Self-Determination and Academic Engagement of Students with Learning Disabilities in a Special Education Context

by

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M.A., Simon Fraser University, 2006

Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

in the Educational Psychology Program

Faculty of Education

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SIMON FRASER UNIVERSITY

Spring 2018

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Ethics Statement

The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

a. human research ethics approval from the Simon Fraser University Office of Research Ethics

or

b. advance approval of the animal care protocol from the University Animal Care Committee of Simon Fraser University

or has conducted the research

c. as a co-investigator, collaborator, or research assistant in a research project approved in advance.

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Abstract

Policies that promote inclusive education have been adopted by provincial governments across Canada to provide students with disabilities access to the general education classroom, its curriculum, and interaction with their peers without disabilities. However, there is debate over the ability of general education classrooms to meet the learning needs of students with learning disabilities. The purpose of this study was to investigate student experiences within a self-contained special education classroom and address the primary research question: What is the lived experience of students with learning disabilities within the Literacy Development Program (LDP)?

This research was guided by self-determination theory (SDT; Ryan & Deci, 2000), that posits human motivation, development, and well-being are impacted by social environments such as classrooms. SDT suggests that when students’ needs for relatedness, competence and autonomy are largely met, they will be self-motivated, curious and eager to succeed. Two sub-questions guided by SDT included: How does the implementation of the LDP support students’ needs for relatedness, competence and autonomy? and, How do supports for relatedness, competence and autonomy within the LDP impact student engagement? Case study methodology provided the opportunity for in-depth analysis of educational practices and student engagement within the classroom.

Findings highlight numerous supports for students’ sense of relatedness to their classmates and the staff. Threats to students’ sense of competence through the process of “othering” that enrolment in a special education classroom entails are discussed. However, within the classroom there was considerable support for students’ sense of competence including minimizing otherness. Minimal supports for autonomy were observed within the LDP. As predicted by SDT, variation in academic engagement of three students selected for in-depth study was found. Implications for educational practice are discussed including ways that special education and regular education classroom contexts may minimize otherness for students with learning disabilities.
Keywords: learning disabilities; self-determination theory; special education; academic engagement; organismic integration theory
Dedication

For Michael who started it all and for Alon, Kyle, Katelyn and so many other students and parents. You inspired me to investigate ways to support students with learning disabilities and kindled a passion to bridge research and practice that led to this work.
Acknowledgements

I would like to acknowledge the unending support I have received from Dr. Maureen Hoskyn. She encouraged me to undertake doctoral studies and has supported this work as my senior advisor in ways too numerous to mention. She has been constantly available - encouraging, reviewing, suggesting, and pushing me to think critically. We have had many, many conversations in which Maureen challenged my teacher lens and focused my thinking on theory and knowledge building.

I would also like to thank Dr. Paul Neufeld for his encouragement and support. I greatly appreciated his thoughtful feedback, especially helping me to clarify key points in my findings and discussion.

I thank Dr. John McNamara and Dr. Robert Williamson for generously offering their time and expertise as part of the examining committee for this work. I am most grateful for the opportunity they afforded me to articulate my findings and defend this thesis. I also thank Dr. Allan MacKinnon for chairing my defense. I so appreciated his time and experience.

I owe enormous gratitude to the students, parents and staff that participated as research subjects making this inquiry possible. The teacher and EA opened their classroom to me willingly. I would like to acknowledge the discomfort that being observed teaching can elicit in all of us educators. It is a bit like baring one’s professional soul. I can’t thank them enough for their candour, their patience, and their enthusiasm for this work. I will forever be indebted to the student and parent participants who allowed me a glimpse into their experiences over the course of the school year. For this I thank you. And also, I thank the elementary school staff that made me feel most welcome in the school throughout the year.
I would also like to thank three individuals that were colleagues at SFU when I began my doctoral studies and continue to be friends who have offered support and encouragement over the past seven years. Thank you Diana Ellis and Catherine Hanna. You are the best intellectual cheerleaders a person could ask for. And thank you, Dr. Ann Chinnery. Your encouragement and support over the years has meant more than you may know.

I thank my sister, Lorna, and her family who have encouraged and supported me in this endeavour. You took on more than your fair share of caring for Mum so that I could carve out time to work on this research. I can’t thank you enough.

And finally, I thank my husband, Eric, and our three sons, Brett, Morgan and Aidan. As I write this Eric and I are approaching our 30th wedding anniversary. I have been a student for 18 of those years. Eric, you are a patient man! You’ve picked up all the pieces at home and supported me to finish my undergraduate degree, complete my master’s degree, and made this doctoral degree possible. I promise that I am done studying. I love you. And to our sons: Thank you for your patience and encouragement. You give my life meaning. I hope you pursue your passions.
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<th>Description</th>
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<tr>
<td>EA</td>
<td>Education Assistant</td>
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<td>LDP</td>
<td>Literacy Development Program</td>
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<tr>
<td>LST</td>
<td>Learner Support Team</td>
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<td>SDT</td>
<td>Self-determination Theory</td>
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<td>SFU</td>
<td>Simon Fraser University</td>
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Chapter 1. Introduction

Students with learning disabilities report lower levels of intrinsic motivation at school than their peers without disabilities (Zisimopoulos & Galanaki, 2009). This is important as motivation to learn predicts academic achievement for all students (Guay, Ratelle & Chanal, 2008; Luftenegger et al., 2015; Meyer, McClure, Walkey, Weir & McKenzie, 2009), including students with learning disabilities (Antoniou & Sideridis, 2008; Sideridis & Tsorbatzoudis, 2003). As student motivation is highly associated with academic engagement (Jang, Kim & Reeve, 2012; Reeve & Lee, 2014), designing classrooms that support student engagement in educational practices is a priority and is particularly pertinent for students with learning disabilities.

While designing general education classrooms to support learning of students with learning disabilities has garnered considerable research attention (Janney & Snell, 2006; Jordan, Glenn & McGhie-Richmond, 2010; Jordan, Schwartz & McGhie-Richmond, 2009; McGhie-Richmond, Underwood & Jordan, 2007), design of special education classrooms has received far less attention. This is a critical oversight. In British Columbia inclusive practices are not defined by placement, and therefore, are not necessarily synonymous with full inclusion in regular education classrooms. Rather, inclusion describes, “a principle that all students are entitled to equitable access to learning, achievement and the pursuit of excellence in all aspects of their educational programs” (BC Ministry of Education, 2016). Therefore, within this educational context
it is important to understand ways in which self-contained special education classrooms may impact student motivation and engagement in learning.

Self-determination theory (SDT; Ryan & Deci, 2000), due to its focus on motivational processes, provides a theoretical framework for this work. SDT posits that environmental contexts either support or thwart students’ needs for relatedness, competence and autonomy which are viewed as fundamental psychological needs that are foundational to human development and well-being including learning at school. According to SDT, motivation to engage in learning is contingent on support for students’ needs to feel related to their parents, teachers and peers, to feel competent to engage in the educational practices of the classroom, and to feel that they are engaging in those practices of their own volition. Organismic integration theory (Ryan & Deci, 2000), a sub-theory of SDT, posits that much human activity, including many educational practices students engage in at school, are externally, rather than internally, motivated. However, degree of autonomy experienced is the key factor, in addition to sense of relatedness and sense of competence, in initiating and sustaining engagement in the classroom. Further, a sense of autonomy is posited to be a necessary condition for the integration of the regulation of learning behaviours into students’ sense of self. It is this integration of learning behaviours into a student’s sense of self that leads to optimal cognitive engagement in learning over time.

The aim of this inquiry is to add to the extant literature regarding how a special education context, the Literacy Development Program (LDP), influences and is influenced by student motivation and engagement in educational practices. The
remainder of this chapter outlines difficulties reported by individuals living with learning disabilities, expands and develops the controversies and complexities regarding the provision of special education support on motivation and engagement of students with learning disabilities, and introduces the theoretical framework that informs this inquiry. The chapter concludes with a statement of the research questions.

1.1. Living with Learning Disabilities

The British Columbia Ministry of Education (2002) adopted a definition of Learning Disabilities adapted from the definition developed by the Canadian Learning Disabilities Association. This definition describes learning disabilities as a number of disorders that: affect the acquisition and use of verbal or nonverbal information, affect learning in individuals with at least average intellectual abilities, result from impairments in processes related to perceiving, thinking, remembering or learning, range in severity and may interfere in the acquisition or use of oral language, reading, written language or mathematics, are life-long, and are due to genetic and/or neurological factors (see full definition in Appendix A). Based on this definition students are identified in BC through assessment and documentation that includes evidence of persistent learning difficulties, average or above average cognitive abilities, and weaknesses in cognitive processing (BC Ministry of Education, 2016). Therefore, all students identified with a learning disability in BC schools, including the students participating as research subjects in this study, have demonstrated persistent learning difficulties in comparison to same age peers within regular education classrooms before receiving a special education designation. This is of
import due to research that suggests students’ perceptions of academic difficulties (Malmberg & Little, 2007) and self-comparisons to peers (Marsh & Hau, 2003; Nagengast & Marsh, 2011; Pinxten et al., 2015; Trautwein, Lüdtke, Marsh, & Nagy, 2009) inform students’ sense of academic competence. Since sense of competence is theorized within SDT to support student engagement in learning, the persistent learning difficulties in comparison to same age peers of students identified with learning disabilities puts these students at risk for decreased motivation and engagement in the classroom.

Beyond the immediate learning consequences evidenced by decreased feelings of competence and motivation to learn, the long-term impact of learning difficulties on students with learning disabilities are numerous and significant (National Centre for Learning Disabilities, 2017). In a study investigating the mental health outcomes of Canadians with self-reported learning disabilities aged 15 to 44 years, Wilson, Armstrong, Furrie and Walcot (2009) found that respondents reporting learning disabilities reported high levels of distress, depression, anxiety disorders, suicidal thoughts, visits to seek mental health support, and lower levels of overall mental health at more than twice the rate of respondents without disabilities. Using data from the Canadian Community Health Survey: Mental Health and Well-being, Cycle 1.2 (Statistics Canada, 2003) the authors found that after controlling for factors such as income, education, social support and physical health multivariate regression analyses showed these differences in mental health outcomes to be significantly higher for respondents reporting learning disabilities than for those without disabilities.
Further, the Canadian Survey on Disability (Statistics Canada, 2012) reported that adult respondents aged 15 – 64 with self-reported learning disabilities who were not attending school had overall lower levels of educational attainment than respondents without disabilities. Respondents who reported having learning disabilities were less likely to have graduated from high school compared to peers without disabilities (67% compared to 86.9%) and were less likely to have completed post-secondary qualifications (35.6% compared to 61.1%). Therefore, the long-term impact of difficulties learning described by students with self-reported learning disabilities demonstrate that these students are disadvantaged when leaving school and entering the work force in comparison to their peers without disabilities. These negative outcomes point to the need for research that examines the nuances, and provides thick description, regarding how a special education classroom context may provide support for student motivation, engagement, and learning. This research aims to add to theoretical knowledge regarding student motivation and engagement and support the bridging of research and practice in designing a variety of educational contexts that will effectively support the learning of students with learning disabilities.

