and the debates around the concepts reflect these problems. Most students with atypical needs are placed in the least restrictive environment, but due to the lack of effective inclusive practices that would support their learning and participation based on their needs and abilities, the environment becomes restrictive for them. They are formally included and present in the schools, but many do not learn and socialize according to their needs and capabilities. They miss out on important learning opportunities, struggle academically and socially, and suffer the long term social and emotional consequences of not receiving a proper education. This is a burden also on their families as they go through years of frustration seeing their children not fitting in and not learning, often combined with the equally frustrating experience of dealing with a highly bureaucratic system that does not understand or accommodate their children’s needs. My experience working with youth with special needs suggest that relatively many students with atypical needs end up in special schools, programs or homeschooled after experiencing insurmountable academic and social problems in mainstream schools. From the perspective of this study, this is a symptom of mainstream educational institutions not meeting the needs of these learners.

Mainstream schools have increasing difficulties accommodating a range of learning needs that seem to be widening. The findings of this research suggest that broadening the instructional philosophy and practices to include and serve effectively this widening range of learning needs may be helpful. The mainstream education system should move from the one size fits all practice of teaching the typically developing children toward a more flexible philosophy that supports a range of practices, which can include the growing population of students with ways of learning and needs that do not fit the pattern of typical development that the system currently assumes and is based on.

Inclusive education has been shown overall to be more beneficial than segregation for students with special needs by a convincing body of research. Yet, as the literature reviewed earlier also suggests, there is hesitation and
confusion over how to include students with special needs in mainstream classes, and what exactly inclusion means. This study shows that sociocultural concepts and practices of education are effective in responding to atypical learning needs, both as strategies to support the participation of students with special needs in the learning activities of the mainstream class and as comprehensive learning activities for these students where the goals of learning based on individual needs and participation with peers are integrated. The experience of the learning projects I implemented show also that activities based on sociocultural concepts and practices can be accommodated and integrated within the program and curricula of mainstream classes. These activities may be appropriate for a significant portion of students with special needs whose abilities and needs are not very far from those of their peers, thus their learning goals can be integrated in the grade curricula, as it happened in the case of the focal students of my research.

Furthermore, these activities can offer enriched learning experiences for typical peers as well. Hence, learning activities based on sociocultural concepts offer more than the model of a special program to accommodate students with special needs; rather they provide an educational philosophy and practice that broadens the existing instructional practice and learning opportunities of mainstream schools. By implementing an approach and practice within the mainstream, the whole system can move from serving a limited range of needs toward including a wider spectrum of learning needs through offering a continuity of instructional approaches and learning experiences that benefits all students.

**LIMITATIONS OF THE STUDY**

The primary goal of my longitudinal participant observations and action research was to document the challenges the focal students experienced in the mainstream classroom, the inclusive practices I implemented to support their learning and participation, and the progress in learning and participation they made over the three and four years respectively I spent with them. While I was able to record an extensive amount of information over a long period of time, collecting data from nearly all the settings and activities in which the focal children participated in school, this ethnographic research has both strengths and limits in terms of its explanatory ability and scope.
Most importantly, while I implemented a number of strategies to help support various skills and abilities that the students struggled with, and I was able to observe and document that they gradually acquired those skills and abilities as their increasing participation and independence showed, I cannot and do not claim having established causal or direct relationships between specific inclusive practices and the changes in participation and abilities of the focal students. My data may be rich and extensive; nevertheless the nature of the phenomena I observed and documented, as well as the nature of the data, limit the possibility to interpret my findings in terms of effectiveness of specific practices in teaching students with autism.

I can conclude that the students acquired skills and abilities and they increased their participation and independence, and that the support system of the inclusive practices I implemented played a certain role in this process. Yet, establishing direct links between specific strategies and skills or abilities is not possible as I did not implement the practices in a clinical setting, I did not have the means to record the effects of specific practices on discrete skills or abilities, and I did not use controls. The nature of the phenomena I studied involves a great number of variables that make it very hard to establish causal relationships among the phenomena. Changes in the focal children’s learning and participation over time were influenced by their natural development, the social climates and dynamics in their classes, and other interventions they may have received outside the school. The inclusive practices I documented in my research likely had an effect, but it is not possible to determine their exact role amid the other variables affecting the focal children’s learning and participation. Therefore, my study has methodological limitations that are typical of other studies on the effectiveness of educational interventions for children with autism.