1.2. Supporting Students with Learning Disabilities

The prevalence of poor mental health outcomes and the inequity in educational attainment among students with learning disabilities is an issue that schools throughout North America aim to address through special education services. However, the design
and delivery of special education programs for students with learning disabilities has been a complicated and at times a contentious undertaking (Fuchs & Fuchs, 1995).

Within the history of special education in Canada, the last two decades have seen a philosophical and practical shift toward inclusive education defined in terms of physical inclusion within regular education classrooms, and in terms of access to learning opportunities (Lupart, 2000). For the purposes of this thesis, inclusive education refers both to the principle of equity of access and to the placement of students with disabilities within general education classrooms for all, or the majority, of the school day.

Provincial governments have adopted policies that promote inclusive education across Canada to provide students with disabilities access to the general education classroom, its curriculum, and interaction with their peers without disabilities (Lupart, 2000; Siegel & Ladyman, 2000; Thomas & Loxley, 2007). Access to the general education curriculum is viewed as one of the major tenets of the inclusion movement in education. Physical separation of children in special schools or classes is seen as unnecessary to meet the learning needs of students with special education designations (Deno, 1970; McLaughlin, 2006). Further, some researchers consider such segregation a violation of human rights at worst (Porter, 2010; Reid & Valle, 2004), and ineffective at best (Rea, McLaughlin, Walther-Thomas, 2002; Affleck, Madge, Adams & Lowenbraun, 1988). Other researchers highlight the stigmatizing effect of special education labeling and intervention and the subsequent effect on student self-concept (Madge, Affleck & Lowenbraun, 1990; Mattson & Roll-Pettersson, 2007; Wiener & Tardif, 2004; Whitley, 2008). However, there is often disagreement over the ability of inclusive regular
education classrooms to meaningfully include students with learning disabilities through the provision of equitable access to learning (Magiera & Zigmond, 2005).

As previously mentioned, in BC inclusive educational practices are not defined by student placement, and therefore, are not necessarily implemented through full inclusion in regular education classrooms. Rather, within the context of BC schools, inclusion describes entitlement to equitable access to learning and opportunities for academic achievement (BC Ministry of Education, 2016). Inclusion advocates state that the expected outcome of inclusion is that students with disabilities are valued members of the school community (McLeskey, Rosenberg & Westling, 2013). This perspective, however, is not without controversy. Reid and Valle (2004) argue that true inclusion cannot occur when students with special needs are physically separated from or excluded from the general education classroom. Although as defined in this research the LDP does not constitute an inclusive classroom context, this research explores how students and staff interact in the educational practices of the classroom in ways that may support student motivation and engagement and enable access to opportunities for learning.

Within the field of learning disabilities many researchers point out that in addition to the implementation of effective general education classroom instruction for all students, students with learning disabilities require additional, high quality instruction that addresses their specific learning needs and aims to close the achievement gap between students with and without learning disabilities (e.g. Fuchs & Fuchs, 1995; Torgesen, 2002; Zigmond & Baker, 1996). Research suggests that there are several qualities of effective targeted intervention for students with learning disabilities.
Students with learning disabilities benefit from instruction that is teacher directed, explicit and systematic within their areas of instructional need (Vaughn & Linan-Thompson, 2003). For example, research converges to suggest that effective literacy intervention for students at risk of reading difficulties or struggling to acquire literacy skills will focus on explicit instruction of key reading skills including phonological awareness, phonemic decoding skills, fluency, vocabulary, reading comprehension, spelling and writing and will be more intensive than for their average achieving peers (Foorman & Torgesen, 2001; National Reading Panel, 2000). Greater intensity can be achieved through small instructional groupings (Gersten et al., 2009; Vaughn et al. 2003), and/or greater instructional time (Fletcher & Vaughn, 2009; Torgesen, 2002).

Although there has been considerable research regarding the delivery of targeted intervention for students with learning disabilities, many reviews of the extant literature report inconclusive findings regarding the academic efficacy of inclusive, pull-out, and special class service delivery models (Fore, Hagan-Burke, Burke, Boon & Smith, 2008; Lindsay, 2007; Zigmond, 2003). In a synthesis of the literature that included observational studies of instruction for students with learning disabilities in regular education and resource room settings, Vaughn, Levy, Coleman and Bos (2002) came to the troubling conclusion that there was no convincing evidence that effective intervention instruction was occurring in either special education or general education classrooms. Students with special needs themselves, including those with learning disabilities, give mixed reviews about their engagement in both educational contexts. They have reported that the resource room is a better environment in which to learn (Le Mare & de la Ronde,
2000), but the regular education classroom is a better environment for developing social connections (Casserly, 2013; Klingner, Vaughn, Schumm, Cohen & Forgan, 1998; Vaughn & Klingner, 1998). The current work explores the LDP as a special education context and the specifics of the design and implementation of the program including lower student:staff ratio, common need for intensive literacy intervention, specialized instructional resources, differentiated small group targeted literacy instruction, and ongoing assessment and progress monitoring. This research includes an examination of how the design and implementation of the program afford students with learning disabilities opportunities to participate in educational practices, develop their academic skills, and engage as competent learners.

In light of findings that are equivocal regarding the relative efficacy of interventions in inclusive or special education settings, it is not surprising that access to general education curriculum for students with learning disabilities has widespread appeal among parents and educators. For supporters of inclusive practices, access to a general education classroom is viewed as a means to increase the breadth of learning opportunities and to support student transitions from school to adult life (Affleck, Madge, Adams & Lowenbraun, 1988; Deno, 1970; McLaughlin, 2006; Porter, 2010). Although, enrolling only students with learning disabilities, the design of the LDP included delivery of grade appropriate general education curriculum as outlined by the BC Ministry of Education (2016). This study includes an examination of the role that access to general education curriculum plays in supporting students’ sense of competence, which is predicted by SDT to enhance student motivation and engagement.
Designing and implementing educational contexts for students with special needs, including students with learning disabilities, is a complex undertaking. Issues regarding meaningful inclusion of students with special needs in regard to both physical access to general education curriculum and peers without disabilities as well as equitable access to learning opportunities continue to be debated by those involved in education in schools, school districts and universities. Zigmond (2003) suggests that focusing solely on place is misguided. She calls for a more nuanced approach to research into special education programming that addresses questions of, “best for whom?” and, “best for what?”. She identifies a need for research that examines instructional settings and the specifics of instructional implementation within those settings that identify what learning they support and for whom those supports are effective beyond that which can be determined from efficacy findings ascribing outcomes to particular settings or service delivery models. The present research addresses this need in two ways: first, through providing thick description of the lived experience of students with learning disabilities in a self-contained special education classroom designed to provide students with both access to regular education curriculum as well as research based literacy intervention, and second, through an examination of how educational practices may support students within this context and impact student motivation and engagement in those educational practices.

1.3. Motivation, Engagement and Learning

Designing educational contexts that promote motivation to learn and student engagement in the educational practices of the classroom is important for all students and
particularly for those with learning disabilities who report both lower levels of perceived
cOMPETence (Deci, Hodges, Pierson & Tomassone, 1992; Grolnick & Ryan, 1990) and
lower levels of intrinsic motivation at school (Zisimopoulos & Galanaki, 2009) than their
peers without disabilities. Numerous theories address motivational issues across life
domains, including learning at school, and have been applied to research regarding
students with learning disabilities (Sideridis, 2009). SDT is utilized in this research as it
provides a theoretical framework outlining ways in which socio-environmental contexts
impact individuals’ motivation including motivation to learn. As outlined briefly below
and in detail in chapter two, SDT has been found to be a useful theoretical framework in
researching learning environments for students with and without learning disabilities and
is an appropriate lens through which to examine the LDP as a context for learning.

SDT is a macro-theory of motivation that is focused on the impact of socio-
environmental influences on motivational processes. It is a theory of personal
development that suggests that motivation is influenced through the provision of
contextual supports for three fundamental human psychological needs. SDT posits that
relatedness, competence and autonomy are universal and fundamental psychological
needs that are the foundation of positive human psychological development and personal
well-being including learning at school. Furthermore, the fulfillment of these needs is
either supported or thwarted within social contexts and motivation and engagement, as a
consequence, are either enhanced or reduced.

SDT provides a clear theoretical framework for the examination of influences
within educational contexts that may impact student motivation to learn and consequent
behavioural and cognitive engagement in educational practices. SDT posits that students are motivated to learn at school when they feel related to their parents, teachers and peers. They also feel motivated to learn when they feel competent to participate in the educational practices of the classroom and when given opportunities to successfully demonstrate and enhance their capabilities. Of particular import as suggested by SDT is the need to feel volitional or autonomous in engaging in educational practices within the classroom. When students feel related to their parents, teachers and peers, competent to participate successfully, and volition regarding participation due to seeing value in the activity in which they are to engage students will demonstrate optimal behavioural and cognitive engagement in learning and integrate the regulation of positive learning behaviours into their sense of self. Self-contained special education classrooms present both challenges and opportunities for students regarding meeting their needs for relatedness, competence and autonomy.

Sense of relatedness refers to students’ need to develop reciprocal caring relationships with parents, teachers and peers. In school settings teachers and peers are particularly salient in promoting engagement in learning. Students with learning disabilities in inclusive general education classrooms have been found to rate their teachers as less fair than students in self-contained special education classes (Whitley, 2008). Special education teachers may be more knowledgeable and understanding about the learning needs of students with learning disabilities, and may therefore, interact with students in ways that are more likely to develop positive relationships. The educational practices within self-contained classrooms may also minimize behavioural issues
resulting in fewer interactions between students and staff dealing with behavioural infractions, which in turn may impact students’ relationships with their teachers.

The extant research regarding peer relationships shows equivocal findings. Previous research suggests that students with learning disabilities prefer the social opportunities available in regular education classrooms (Casserly, 2013; Klingner et al., 1998; Vaughn & Klingner, 1998). This finding may be related to larger class sizes in regular education settings providing a greater number of classmates with whom students can connect. Preference for the social opportunities available in regular education classrooms (Casserly, 2013; Klingner et al., 1998; Vaughn & Klingner, 1998) may also be related to the possibility that segregating a select group of students who all have special needs into one classroom may identify those students as “special” or “other” to themselves and the rest of the students in the school which may also negatively impact their social opportunities.

However, conflicting findings also exist in the extant literature on peer relationships of students with learning disabilities. Research by Whitley (2008), using data from the National Longitudinal Study of Child and Youth data set (Statistics Canada, 1999), found that for a sample of 106 students with learning disabilities increasingly inclusive placements, from self-contained classes through to fully inclusive regular education classes, resulted in increasingly negative student ratings of relationships with peers. It is possible that being enrolled in classes with students who all have learning disabilities may in fact limit the “othering” of students with learning difficulties within the classroom and support the forming of positive social relationships with classmates.
Special education classrooms may also present both challenges to and supports for students’ sense of academic competence. Some researchers have found that students prefer more inclusive settings and feel awkward and excluded from general education opportunities to learn when receiving special education support outside the classroom (Mattson & Roll-Pettersson, 2007). However, there is a growing body of evidence that students with learning disabilities prefer the access to specialized instruction that small group special education instruction for part or the entire school day affords (Deci et al., 1992; Grolnick & Ryan, 1990; Mattson & Roll-Pettersson, 2007, Nugent; 2008). Further, although students with learning disabilities demonstrate lower academic self-concepts than their peers without learning disabilities in general and across school settings (Zisimopoulos & Galanaki, 2009; Wiener & Tardiff, 2004), students in self-contained settings have been found to view themselves as capable learners (Burden & Burdett, 2005) and to have greater academic self-concepts than their peers with learning disabilities in more inclusive settings (Whitley, 2008).

According to SDT in addition to feeling related to their teachers and peers, and competent to engage in educational practices, students need to see value in those practices and volitional in their participation in order to demonstrate optimal motivation and engagement within the classroom. Research regarding sense of autonomy for elementary aged students with learning disabilities is very limited. Grolnick & Ryan (1990) found that students with learning disabilities reported lower feelings of autonomy in the classroom than either low achieving or average achieving students without learning disabilities. However, Deci et al. (1992) reported that for students with learning
disabilities sense of competence accounted for greater variance in motivation at school than sense of autonomy. Therefore, examining the impact of classroom supports for autonomy on the academic engagement of students with learning disabilities is warranted.

Examining ways in which educational contexts support the meeting of students’ basic psychological needs as outlined in SDT is of critical importance especially for students with learning disabilities who report lower levels of perceived competence and motivation at school (Deci et al., 1992; Grolnick & Ryan, 1990; Zisimopoulos & Galanaki, 2009), demonstrate statistically poorer mental health and educational outcomes (Statistics Canada, 2003, 2012; Wilson et al., 2009), and may not currently be well served through either regular or special education (Vaughn et al., 2002). SDT was chosen as a theoretical lens through which to examine the context of the LDP and its impact on student engagement in learning due to its focus on contextual influences on motivation. This examination of a special education context and its impact on student engagement through the lens of this theoretical framework supports the consideration of students’ needs for relatedness, competence and autonomy and aims to add to the extant research regarding the application of the theory for students with learning disabilities. Further, it is hoped that the findings from this work will prove of practical utility for schools and school districts in designing educational contexts that support the learning of all students, including those with learning disabilities, across a range of service delivery options from fully self-contained classrooms to full inclusion general education settings.

The purpose of this study was to examine and provide a thick description of one special education context for students with learning disabilities. Specifically, this
dissertation aims to describe how a special education context provides access to learning opportunity and supports students with learning disabilities in a community of learners. This research adds to the extant literature in two respects 1) highlighting the complexity associated with how students and staff engage in educational practices in a special education context, and 2) through the lens of SDT provides a description of how a special education context influences student motivation and engagement.

This study was designed to broadly address the question: What is the lived experience of students within the LDP?

Through the lens of SDT the following sub-questions directed this research:

1) How does the implementation of the LDP support students’ needs for relatedness, competence and autonomy?

2) How do supports for relatedness, competence and autonomy within the LDP impact student engagement?

The remaining five chapters of this dissertation are organized as follows:

Chapter two reviews the extant literature regarding SDT and its application in educational settings. Chapter three outlines the methodology and research practices employed during the investigation. Chapter four describes the LDP as an educational context for students with learning disabilities. Chapter five outlines the findings of this research through the lens of SDT. And finally, chapter six summarizes the findings, and highlights implications for educational practice and policy as well as study limitations and directions for future research.
Chapter 2. Personal Development, Motivation and SDT

For students with learning disabilities engagement and achievement at school have been found to be predictive of school retention or drop out (Doren, Murray & Gau, 2014). Student achievement in turn may be predicted by motivation for both students with learning disabilities (Antoniou & Sideridis, 2008; Sideridis & Tsorbatzoudis, 2003), and their peers without disabilities (Chan, Wong & Lo, 2012; Guay et al., 2008; Luftenegger et al., 2015; Meyer et al., 2009). Furthermore, recent research has shown that motivation and engagement are reciprocally related in that increases in motivation predict increases in engagement (Jang et al., 2012) and increases in engagement predict increases in motivation (Reeve & Lee, 2014). Therefore, designing school contexts that support students’ motivation to learn and engagement in instructional activities may be particularly pertinent for students with learning disabilities who, by the nature of their disabilities and school experiences, may struggle to meaningfully engage in many learning activities which in turn may impact their academic achievement.

SDT is a theory relevant to the study of student actions and interactions within learning contexts. It is a theory of human motivation, development, and well-being that examines the impact of social environments on human development. SDT proposes that satisfaction of basic psychological needs within social contexts is foundational to healthy psychological development and self-motivation. SDT posits that these three basic
universal psychological needs include the need for relatedness, competence and autonomy.

According to SDT when these three needs are met individuals are pro-active and engaged, strive to learn new things and expand their capabilities, and self-regulate their behaviours in responsible ways. In contrast, if satisfaction of these needs is thwarted individuals become passive, alienated and irresponsible. SDT focuses on the environmental contexts that contribute to both within-person and between-person differences in motivation and personal development that result in optimal or sub-optimal personal development, performance and well-being.

The empirical research base involving SDT covers an expanding range of social environmental contexts including education, parenting, work, health care, sport, and close relationships (Deci & Ryan, 2008a). This chapter reviews the theory and research relevant to the current investigation including the following: a) three mini-theories contained within the framework of SDT, b) SDT in educational contexts with respect to student motivation to learn, and c) SDT and students with learning disabilities.

2.1. Mini-Theories Within SDT

SDT is a macro-theory of human development comprised of six mini-theories that address various facets of personal development, motivation and well-being that can be applied across a wide range of social contexts. These include cognitive evaluation theory, organismic integration theory, causality orientations theory, basic psychological
needs theory, goal contents theory, and relationships motivation theory (Ryan & Deci, 2017). Three of these theories are of particular relevance to this dissertation and will be elaborated.

### 2.1.1. Basic psychological needs theory.

Basic psychological needs theory (Deci & Ryan, 2000) states that for humans to thrive three basic psychological needs must be met including relatedness, competence and autonomy. The social contexts that people engage in either support or thwart the meeting of these three basic needs. When these three needs are met individuals are energized, curious, and self-motivated (Deci & Ryan, 2008b). However, when these needs are not met or are actively thwarted a variety of negative impacts to personal well-being result including defensiveness, amotivation and psychopathology (Chen et. al, 2015; Vansteenkiste & Ryan, 2013). Deci and Ryan (2000) suggest that these three needs are universal and that SDT can be used as a framework for examining social contexts that support these three basic psychological needs and identify the environmental conditions that allow individuals to realize their full potential in terms of performance, development, and well-being.

Reis, Sheldon, Gable, Roscoe and Ryan (2000) explored the relationship between global and daily variations in the degree of need satisfaction and emotional well-being in order to investigate the hypothesis that the well-being of individuals is related to the satisfaction of the three basic psychological needs as outlined by SDT. Data were analyzed from 29 male and 38 female university students. Global person level measures
included self-ratings of perceptions of autonomy (self-determination), competence, connectedness and loneliness. Day level measures included daily ratings of well-being (positive and negative affect, vitality, and physical symptoms of ill-being such as runny nose, soreness, breathing difficulty), and description and perceptions of autonomy, competence, relatedness for the three activities that they had spent the most time participating in each day.

Results showed that global perceptions of autonomy (self-determination) were positively related to positive mood and vitality, perceptions of competence were negatively related to negative mood and physical symptoms, and connectedness was positively related to positive mood. Day level analysis resulted in positive correlations between autonomy and positive mood and vitality, competence correlated positively with positive affect and vitality, and negatively with negative affect and physical symptoms, and connectedness correlated positively with positive mood. Further analysis demonstrated unique contribution of each need to overall composite measures of well-being at the person and day levels.

A recent meta-analysis of research exploring SDT and its relevance to performance at school, at work and during physical pursuits analyzed the results from 128 relevant studies, both published and unpublished, up to the year 2015 (Cerasoli, Nicklin & Nassrelgargawi, 2016). This research examined several hypotheses including the following: Perceived autonomy is positively related to performance; Perceived competence is positively related to performance; Perceived relatedness is positively related to performance; and, the relationship between perceived need satisfaction and
performance is stronger for quality tasks than quantity tasks; (p. 783-785). A distinction was made in quality versus quantity tasks such that quality tasks were considered those tasks that included creativity, lack of errors, and originality while quantity tasks were considered those that were repetitive, dependent on rote skill, and required less personal investment and creativity. Results indicated that subjects’ perceptions of the degree to which all three basic needs (relatedness, competence and autonomy) were met predicted performance with competence being the strongest need predictor of performance. Need satisfaction was a stronger predictor of performance quality than performance quantity, however this difference was not statistically significant. The authors concluded that in contexts involving academic, work and physical performance meeting the needs for relatedness, competence and autonomy matters.

Research conducted by Chen et. al (2015) investigated the role of need satisfaction in psychological well-being and ill-being across four culturally diverse countries. In a study involving young adults (mean age 20 years) the researchers hypothesized based on basic psychological needs theory that there would be unique associations between meeting the needs for relatedness, competence and autonomy and well-being, and between frustration of each of the needs and ill-being. They also hypothesized that these associations would hold true across all four countries. Finally, they hypothesized that the valuation of having needs met would not mediate the association between the meeting or frustration of needs and well-being or ill-being. In other words, the needs are universal irrespective of cultural values placed on relatedness, competence and autonomy.
The research involved 1,051 university students from four culturally diverse countries including China, Belgium, Peru and the USA. Measures included student perception of need satisfaction and frustration, value placed on need satisfaction, perceptions of well-being and vitality, and self-reports of depressive symptoms (ill-being).