This limitation is somewhat compensated for by the fact that my data contain information that is extensive enough to draw conclusions on the generalization of skills and abilities of the focal students. Research on the effectiveness of educational interventions for children with autism are often limited in this sense as they record the direct effects of specific interventions in a clinical or controlled setting, but they have no means to determine whether taught skill and abilities become generalized and transferred to other settings. Since I had the opportunity to watch the focal children over several years in different settings, I could document some effects of generalization of the skills
and abilities I helped them build. Sarah’s participation in the organization of the Halloween day in particular was an opportunity to observe her using in a new environment the skills and abilities I had helped her acquire in a number of other settings and activities before. Robert’s participation in the card games with other children at recess and lunch also allowed observing the generalization of skills and abilities that I had supported in a number of other settings through different strategies. As well, the participation of both focal students in the weeklong trip to Quebec offered yet another opportunity to see them using a great number of skills and abilities in a new setting and activity. Again, this study does not rely on data or means that would allow establishing direct links between inclusive practices and the students’ generalization of skills and abilities in these new settings. However, the inclusive practices had certainly played a role as a system of support in their learning and generalization of those skills and abilities that transpired through their increasing participation and independence over the intermediate years of elementary school.
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References


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References


APPENDIX A

Document dating from February 2008, created to communicate with the classroom teacher about Sarah’s progress and needs with stressful situations

Analysis of Sarah’s ability to solve problems and handle stress based on last Friday’s events.

9:00am: Sarah interpreted the teacher’s words in a way that assumed she couldn’t participate in the hip-hop presentation later. The suggested only that she hadn’t practiced the dance and it might be stressful for her not to follow with the class. Sarah became upset but calmed down after I asked her to; following the protocol we are using.

11:55am: Sarah became stressed as her lunch hadn’t arrived yet – mum was late – but managed to stay calm after I reminded her to do so and wait.

12:05pm: Sarah took the initiative to call her mum as she still wasn’t coming. She was reassured that she’d be there very soon, but when the bell allowing the children to go out rang she got very upset and lost control. She cried, kept asking “why lunch is so short?” and did not respond to my attempts to calm her down and also she shut down for the solutions I could offer – finding some food in the staffroom or eat after lunch. She knew that she was supposed to go to the gym to her weekly activity she always looks forward to, but being hungry and her mum not coming were problems too hard to overcome, she was very angry and at one point she pushed over a chair. When mum arrived she calmed herself down quickly.

12:20pm: when we got to the gym Sarah had to deal with another change of routine. The hip-hop teacher offered to the girls to teach them some more dance moves and they accepted. Sarah overcame her initial upset about not being able to play as she usually did and joined the dance.

12:40pm: Sarah got upset when at the end of recess the grade seven girls came in the gym. As we couldn’t hear the bell because of the music she did not
realize that lunch was over and blamed those students for stopping their activity. She could overcome her frustration again when I explained the situation to her.

During the afternoon she was with another support worker with no major stress.

3:00pm: Sarah got upset as her mum was not coming to get her bag before she was supposed to go to a friend’s party. She cried, but calmed down when I explained that mom came earlier with the present and she had to keep her bag like the other girls.

This review of the events help to illustrate where is Sarah regarding her ability to cope with unexpected and upsetting situations. This was a stressful day with more changes than usual. Overall, Sarah is now more able to handle stressful situations and control her emotions than she was in the past. She responds well when she is reminded that she needs to stay calm and there is a solution to the problem she encountered — she overcame several stressful situation for which she needed assistance, however in the past her ability to cope was lower, even with assistance. Also, she was able to take the initiative to call her mum, which is a big step compared with similar situations last year when she got so upset that she couldn’t even think of this solution, even when I prompted her. Now she went to call on her own from the lunchroom to the office, I was not even there.