Results showed that need satisfaction and need frustration contributed uniquely to associations with well-being and ill-being. Further, satisfaction of all three needs uniquely contributed to life vitality, while satisfaction of relatedness and autonomy contributed to life satisfaction. Similarly, frustration of all three needs contributed uniquely to depressive symptoms. Multi-group analysis demonstrated that these relationships were not moderated by country. Further, within each country the value of having the three basic needs met, did not moderate the associations of need satisfaction or frustration to well-being or ill-being. The authors concluded that satisfaction or frustration of the needs for relatedness, competence and autonomy as outlined in SDT universally results in psychological well-being or ill-being respectively, and this finding is evident across cultures regardless of the cultural value placed on autonomy versus relatedness and interdependence.

Basic psychological needs theory, therefore, is relevant to the study of learning contexts in that it proposes that educational contexts in which students learn impact students’ achievement, development and well-being. For students with learning disabilities, examination of the nuances of the learning context through the lens of basic psychological needs theory may add considerably to the extant research which currently
demonstrates equivocal results regarding the efficacy of special education service delivery models.

2.1.2. **Relationships motivation theory.**

Relationships motivation theory (Deci & Ryan, 2014) proposes that relatedness is necessary for psychological well-being in that people need to feel accepted by and significant to others, as well as to care for and feel cared for by others. Further, people will seek to develop relationships with others to fulfill the need for relatedness. However, although relatedness is viewed as a basic psychological need, relationships motivation theory suggests that maintaining relationships with others is not sufficient for individuals in those relationships to experience high quality close relationships and subsequent relationship satisfaction and enhanced general well-being. In addition to feeling cared for by and caring toward significant others within their social contexts, individuals require satisfaction of the needs for competence and autonomy within such relationships.

In a study described earlier investigating the relationship between the needs for relatedness, competence and autonomy and well-being, Reis et. al (2000) further investigated the relationship between social activities and perceptions of daily relatedness as mediating factors in the relationship between relatedness and well-being. They found that talking about meaningful matters as well as feeling understood and appreciated were strong predictors of daily perceptions of relatedness. Hanging out and doing fun things were also daily activities positively related to feelings of relatedness. Feeling insecure or
self-conscious was, as predicted, negatively associated with relatedness. Conflict and participating in concrete activities or tasks were not significantly related to perceptions of relatedness. Further analysis demonstrated that participating in enjoyable social activities was positively related to well-being but was not significantly related to negative measures of well-being. Conflict and arguments were negatively related to well-being. The authors concluded that since conflict was not associated with feelings of relatedness, daily activities such as conflict may have independent associations with measures of well-being or ill-being and that individuals may experience negative consequences from conflict with significant others while still feeling close and connected with them.

Patrick, Knee, Can Evello & Lonsbary (2007) conducted a series of studies investigating psychological need fulfillment in close relationships. These studies included an examination of the contribution of the needs for relatedness, competence and autonomy to individual and relationship functioning and well-being involving university students volunteering to participate in studies of romantic relationships. Data collected included measures of participants’ perceptions of the degree to which their romantic partner met their needs for relatedness, competence and autonomy, measures of global self-esteem, measures of positive and negative affect and vitality, measures of adult attachment, and measures of relationship well-being including satisfaction, commitment, perceived conflict and response to conflict, and perceived closeness. Results from these studies indicated that need fulfillment was positively related to self-esteem, positive affect and vitality and negatively associated with negative affect. Need fulfillment was negatively associated with the anxious and avoidant attachment variables. Need
fulfillment was also positively related to relationship satisfaction, commitment and understanding responses to conflict within relationships. These associations between need fulfillment and relationship variables and well-being held true for the composite of autonomy and competence needs and for each need individually. In couples, results showed that perception of need fulfillment of autonomy and competence for both partners contributed to relationship functioning and well-being. For relatedness individual perceptions of need fulfillment was the greater contributor.

Ryan, Bernstein & Brown (2010) conducted a study examining the effects of the workplace on well-being. This research examined four hypotheses: 1) Pleasant mood will be higher on the weekend than during the work week for both men and women; 2) Satisfaction of the need for autonomy and relatedness will mediate weekday/weekend well-being; 3) Participants will experience lower pleasant mood and higher unpleasant mood in work situations compared to non-work situations; and 4) Need satisfaction of autonomy and relatedness will independently contribute to the association between work and non-work experiences and well-being. It was assumed that adults may have opportunities both during work and weekend settings to experience competence and so it was not predicted that satisfaction of the need for competence would mediate the hypothesized relationships.

Participants included 40 females and 34 males working at least 30 hours per week in a variety of jobs. Measures collected included a baseline collection of personal demographics, mood, subjective vitality, and physical well-being. Participants were trained to complete experience sampling forms and completed these forms three times per
day on a quasi-random schedule when signalled to do so via a pager system. Data were collected over a three-week period.

Results indicated that positive affect was higher on the weekends than during the work week for both male and female participants (the weekend effect). Analysis demonstrated that as anticipated weekends were associated with higher levels of autonomy and relatedness, but not competence. After controlling for the mediating effects of the weekend effect, sex, age, trait well-being and time series variables, results indicated that both autonomy and relatedness were positively associated with positive affect and vitality and negatively associated with negative affect. Further analyses indicated that autonomy and relatedness together mediated 66% of the explainable weekend variance in positive affect, 90% of the variance in negative affect and 14% of the variance in vitality. Final analyses suggested that all three need satisfaction variables mediated the relationship between work and positive or negative affect. Together fulfillment of the three needs accounted for 82% of the variance in the relationship between work and positive affect and 83% of the variance in the relationship between work and negative affect. In the final analysis, the authors concluded that daily fluctuations in well-being were related to variations in days of the week and work activities, and mediated by satisfaction of the needs for autonomy and relatedness in the work place.

Research conducted by Bartholomew, Ntoumanis, Ryan, and Thøgersen-Ntoumani (2011) investigated the role of autonomy supports and controlling behaviours within relationships between coaches and adolescent and young adult athletes. In a series
of three investigations the researchers studied the relationship between athletes’ perceptions of their coaches’ support for autonomy, perceptions of their coaches controlling behaviours, and perceptions of need satisfaction in the areas of relatedness, competence and autonomy and outcome measures including athletes’ reports of disordered eating, feelings of vitality, depressive symptoms, burnout symptoms, positive and negative affect, and levels of S-IgA which is a protein in saliva considered an indicator of psychobiological functioning. These three studies included athletes in a range of individual and team sports such as swimming and rugby. Study 1 included 303 female athletes ranging from 16 to 25 years of age. Study 2 included 80 male and 214 female athletes ranging from 12 to 17 years of age. Study 3 included 24 male and 37 female athletes ranging from 15 to 25 years of age.

Results from study 1 showed that perceptions of autonomy support predicted need satisfaction and perceptions of coaches’ controlling behaviours predicted need thwarting. Need satisfaction predicted vitality and need thwarting predicted depression and disordered eating. Lack of need satisfaction was not related to negative outcomes. Results from Study 2 showed that athletes’ perceptions of autonomy supportive coaching were associated with need satisfaction that, in turn, predicted positive affect. In contrast, perceptions of controlling coaching behaviours were associated with need thwarting that, in turn, predicted burnout and negative affect. Further, perceptions of need thwarting were related to higher levels of S-IgA measured before training sessions suggesting that athletes who perceived their needs to be thwarted within the sporting environment demonstrated higher levels of physiological arousal at the start of their training sessions.
Study 3 examined daily fluctuations in these relationships. Findings indicated that autonomy support was the strongest predictor of daily need satisfaction while controlling coaching was the strongest predictor of daily perceptions of need frustration. Further, higher levels of autonomy support from participants’ coaches during training predicted higher levels of positive affect after training, while higher levels of controlling behaviours from their coaches during training predicted higher levels of negative affect and physical symptoms (headache or stomach pain) after training sessions. The findings suggest that the global relationships found in the first two studies were similarly found to occur at the daily level of need support or frustration.

From this series of studies, the authors concluded that the modest correlations found between perceptions of autonomy support and perceptions of control by participants’ coaches suggest that support for autonomy and controlling behaviours may be related but distinct constructs and may in fact co-occur, for example, when a coach acts in a controlling manner, but provides a rationale to the athlete. They also concluded that there is a distinction between low levels of psychological need support and thwarting of need support (in this case the need for autonomy). Athletes viewed controlling behaviours by the coaches as need thwarting, while autonomy supportive behaviours were perceived as meeting the need for autonomy. Controlling behaviours rather than lack of autonomy support were related to measures of ill-being. Therefore, the authors concluded that need thwarting is related to but distinct from lack of need support.

Relationships motivation theory, therefore, is particularly relevant when examining teacher/student relationships in that these relationships impact students in
considerably nuanced ways. A teacher being kind and caring toward a student, as in the traditional conception of teacher as caregiver, is only part of the equation. Examining ways in which the teacher/student relationship fosters or thwarts the meeting of student needs for competence and autonomy becomes an especially important factor for students who may require motivational supports at school, including students with learning disabilities.

2.1.3. Organismic integration theory.

Deci and Ryan (2008b) posit that motivation is a multidimensional construct, and these dimensions are differentiated along a continuum from external to internal motivation. Internal motivation involves undertaking activity for the satisfaction inherent in the activity itself due, for example, to the appeal of an activity such as novelty, optimal challenge or aesthetic value. For example a student may be intrinsically motivated to read a book for the pleasure derived from reading an interesting tale. External motivation involves undertaking activity that has the purpose of attaining a separate outcome (Ryan & Deci, 2000). For example, an employee may be externally motivated to perform well at work to get recognition and an increased monthly salary. This form of motivation is considered extrinsic, even though the employee is self-motivated to perform the activity well because the motivation for engaging in the activity is to gain a separate outcome (to obtain a pay raise, or to avoid a reprimand and loss of peer respect) rather than the sheer enjoyment of undertaking the behaviour itself. Autonomy refers to acting of one’s own accord, with a sense of choice, and can result from either intrinsic or extrinsic motivation to act. The key to autonomy is the sense that one has chosen to engage in behaviour for
the pleasure derived in so doing (intrinsic motivation), to attain another goal, or to avoid an unappealing outcome (extrinsic motivation).

Although considerable human activity is intrinsically motivated, much human activity is undertaken through external motivation dependent on the roles and responsibilities an individual assumes. SDT proposes that external motivation varies along a continuum based on the degree to which it is internalized and integrated into the self and perceived as self-determined. The focus, then, is placed on autonomous versus controlled motivation rather than on intrinsic and extrinsic motivation (Deci & Ryan, 2008b). According to the principles of SDT behaviours that are externally motivated can also be autonomous through the internalization of the value or regulation of the behaviour, or through integration of that regulation into one’s sense of self. Through integration the value and regulation of that behaviour becomes one’s own.

Organismic integration theory describes different forms of external motivation in addition to the contextual factors that support or thwart internalization and integration of the regulation of behaviours (Ryan & Deci, 2000). Figure 2.1 shows the development of self-determination posited by organismic integration theory. Amotivation or the lack of motivation to act is on the far left and Intrinsic Motivation is on the far right of this continuum. Individuals who are amotivated fail to act or merely go through the motions of an activity without intent. Amotivation is the result of not valuing the activity, feeling incompetent to complete the activity successfully, or not expecting to attain the desired outcome. Intrinsic motivation on the other end of the spectrum is highly autonomous, self-determined and involves doing an activity for the intrinsic satisfaction of
participation. Between these two motivational extremes Ryan and Deci (2000) have outlined four theoretically distinct types of external motivation that vary in the degree to which they involve autonomous regulation each yielding specific consequences for learning, performance, affect, and well-being.

<table>
<thead>
<tr>
<th>Amotivation</th>
<th>Controlled Extrinsic Motivation</th>
<th>Autonomous Extrinsic Motivation</th>
<th>Intrinsic Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Regulation</td>
<td>External Regulation</td>
<td>Introjected Regulation</td>
<td>Identified Regulation</td>
</tr>
</tbody>
</table>

Low self-determination  
High self-determination

**Figure 2.1 Continuum of self-determination** - Adapted from Ryan & Deci (2000)

External regulation involves extrinsically motivated behaviour that is experienced as externally regulated and controlled. Introjected regulation involves extrinsically motivated behaviour that is taken in but not fully accepted and is undertaken to avoid guilt or anxiety or to enhance one’s ego. Identified regulation involves consciously taking in, and valuing the regulation of behaviour. And finally, integrated regulation involves the integration of the regulation of behaviour and assimilation of that regulation into one’s sense of self. For this to occur regulations are internally evaluated and
integrated with one’s other values and needs. As behavioural regulations become increasingly internalized and integrated with the self, action is experienced as increasingly autonomous and self-directed which leads to increased motivation to engage in behaviours initially prompted by others.

Teasing out the role of more and less autonomous forms of motivation as theorized by SDT is particularly relevant in academic settings in which students are often not intrinsically motivated to undertake teacher directed academic tasks. Vallerand and Bissonnette (1992) conducted a study examining the role of the variations of motivation including amotivation, extrinsic, introjected, integrated, identified and intrinsic motivation in predicting academic behaviour. Participants in the study were 1062 first year French Canadian college students (674 females) enrolled in a compulsory French course in Montreal, Canada. A questionnaire assessing motivation in respect to academic activities was administered at the beginning of the semester, and data collected regarding age, gender, date of birth and name. It was hypothesized that students who persisted in the course would have displayed higher levels of autonomous motivation for academic activities such as intrinsic, identified or integrated motivation than students who dropped out of the course. Results confirmed this hypothesis in that students who persisted in the course had significantly higher levels of intrinsic motivation for academic activities than those who dropped out. Also, as theorized by SDT there was an effect evident regarding type of external motivation and behavioural persistence. Students who displayed higher levels of integrated and identified motivation for academic activities at the beginning of
the course were more likely to persist and not drop out than students who displayed external or introjected motivation for academic activities.

SDT is concerned with the processes through which extrinsically motivated behaviours become self-determined, and the influence on those processes of the social-environmental context. This is particularly relevant to learning at school. Many activities students are asked to engage in at school are activities that are not typically interesting to them. Consequently, initially these behaviours are extrinsically motivated, undertaken because they have been prompted or are valued by significant others such as students’ teachers, parents and even peers. According to organismic integration theory (Ryan & Deci, 2000) internalization is more likely to occur under conditions of relatedness, competence, and autonomy. Students who feel related to and cared for by their teachers and parents are more likely to internalize the regulation of school related behaviours. However, in addition to feeling connected and supported, students require a sense of competence in their ability to be successful in classroom learning activities. Further, a sense of autonomy regarding participation supports the internalization of self-regulation of learning behaviours and is viewed in SDT as a necessary environmental condition for the integration of regulations into students’ sense of self.

2.2. Motivation to Learn

When applied to school contexts SDT proposes that all students, including students with learning disabilities, have three basic human needs which are necessary for self-motivated or self-initiated behaviours to occur: the need for relatedness, the need for
competence and the need for autonomy. The need for relatedness refers to students’ need to feel connected to others in the school community, to care for and feel cared for by those others, and to have a sense of belonging within their classrooms and school communities. The need for competence refers to students’ need to feel effective within the school environment, and to exercise and enhance their school related capabilities. The need for autonomy refers to students’ need to feel in control of their own actions within the classroom. When feeling autonomous students feel as if their actions are an expression of their own volition and sense of self even if teachers have prompted those actions. Students feel autonomous in participating in classroom activities designed by teachers when they agree with the initiative and value participation in the activity based on their interests or personal goals and objectives. Classroom satisfaction of these needs supports students’ self-regulation of motivational behaviour patterns for learning (Ryan & Deci, 2009).

SDT is a valuable lens through which to examine educational contexts and the ways in which they might support or thwart the meeting of basic psychological needs and, in turn, impact engagement and learning at school. Questions have been raised regarding the ability of inclusive general education classrooms to meet the academic needs of students with special needs including students with learning disabilities (Fuchs, Fuchs & Stecker, 2010; Zigmond, 2003; Zigmond, Kloo & Volonino, 2009). However, inclusive classrooms are believed by some researchers to provide educational contexts that provide students with learning disabilities with the same access to social opportunities and the general education curriculum of regular education classrooms.
Therefore, for students with learning disabilities place may not be as relevant as the design of educational contexts that support students to engage in learning opportunities that meet their need to develop academic skills and provide access to enriching general education curriculum.

According to SDT, when the needs for relatedness, competence and autonomy are largely met students will be naturally self-motivated, curious and eager to succeed due to the inherent satisfaction of being successful in school pursuits. More autonomous forms of motivation, in turn, lead to greater cognitive and behavioural engagement in learning, higher grades and more positive affect at school (Guay et al., 2008). However, when these basic human needs are thwarted students will demonstrate behaviours that are non-optimal for human development and well-being including alienation, passivity, and irresponsibility. In classrooms, lack of motivation may present as resistance to engagement, or compliance with the external demands of the classroom while students only go through the motions of learning rather than deeply engaging with the concepts presented in educational practices.

SDT is primarily concerned with the social-environmental conditions that foster, or thwart, the meeting of needs for relatedness, competence and autonomy which in turn foster, or thwart positive psychological, developmental and behavioural outcomes such as greater persistence at tasks, improved performance, and more positive affect. What follows is a review of research investigating school contexts and supports for relatedness, competence and autonomy.
2.2.1. Relatedness in school contexts.

There has been considerable research into the impact of students’ relationships both at home and within their school settings on a variety of school related outcomes and measures of personal well-being. Ryan, Stiller and Lynch (1994) conducted research investigating the predictive value of students’ relationships to their parents, teachers and peers in regard to school outcomes and self-esteem. This study involved 606 students from a middle school in New York including 154 boys and 156 girls in Grade 7 and 164 boys and 132 girls in Grade 8. The researchers hypothesized that student representations of parents, teachers and friends through reports of felt security (“My … understands me”), emotional utilization (“When I am sad, I go to my …”), and emulation (I try to model myself after my …) within relationships would predict school related functioning including self-reports of: academic coping, self-regulation, academic engagement, perceived control over school functioning, capacity beliefs, and self-esteem. Results showed that student representations of parents and teachers were correlated and both variables predicted school functioning. With the exception of the negative correlation between emulation of friends and school functioning, the association between student representations of friends and school functioning were not statistically detectible. Student self-esteem was positively associated with parent and friend security and utilization. Parent and teacher representations of students were positively associated with school outcomes, whereas felt security with friends was the greatest predictor of self-esteem. The authors concluded that the results suggest there is some generalizability across relatedness to parents and teachers with respect to positive associations with school functioning. Relatedness to friends in comparison is associated with measures of
self-esteem. The authors further suggest that for students at these grade levels sense of relatedness to their teachers supports students’ sense of control, autonomy and engagement at school.

In a study examining university students in cohort programs, Beachboard, Beachboard, Li and Adkison (2011) examined the role of relatedness to learning outcomes. The data set for this study was comprised of two thousand records randomly drawn from the 2005 National Survey of Student Engagement that met the criteria of equal numbers of males and females and cohort and non-cohort participants, as well as being full time, non-international students in their final year at a public mid-tier research intensive university in the United States.

The researchers questioned whether participation in cohort communities of learning, and/or higher levels of relatedness to faculty and peers would lead to higher levels of academic development and job preparation. Additionally, the question of whether relatedness mediates the effect of cohort participation on academic development and job preparation was investigated. The analysis included cohort participation as the explanatory variable, feelings of belongingness and connectedness to others as a mediating measure of relatedness, academic development and job preparation as response variables, and higher order thinking assignments, enrichment activities, SAT scores, gender, age and ethnicity as explanatory control variables.

Results of regression analyses indicated that cohort participation did not significantly account for any further variance in academic development beyond control
variables, and only minor (0.3%) additional explained variance in job preparation. However, relatedness entered after accounting for the control variables and cohort participation accounted for significant variance in both academic development (5.3%) and job preparation (9.4%). In a final analysis relatedness did mediate the effect of cohort participation on both academic development and job preparation. The authors suggest that cohort participation is associated with an increased sense of relatedness that is, as suggested by SDT, positively related to academic development and job preparation.

Furrer and Skinner (2003) conducted a study including an examination of the predictive ability of students’ sense of relatedness to their academic engagement. Data used in this study were a subset of that from a longitudinal study consisting of 948 participants in Grades 3 to 6 enrolled in elementary schools in the United States. Students completed questionnaires in the spring and fall of the school year reporting on their feelings of relatedness to their parents, their teachers and their peers, their perceptions of control over their success at school, and their engagement versus disaffection in class. Teachers reported on students’ behavioural and emotional engagement in class.

Results of regression analyses showed that relatedness and perceived control were both unique predictors of both teacher and child self-reports of student engagement. Further, relatedness was a stronger predictor of children’s self-reports of total engagement accounting for 15% of the variance in engagement beyond the variance contributed by perceived control. In follow-up analyses feelings of relatedness to each social partner including relatedness to parents, teachers and peers accounted for unique
variance in behavioural and emotional engagement for both teacher and student self-reports with one exception. Relatedness to peers did not predict teacher reports of emotional engagement. The authors concluded that students’ sense of relatedness influences their academic engagement in the classroom.