It is very important to help Sarah overcome stressful situations using the protocol. It is also important to debrief after stressful situation so she sees when she coped appropriately and she can use the experience to learn from it. She still needs reminders and assistance, but in time the assistance must be gradually faded out so Sarah becomes able to deal with stressful situations and problems independently by staying calm, taking a break and look/ask for help appropriately.
APPENDIX B

Excerpt from the novel written by Sarah and her peers in Grade 6

Eva put down her suitcase and sat down on the hard orphanage bed. She brushed her honey blond hair out of her brown eyes and reached down to take off the support that kept her right leg straight. She had been wearing it since she was five. It was just a black plastic stick attached to her leg but it was the only thing that kept it straight.

Eva’s parents had been murdered a month ago and no one knew who had done it. Actually, they were her foster parents. When she was a baby her parents found her by a tree. They never found her biological parents so they adopted her.

She looked around. The dormitory was a large room with at least forty beds in it. The walls were grey and the yellow quilt on the bed was scratchy. She was wearing the orphanage uniform. She changed into it before she went to her dormitory. She had to admit she liked the uniform. It was a long sleeved white tee-shirt, a grey dress, white stockings and black Mary Jane’s. She did not know what the boys’ uniform looked like. She wondered if it was like the girls’ uniform.
Brinnggg! Brinnggg! Brinngggg!

The dinner bell went, Elise, Eva and Violet bumped into each other while running down the stairs. Elise was about to go to her regular spot when Amanda Nibbinson sat there. So Elise was forced to sit with the new kids; Eva and Violet. They started chatting about life in the orphanage when a boy named Jacob asked to sit with them. Elise immediately said “no” because he was a loner who never spoke to anyone, however, Eva told Jacob that Elise was just joking, so he sat down with the girls. Eva asked Elise quietly “Who is he?” but Jacob overheard and said “They call me Jacob”. Violet wondered: who are “they”? Jacob was weird; he kept staring at Eva as if she were food. Elise heard Eva say in a high pitched tone “He is hot!”: She immediately clasped her hand over Eva’s mouth.

After dinner Elise sat down on her hard orphanage bed and said Eva and Violet to sit with her. Violet asked why the uniforms were so boring. Elise sat motionless, she had never thought about it, but now she wondered herself about the dull outfit. She tried to remember how she felt about the uniform when she first got here. It seemed so longtime ago and yesterday at the same time. Violet shook her: “Elise...Elise!” She blinked slowly “They wear the outfits because it shows respect to the Lord and to our elders” she replied. “Oh” said Eva, sounding really surprised. Sister Claire entered the room. “There you are!” Elise glanced at the grey clock on the wall. It was 6:30, they all had lost track of the time. It was time to go to church to pray. They ran out. Elise prayed the “Our Father” then the “Hail Mary”, Eva prayed the simplest kind of prayer and Violet prayed the “Hail Mary”. Sister Marguerite clapped her hands, “Prayer time is over kids!” (Violet found that she Eva and Elise were the only kids left but she did not mention it.) When they got back into the dorm and went to bed it was already past lights out. Violet and Elise fell asleep quickly; however, Eva could not sleep. The boys’ dorm was above theirs, but it sounded more like a sumo wrestler fighting a mountain lion than a boys’ dorm.
How come they are still up and can be so noisy? Perhaps the sisters do not hear? Eva wondered. She got up and took out her markers and a notebook from under her mattress that was the only place she could hide them. When opened the notebook she started writing, it started out as a word, which became a paragraph, which quickly became a chapter book!

Suddenly, Jacob came in. “Hey girly” he said to Eva in a very quiet voice. “Hhh-hi!” she stammered. She looked at him, wondering where he had come from. Jacob and Eva was special. Eva thought he meant he liked her! Suddenly she remembered Jacob was talking. “… and therefore you are from Iralia.” he said. “What’s Iralia?” Eva asked. Jacob knew she had not been listening. “Look” he said “I’ll come back tomorrow night. Make sure Violet and Elise are awake.” “Wait!” she said, “I .. uh .. I want to tell you I really like you.” Jacob smiled. “I know. I can read minds. You shouldn’t like me. It’s not safe.”
Document written in November 2006 to communicate with the teacher and parents about our strategies to help Robert learn skills to handle frustrating situations

Teaching self-control skills for Robert

General goal:
To teach Robert how to handle stress situations by calming himself and choosing an appropriate solution to the problem.