In a similar study, King (2015) investigated the relationship between adolescents’ sense of relatedness to their parents, teachers and peers and their engagement, disaffection, and achievement. This study involved 848 students (485 females) from two public high schools in Metro Manilla, Philippines. Students completed questionnaires at the beginning of the school year regarding their sense of relatedness to parents, teachers and peers, their behavioural and emotional engagement, and disaffection regarding school. At the end of the school year, students completed questionnaires regarding their behavioural and emotional engagement and disaffection regarding school. Academic achievement data were gathered at the end of the school year as measured by student overall GPA.

Results showed that on average engagement did not change over the course of the school year, however, disaffection significantly increased from the beginning to end of the year. Results also showed that relatedness to parents, teachers and peers were positively related to engagement and negatively related to disaffection at the beginning of the school year. In relation to academic achievement, initial levels of engagement and changes in engagement over the school year were both positively related to academic achievement, while both initial levels of disaffection and changes in disaffection were negatively related to academic achievement. The author concluded that relatedness to
parents, teachers and peers were related to increased engagement and lowered levels of disaffection that then predicted higher academic achievement.

### 2.2.2. Competence in school contexts.

Applied to educational contexts, SDT posits that instructional environments that either support or thwart students’ basic psychological need for competence will impact motivation to engage meaningfully in learning opportunities. Providing structure (Jang, Reeve & Deci, 2010), positive feedback (Rakoczy, Klieme, Burgermeister & Harks, 2008) and optimal levels of challenge (Malmberg & Little, 2007) support students’ sense of competence in the classroom. Nicholls (1984) suggests that students judge their competence in terms of academic ability in two ways. One way is based on previous performance feedback. The other is through comparison with others. For students to perceive themselves as highly competent they must either achieve more with equal effort or achieve equally with less effort than their peers.

Structure has been found to be an important instructional component in supporting students’ sense of competence. Structure involves teachers communicating to students what they expect students to do to achieve the academic goals being undertaken. This includes teachers providing plans, goals, expectations, schedules, rules, directions, challenges, reminders, prompts, feedback, and learning strategies (Reeve, 2006). Provision of structure supports students to successfully engage in classroom learning activities.
In a study examining student outcomes Starkweather and Shriver (2005) trained three elementary school teachers to provide students with instructions that were concise, specific and direct, stated positively in a calm tone of voice. Three students displaying particularly disruptive and disengaged behaviour were the focus of the study along with their teachers. Two students were in Grade 2. One student was in Grade 4.

Baseline data were collected on teacher instructions, and student engagement. Following training on structured directions teachers and students were again observed and video recorded. A final condition was undertaken through training teachers to implement structured instructions in conjunction with positive feedback for appropriate classroom engagement. Results showed improved rates of academic engagement for all three students when structured instructions were given and a further increase occurred when structured instructions were combined with positive feedback for appropriate classroom engagement.

Recent research by Reeve and Lee (2014) utilized a longitudinal research design in a study involving 351 Grade 10-12 students in five urban schools in South Korea. The aim of the study was to test the hypothesis that changes in engagement predict changes in motivation for learning. It was hypothesized that increased engagement would provide students with increased opportunities for need satisfaction, increased opportunities for efficacy feedback, and increased opportunities for learning that enhance mastery goals. Decreases in engagement would have the opposite effect. Students completed questionnaires three times during a semester during weeks 2 (T1), 9 (T2) and 17 (T3). Questionnaires asked students to self-report psychological need satisfaction including
relatedness, competence and autonomy, self-efficacy, mastery goals, and behavioural, emotional, cognitive and agentic engagement.

Results showed that changes in engagement from T1 to T2 were positively related to changes in need satisfaction for relatedness and competence, but not significantly related to satisfaction of the need for autonomy at T3. Further, T2 classroom engagement was significantly related to achievement at T3 after accounting for engagement at T1. The authors concluded that results from this study demonstrate that changes in engagement (behavioural, emotional, cognitive and agentic) are related to changes in perceptions of need satisfaction. This research suggests a bi-directional impact of classroom practices and student engagement on student well-being and achievement.

Rakoczy et al. (2008) examined the impact of evaluative and informational feedback provided to students in the context of mathematics instruction. It was hypothesized based on SDT that informational feedback would support students’ sense of competence and therefore engagement and achievement as compared to evaluative feedback. The study involved 140 German high school students (116 females). Data were collected through means of video taped recordings of teacher instruction, student questionnaires regarding cognitive engagement and motivation, and pre- and post-testing of the mathematical concepts taught in a unit on Pythagorean Theorum.

Results showed that positive evaluative feedback and informational feedback were both positively associated with self-reports of motivation. Negative evaluative feedback was not related to motivation, and neither evaluative nor informational feedback
was related to achievement. These findings suggest that positive feedback that demonstrates to students that they are being successful in their academic pursuits as well as informational feedback that supports students to effectively engage in the learning opportunities of the classroom impact student motivation, as suggested by SDT.

Malmberg and Little (2007) conducted research involving 152 male and 161 female German students attending primary school with a mean age of 11.7 years. The aim of the study was to investigate whether distinct personal belief profiles can be distinguished based on agency beliefs about ability and effort as well as perceived difficulty, and whether these profiles relate to motivation and school adjustment. Students completed questionnaires regarding their beliefs about ability and effort, their motivation, and their well-being at school. Achievement was operationalized as language and mathematics grades from their school records.

The researchers identified five clusters of belief profiles based on relative scores including Agentic (high agency and effort beliefs, and low perceived difficulty), Strivers (above median beliefs in agency and effort, and high perceived difficulty), Normative (close to the mean value for all variables), Disengaged (low levels of beliefs in agency and effort, and mid-range levels of perceived difficulty), and Challenged (low levels of beliefs in agency and effort and high levels of perceived difficulty). There were significant relationships between these profiles and motivation in that the Agentic group generally demonstrated the highest levels of autonomous forms of motivation (intrinsic and identified) followed by the Strivers and Normative groups, while the Disengaged and Challenged groups demonstrated the lowest levels of autonomous motivation. The
Strivers followed by the Challenged groups, who both perceived high levels of difficulty at school, were highest in measures of extrinsic motivation.

Significant differences in academic achievement were found among these groups. Students in the Agentic group had the highest school achievement, the Strivers and the Normative groups had average levels of school achievement, while the Disengaged and Challenged groups had the lowest school achievement. Students in the Agentic, Strivers and Normative groups were found to have higher levels of well-being than students in the Disengaged and Challenged groups. Together these findings suggest that lower academic achievement is related to lower levels of well-being, lower levels of autonomous motivation, and for some students, higher levels of perceived difficulty which suggests lowered sense of competence to complete tasks successfully. It is of interest that perceived difficulty might be moderated by beliefs about ability and effort regarding learning. Matching students’ current level of achievement with task difficulty so that students are provided with optimal levels of challenge may help to increase students’ sense of competence through lowering perceived difficulty and providing opportunities for students to experience successful results of their efforts that contribute to the formation of their sense of competence (Nichols, 1984).

In addition to research specifically examining SDT, considerable research has been conducted regarding the self-concepts of students with learning disabilities. However, self-concept is not a unitary concept. Students have been found to possess qualitatively different self-concepts in different areas of functioning. For example, students may have a low or negative academic self-concept, but high or positive self-
concepts in social or athletic domains. In fact, students with learning disabilities have been found to have significantly lower academic self-concepts than their higher achieving peers without learning disabilities (Elbaum & Vaughn, 2001; Harter, Whitesell & Junkin, 1998; Rawson & Cassady, 1995; Vaughn, Haager, Hogan & Kouzekanani, 1992), and lower but similar self-concepts to their peers without learning disabilities in non-academic domains (Chapman, 1988; Prout, Marcal & Marcal, 1992; Vaughn, Elbaum & Schumm, 1996). Furthermore, service delivery model for students with learning disabilities has been found to impact academic self-concept. Students with developmental dyslexia have been found to report higher academic self-concepts when enrolled in specialized classes or schools for students with dyslexia than students with dyslexia enrolled in regular education classes (Casserly, 2013; Humphrey, 2002; Rawson & Cassady, 1995). Factors contributing to this finding are unclear, however, access to specialized instruction, knowledgeable and caring teachers and a “dyslexia friendly” instructional environment (Humphrey, 2002) may play a role.

Theories of social comparison are believed to contribute to the finding that students enrolled full time in specialized programs for students with special needs report higher academic self-concepts than those of students in regular education classes. The big-fish-little-pond effect, proposed by Marsh (1987) and Marsh & Parker (1984) suggests that students compare their own academic achievement with the average achievement of their classmates. The theory posits that social comparison within high ability groups will negatively impact the academic self-concept of students while social comparison within low ability groups will positively impact academic self-concept.
Research has demonstrated that both elementary and high school students in higher achieving classes view their own achievement more negatively than do students in lower achieving classes (Marsh & Hau, 2003; Nagengast & Marsh, 2011; Pinxten et al., 2015; Trautwein et al., 2009). Furthermore, low achieving students demonstrate greater negative impact on their academic self-concept from enrolment in higher achieving classes (Trautwein et al. 2009). Research reporting that students with learning difficulties including those with learning disabilities report higher levels of academic self-concept in specialized classes than regular education classes (Humphrey, 2002; Nagengast & Marsh, 2011; Rawson & Cassady, 1995) aligns with this theory.

Casserly (2013) investigated the socio-emotional effects of class placement on Irish students with dyslexia who were enrolled in special education programs and then returned to regular education classroom contexts. The research was conducted over a three-year period examining the socio-emotional impact of two to three years of special education placement and following one year after returning to regular education placements. Participants included 10 special education reading teachers, 20 regular education classroom teachers, 20 support teachers working in regular education schools, and 20 children with dyslexia and their parents. Data collection included 3 semi-structured interviews with the children while they attended special classes, and three while they attended regular education classes. Three semi-structured interviews were conducted with the special education reading teachers. Structured interviews were conducted with the regular education classroom teachers and the support teachers completed self-completion questionnaires. Parents were asked to complete three
questionnaires over a three-year period regarding their views of special education reading classes and regular education classes.

Through qualitative analysis of the data, findings demonstrated that both parents and special education reading class teachers believed that the children’s socio-emotional levels, as described through levels of happiness and self-esteem, improved while enrolled in the special education classrooms. They believed that this was due to use of teacher praise and encouragement and belief in student competence, improved academic achievement, and having peers whom also experienced academic difficulties. Children were asked to rate their reading achievement on a scale from 1 – 10 in which 1 indicated very poor reading ability and 10 indicated excellent reading ability. Upon entry to the reading classes 19 of the 20 students rated themselves 5 or lower in reading ability. Upon exit 17 rated their ability as 7 or greater and half rated their reading ability in the 9-10 range. However, students reported mixed feelings regarding enrolment in these special education settings due to missing their friends from their regular education classrooms.

Upon return to regular education classes children were happier with their friends in these classes and felt popular amongst their peers, however rated their reading ability as lower upon return to regular education than they had when enrolled in special classes. Only 4 students felt they were as academically capable as their peers. Many of the students reported feeling self-conscious regarding their ability in relation to their regular education peers and approximately half reported that they often compared their academic ability with that of their peers. Casserly concluded that this might have been due to more realistic comparisons between themselves and their regular education peers as well as the
more difficult instructional activities within regular education and non-optimal levels of challenge. Although many of the students reported persevering at tasks in their regular education classes, one third of the students did not report the resiliency to do so. They attributed their lack of perseverance to tasks that were too difficult and lessons that were too fast paced. These findings suggest that classroom instructional contexts may support or thwart students’ sense of competence through comparisons with their peers and through experiences of optimal or non-optimal levels of challenge.

2.2.3. Autonomy in school contexts.

According to SDT classroom contexts can either support or thwart students’ psychological need to feel autonomous as they participate in academic and school related activities. In educational contexts support for autonomy may include teacher behaviours that are responsive, supportive, and flexible as well as behaviours that motivate through tapping into students’ interests (Reeve, 2002). Reeve (2006) suggests that teachers who are autonomy supportive nurture students’ inner motivational resources through coordinating instructional activities with students’ interests, competencies, sense of challenge and enjoyment, and allowing for choice. They also utilize informational, noncontrolling language that aims to provide explicit positive feedback on progress and a rationale for the expenditure of effort. Autonomy supportive teachers also acknowledge students’ expressions of negative affect as a reasonable response to the many seemingly arbitrary requirements of the classroom.
Assor, Kaplan and Roth (2002) conducted a study in which the participants were 493 Israeli students in Grades 3-5 and 364 Israeli students in Grades 6-8 from three different schools. The aim of their study was to determine whether students in these age ranges could distinguish between three types of autonomy supportive and three types of controlling behaviours and whether their perceptions of these teacher behaviours impacted their reports of engagement and enjoyment at school. Students were asked to complete questionnaires assessing their perceptions of their teachers’ behaviours, their feelings toward schoolwork, and their perceptions of their own behavioural and cognitive engagement during class. Students were asked to rate their teachers’ behaviour on a four point scale indicating the extent to which their teachers exhibited autonomy supportive behaviours including providing choice, fostering relevance, and allowing criticism/encouraging independent thinking. They were also asked to rate their teachers’ behaviour regarding controlling behaviours including suppressing criticism/independent opinions, intruding during activities, and forcing uninteresting activities. Positive feelings regarding schoolwork assessed feelings of comfort, enjoyment and interest. Negative feelings regarding schoolwork assessed feelings of stress, anger and boredom. Behavioural and cognitive engagement assessed student attention and participation during lessons and preparation for class.

Results showed that students at both age ranges could distinguish between the three sub-dimensions of autonomy supportive and controlling teacher behaviours. Relationships between the dimensions of autonomy support and controlling behaviours and student outcomes were varied. Fostering relevance was related positively at both age
ranges to both positive feelings and student engagement and negatively to negative feelings (although the relationship to negative feelings did not reach significance at the Grade 6-8 level). At both age levels providing choice was positively related to positive feelings but not with negative feelings or engagement. Allowing criticism was not significantly related to outcome measures at either age range. Interestingly, intruding was negatively related to both positive and negative feelings at the younger age and positively related to negative feelings at the older age. Suppression of criticism was negatively related to positive feelings at both age ranges, negatively related to negative feelings at Grades 3-5 and positively related to negative feelings at Grades 6-8, and negatively related to student engagement at both grade levels.

The authors suggest that fostering relevance is particularly salient in terms of fostering positive affect and engagement in learning while suppressing criticism is particularly detrimental for student outcomes. They suggest that choice may not be as important at these age ranges as students may not see the relationship between the choices they are offered and their personal goals and interests, or because they may not yet have clearly defined goals and interests.

Grolnick and Ryan (1987) conducted a study involving 91 fifth grade students (48 females) enrolled in three different elementary schools in New York. Subjects were asked to read a grade level passage within one of three experimental conditions. Instructions were given to the students in one of three ways: non-controlling-directed (subjects were told they would be asked questions about what they could remember from the passage, but would not be graded), controlling-directed (subjects were told they...
would be tested and graded on how much they could remember from the passage), or non-directed (students were told they would be asked some questions similar to previous questions they’d been asked about how much they liked a passage and if they felt pressure reading it and how difficult it was for them to read it.) Results showed that students in the non-controlling-directed and non-directed conditions found the reading passage more interesting than students in the controlling-directed condition. Further, students in the controlling-directed condition reported feeling greater pressure and tension while reading than students in the other two conditions. In terms of learning from the passage reading, students in the non-controlling-directed and controlling-directed demonstrated greater rote recall than students in the non-directed condition, however, greater conceptual learning was significantly higher for students in the non-controlling-directed and non-directed conditions in comparison to the controlling-directed condition.

The authors concluded that all three learning environmental conditions resulted in different subjective experiences for students and different types of learning. They suggested that greater surface level learning occurred in both controlling and non-controlling conditions in which students were directed to learn from the passage than in the non-directed condition. However, deeper level conceptual learning was supported in non-controlling conditions with or without direction to learn from the passage. The authors suggested that this was because the students in the controlling condition felt greater pressure and less interest in the contents of the reading passage. The students who were in the non-controlling conditions, therefore exhibited greater internalization of
the regulation of the behaviour as evidenced by their reports of greater interest and less external pressure to perform the task.

Reeve et al. (2004) conducted a study designed to train teachers to increase their use of autonomy supportive teaching strategies including nurturing students’ inner motivational resources, using informational, non-controlling language, promoting value in uninteresting activities and accepting expressions of negative affect. It was hypothesized that teachers would adopt a more autonomous teaching style following training and that this would result in an increase in student engagement during class as measured by students’ active involvement in tasks and attempts to influence the flow of classroom events. Participants included 20 teachers from two American high schools with an average class size of 24 students. Half of the teachers were randomly assigned to the training condition and half to a delayed training control condition. Classroom observations of teachers’ autonomy supportive behaviour, provision of structure and student engagement were conducted in all 20 classrooms during weeks 1, 5 and 10. The training involved a one-hour after school session on how to support student autonomy followed by a three-week web-based independent study program. The first set of teachers participated in the training during weeks 3 – 5, while the delayed training control participated during weeks 8 - 10.

Results also showed that after controlling for initial levels of autonomy supportive teaching behaviour and student engagement, the effect of teacher training on student levels of engagement at post-test was statistically significant. The positive association between autonomy supportive teaching behaviours and student engagement was found
using two different groups of teachers, and two different measures of student engagement.

Regarding the influence of increased autonomy support on student engagement results showed that after controlling for initial levels of autonomy supportive behaviour and students’ prior engagement during observation 1, students’ demonstrated significantly greater levels of engagement during observation 2 following the teacher training. Further, teachers’ use of autonomy supportive teaching was significantly related to higher levels of student engagement during observation 3. This positive association between autonomy supportive teaching and student engagement was found using two different groups of teachers, and two different measures of student engagement.

Reeve (2006) suggests that teachers most effectively support their students’ academic engagement and consequent learning when they provide both high levels of autonomy support and structure in the classroom. This in turn promotes positive teacher-student relationships which promotes student motivation. Jang et al. (2010) investigated teachers’ support for autonomy and classroom structure hypothesizing that student engagement would be maximized when teachers provide both. Participants included 133 teachers and 2,523 Grade 9 to 11 students from nine high schools in the US. Utilizing graduate students who were blind to the study’s purpose and hypotheses teachers’ demonstration of support for autonomy (e.g., use of controlling language versus informational language) and provision of structure (e.g., provision of clear understandable instructions versus confusing ambiguous directions) as well as student engagement during lessons (e.g., students don’t talk, ask questions or discuss versus
students talk, ask questions and discuss) were observed and rated on a seven point Likert scale. At the end of each class observation the students were asked to anonymously complete a survey consisting of 4 statements about their engagement during the lesson (e.g., During this class I worked very hard). They were asked to rate the magnitude of agreement with the statement on a seven point Likert scale that ranged from: 1 not at all true, to 7 extremely true.

Results indicated the positive relationship between observer ratings of teacher autonomy support and provision of structure was statistically detectible. Also, student engagement was positively related to both instructional styles. Teacher autonomy support uniquely predicted observer ratings of collective student engagement during class and student self-ratings, while provision of structure predicted only collective behavioural engagement. The authors concluded that these findings suggest that while both teacher support for autonomy and provision of structure support student engagement in classrooms, they may do so differently. Teacher support for autonomy may support students’ sense of volition enhancing both cognitive and behavioural engagement, while provision of structure supports students’ sense of competence and control over outcomes which might be more specifically related to on-task behavioural engagement.

In a similarly focused study, Vansteenkist et al. (2012) hypothesized that teachers’ behaviours as perceived by their students would cluster into four distinct configurations including 1) high autonomy support, 2) clear expectations, 3) high autonomy support – clear expectations, and 4) low autonomy support – vague expectations. It was further hypothesized that high levels of both autonomy support and
structure would be positively related to the most adaptive student outcomes including self-reports of academic self-regulation, learning behaviours such as attention, time management, persistence and test anxiety, and negatively related to externalizing problem behaviours such as drug use, vandalism, stealing, fighting and skipping classes, and the opposite relationship would hold true for low levels of both autonomy support and structure. Participants included 1036 Dutch students in Grades 7-13 who were asked to complete questionnaires on a computer in their school’s computer lab.

Results of this study confirmed the hypothesis that both autonomy support and clear expectations as a facet of structure, while related to each other and student outcomes, uniquely contribute to positive learning environments. All four hypothesized clusters of autonomy support and expectations were found. High autonomy support - clear expectations was positively related to the most adaptive school outcomes as students who rated their teachers this way reported the most autonomous study motivation, greatest use of self-regulatory learning behaviours and low behavioural problems. In contrast, students who perceived their teachers as providing low autonomy support - vague expectations reported significantly lower levels of autonomous and controlled motivation, less frequent use of self-regulatory learning behaviours and higher levels of behavioural problems. As expected the two remaining profiles provided results between these two extremes and for most outcomes were not significantly different from each other. The authors concluded that these results fail to provide strong evidence for unique correlates of autonomy support and structure, however, it was noted that the clear expectations cluster was related to higher levels of controlled motivation. This fact may
be explained as suggested by SDT that when teachers give clear instructions without a rationale or in the absence of other generally autonomy supportive teaching behaviours students perceive the clear instructions as efforts at controlling their behaviour rather than supporting their sense of competence.