Particular focus within this:
To help Robert learn to handle test situations that are most likely to cause feelings of frustration, helplessness, stress and sometimes major meltdowns, so he is able to take tests with the class, stay calm if he is stuck and choose an appropriate solution (skip that part of the test, finish later, have it scribed for him, be tested in a different way, etc.).

Strategies:

1. Social stories — one about how to recognize/identify signs of frustration when they start and how to handle them at that level; another about test situations and the choices he can make before and during tests — like above between brackets.

2. A game/mind exercise to learn how to handle problem situations: prepare scripts of situations and decide if they are a problem, why, and how to solve them with Robert reading the script and answering multiple choices and/or open questions and later create the scripts himself.

3. Debriefing with Robert if there was a problem situation: what was the problem, what did he do, could have done, etc. either in school or at home depending on Robert being ready for it but as soon as possible.

4. Tools for Robert to deal with his anger — squish ball, . . . ?
Appendix E

Rules for the weekly gym activity, “Girls’ Soccer Club”, created by the members to facilitate inclusion, play together and ensure safety (October, 2008)

GSC Rules

Routine:
- Start cleaning up at first bell
- Leave gym at second bell
- If you have to go to another class after lunch bring your materials for it to the club
- You must go to the washroom during lunch not after; you must be back in class no later than 2 minutes after 2nd bell

Fairness and Inclusion:
- No bullying: don’t be mean in any way to others
- No Cliques: don’t play with the same people all the time
- Make sure you join games and invite others to your games
- Never exclude anybody from a game, always compromise how they can participate
- Be social with other members: say “hi”, “bye”, etc. in and outside of the club

Sharing Materials and Space:
- Take turns using materials, or switch at bell
- Use cones to mark your space when playing a game with a small group
- Be considerate to others’ games when you mark a space
- Respect a group’s space if they marked it

Organizers’ responsibilities:
- Organize team games at least every 2-3 weeks
- Make sure everybody listens and follow rules
- Help to solve problems between club members
- Set up gym if there is a game before others finish eating
Safety:
Don’t stand on turtle boards
Don’t jump off ladder/ropes without a mat
When you jump make sure there is no one on the mat
Don’t aim at others’ heads with balls
Don’t drag people on the parachute
Don’t stand under basketball nets
Don’t swing the turtle boards and don’t spin them in the air
Don’t go between mats
Don’t go on mats when they stay chained to the wall
When playing with rackets mark your area so you will not hit others
No eating or drinking while playing
When you finish using something leave it next to the wall – not in the middle of the gym – so others don’t trip and materials don’t get ruined
APPENDIX F

Pieces of writing by Robert for the novel he wrote in a COL project, containing the riddle and showing the difference between his own succinct version of the chapter and the one written with guidance

Chapter 9: Help where you least expect

Rachel dreamed about chasing someone again but this time she was also being chased, some who was armed! But then she suddenly fell into a rabbit hole which lead to an igloo. Mark was inside the igloo, and he spoke these words: if knowledge is what you seek, education is likely what you need, but to find the one who put me at the end of my rope, you’ll need to be cunning and search the quarters of the educational chief.

With that which I have told you the sinner is to be revealed.

Then Rachel woke up.

Chapter 9: Help where you least expect it

Rachel dreamed about chasing someone with a black hoodie again.

She was running along the park, her feet burned and panic slithered through her body. She chased the same black hooded figure, again, not knowing who it was and the potential danger within the possibilities of the resulting events. Like in dreams, she just flew with the events. But she was afraid of the consequences should her pursuit fail. She somehow just knew that catching the person in front of her was essential to solving the mystery. The thought of letting who was likely Mark’s murderer get away was unbearable.

But the person faded and panic overcame her again. Suddenly she was running on another path in the park, but this running was different. The same person who she was chasing moments ago was now pursuing her and was armed. The park was empty and Rachel ran for her life. She did not dare to look back; she
heard it gaining on her with corroding anger. And she also knew that if her pursuer caught her it would mean death.

Just when about to be caught, she suddenly fell into a rabbit hole which lead to an igloo. Mark was inside the igloo, and he spoke these words:

*If knowledge is what you seek, education is likely what you need, but to find the one who put me at the end of my rope, you’ll need to be cunning and search the quarters of the educational chief.*

*With that which I have told you the sinner is to be revealed.*

Then she woke up.