2.3. **SDT and Students with Learning Disabilities**

SDT, due to its focus on motivational processes, is particularly suited to theorizing regarding educational experiences and outcomes for students with learning disabilities (Deci & Chandler, 1986). Environmental supports for relatedness, competence and autonomy are seen as key to students’ self-regulated motivation. The majority of SDT-based research involving students with learning disabilities has involved students’ self-perceptions of self-determination (Sideridis, 2009) particularly during adolescence and during school transitions. There is also a small body of research regarding elementary school students with learning disabilities and their basic psychological needs as outlined by SDT.

As students with learning disabilities, by definition, struggle to achieve to the standards set by the academic institutions they attend they are at risk for becoming amotivated, due to thwarting of their sense of competence, rather than autonomously motivated, and consequently for dropping out before completing high school. Doren et al. (2014) conducted a study examining the unique contributions of individual, family and school factors in relation to school drop out for students with learning disabilities in addition to determining which of these factors is most predictive. The study sample was
drawn from the National Longitudinal Transition Study-2 that is a nationally representative dataset of more than 11,000 American students, aged 13 to 17 years, receiving special education services during the 2000-2010 school years. Data were collected at four intervals across this 10-year span. At time 1, parents were interviewed over the telephone regarding their children’s school and non-school experiences, personal and educational histories, household characteristics and family processes. At time 2 and 3, parents and students completed phone interviews, and a final one time in person interview was completed with students and parents when students were between the ages of 16 and 18 years old with a focus on academic achievement, self-concept, self-determination skills, and attitudes toward learning and school. The sample for this study included data from the final three interviews for 725 students with learning disabilities.

Four main factors were examined as predictors of drop out including: socio-demographic (gender, race, poverty status and English proficiency), individual (academic achievement, school absences and behaviour, risk behaviours and arrest history, social skills, self-concept, self-advocacy, and self-determination), family (home support for schooling, parental involvement in school and IEP, parental expectations) and school-based (quality of students’ relationships with teachers and peers, instructional components included in students courses such as language arts, math, study skills, class size, time in special education class, accommodations received.)

Results showed that none of the socio-demographic factors predicted drop out. Four individual factors predicted drop out including student achievement (grades), social skills, risk behaviours and history of arrest. Two of the family factors predicted drop out
including parent school involvement and parent expectations. Quality of relationships with teachers and peers was the only school based factor that significantly predicted drop out. These results are consistent with SDT in that relatedness to parents, teachers and peers as well as students’ sense of competence influenced by achievement feedback (i.e. grades) are proposed as contributing factors in students’ positive engagement in learning. This research demonstrates that relationship for students with learning disabilities.

In a study examining perceptions of self-determination during postsecondary transition planning of culturally and linguistically diverse students with learning disabilities, Trainor (2005) conducted a qualitative study involving a sample of 15 male students with learning disabilities who were aged 16 to 19 years and who lived in families with low SES as measured by eligibility for free or reduced-price lunch programs. Students were recruited for participation based on purposive sampling and grouped into focus groups of African American, Hispanic American, and European American participants. The research questions included: What are the self-determination behaviours of culturally and linguistically diverse male adolescents with learning disabilities? How do these students perceive their responsibilities regarding transition planning? How do these students perceive the influence of their parents and teachers on transition planning? Data were collected through transition planning document reviews, observations of transition meetings, field notes, focus group and follow-up interviews.

Results of qualitative analysis identified five themes including Missing Connections Between Transition Plans and Post-Secondary Plans; Participating on the Periphery; Relying on Family for Transition Planning; Attempting Self-Determination;
and Actualizing Self-Determination Efforts. In discussing these themes, Trainor suggests that only very subtle differences in the perceptions of the three focus groups of culturally and linguistically diverse male students with learning disabilities were found. She posits that this unexpected finding may be explained by the emergence of a mediating variable in the form of school culture. Her analysis suggested that all of the study participants perceived that they were responsible for transition planning and were aided in their efforts to be self-determined by their parents and family members. However, in terms of school support for transition planning all three focus groups reported perceiving teachers as having a minimal impact on their transition planning and further reported that their self-determination efforts at school had in fact been thwarted.

Grolnick and Ryan (1990) explored the role of negative competence feedback in the academic self-concepts of elementary school students with learning disabilities. Participants in this study included 148 students in Grades 3 to 6 attending schools in a suburban school district in the North Eastern United States. Four groups of students were identified including: learning disabled, matched IQ non-learning disabled, randomly selected non-learning disabled (not matched for IQ), and low achieving non-learning disabled. Students completed questionnaires that were read aloud to them assessing items including perceived competence, academic self-regulation, and perceptions of control. Their regular classroom teachers completed two ratings scales for each student assessing teacher perceptions of students’ competence, motivation, self-esteem and classroom adjustment, as well as the degree to which they tended to control or prod the student.
As hypothesized results showed that elementary school students with learning disabilities viewed themselves as less competent than higher achieving peers matched for IQ, but similar to low achieving students who have not been identified as learning disabled. The authors concluded that environmental achievement feedback, which is similar for low achieving students with and without learning disabilities, influences students’ cognitive perceptions of competence. Findings also demonstrated that on average, students with learning disabilities perceived themselves as significantly less autonomous than students in the non-learning disabled group not matched for IQ. Further, students with learning disabilities felt greater control imposed on them by powerful others than students in the group without learning disabilities that were not matched for IQ and students in the low achieving non-learning disabled group. Results from teacher ratings showed that teachers rated students with learning disabilities as less competent and less motivated than all other groups including the low achieving non-learning disabled group. Teacher reports of the degree of controlling and prompting behaviours provided for students with learning disabilities were also higher than reported for all other groups. These results would suggest that examining educational contexts for students with learning disabilities and the resultant impacts on students’ sense of competence and feelings of autonomy is warranted.

Deci et al. (1992) conducted research with students in elementary and high school attending special education classes. All students were identified as having either a learning disability or an emotional handicap. Questionnaires were used to assess students’ self-perceptions related to aspects of competence and autonomy as proposed by
SDT. These included rating scales of academic self-regulation, academic coping, perceived control (autonomy) and perceived competence. Reading and math scores were obtained from students’ school files as achievement measures. Findings suggested that for elementary students with learning disabilities and emotional handicaps perceptions of their home environment, factors reflecting maternal support-of-autonomy, were more strongly related to self-perceptions of motivation, whereas for high school students perceptions of the classroom environment, factors reflecting teacher support of autonomy, were more strongly related to self-perceptions of motivation in school. Furthermore, among students with learning disabilities or emotional handicaps, statistically detectible differences were found between the amount of variance in achievement and emotional adjustment accounted for by variables reflecting competence and autonomy. Perceptions of competence were more strongly related to achievement and general self-worth and anxiety for students with learning disabilities, whereas perceptions of autonomy and support for autonomy were more strongly related to achievement and general self-worth and anxiety for students with emotional handicaps. The authors concluded that this difference may be due to differences in ongoing struggles at school, namely academic struggles affecting the self-perceptions of competence for students with learning disabilities and struggles with self-regulation for students with emotional handicaps affecting their self-perceptions of autonomy due to feedback from the classroom context in terms of behavioural reminders and external controls.

In a study involving 980 Greek students with and without learning disabilities in Grades 5 and 6, Zisimopoulos and Galanaki (2009) explored differences in perceived
competence and intrinsic motivation. Measures included student self-reports of intrinsic versus extrinsic motivation in the classroom, and perceived competence. Results indicated that despite reporting similar interest levels as their peers without learning disabilities for school learning in general as well as specific subject domain learning, students with learning disabilities reported significantly lower levels of intrinsic motivation for general school learning and specific subject learning. Similarly, students with learning disabilities reported significantly lower perceived competence across subjects including reading, math, history and science.

However, in contrast to the work of Deci et al., (1992) who found that perceptions of competence were related to measures of achievement and well-being, an interesting difference between students with and without learning disabilities was identified in this study regarding the correlation between perceived academic competence and intrinsic motivation toward learning in general and for specific academic subjects. For students without learning disabilities perceived competence was positively correlated with intrinsic motivation generally and across all subject areas. Whereas for students with learning disabilities perceived competence was positively correlated with only one aspect of intrinsic motivation measured, preference for challenge. Also, for students with learning disabilities perceived competence was positively correlated with learning in general, but only in one specific subject area: Science. The authors concluded that although contextual factors may influence both perceived competence and intrinsic motivation, results supported SDT in regard to perceived competence influencing student
motivation for students without learning disabilities and to some extent for students with learning disabilities.

SDT has been shown to be a valuable theory regarding contextual influences on motivation for learning at school for students with and without learning disabilities. SDT was chosen as a theoretical framework for this investigation as it offers clear conceptualizations of socio-environmental factors within educational contexts that may support students with learning disabilities and promote positive developmental outcomes. However, the extant research reviewed above regarding students with learning disabilities attending elementary school in either regular or special education classes, and particularly students in the 8 – 11 year old age range, is scant at best. Further, the bulk of the research has employed student/parent/teacher reports of need satisfaction, or students’ sense of competence rather than observation of classroom contexts and student behavioural engagement in educational practices.

The aim of this dissertation is to add to this extant body of literature regarding SDT and experiences of students with learning disabilities in a special education program. Ways in which classroom contexts may meet students’ basic psychological needs for students with learning disabilities are explored. This study contributes much needed description of the ways in which a special education classroom context may actively support or thwart students’ psychological needs and as a consequence impact their engagement in learning opportunities. In contrast to the vast majority of research utilizing SDT, this study will add to the extant knowledge utilizing a qualitative case study approach conducted over an entire school year including many hours of classroom
observation plus student, parent and staff interviews as the main sources of data. Additionally, this research will extend the limited research base regarding the application of SDT to special education contexts - in particular a single year self-contained special education classroom program for elementary aged students in Grades 4 and 5. This research provides thick description of environmental supports for relatedness, competence and autonomy and the engagement of students with learning disabilities within this educational context.

The methodology employed in this research is outlined in chapter three including my role as researcher, the research design, selection of the case, the participants and methods of data collection and analysis.
Chapter 3. Methodology

I begin this chapter by situating myself as researcher through a description of my background and perspectives toward this work. This is followed by a discussion of the research methods employed while undertaking this inquiry. Description of the methods includes the research design, the selection of a LDP as a case for inquiry, recruitment of study participants, and the methods of data collection. The chapter concludes with a description of the process of data analysis.

3.1. From Teacher to Researcher

My interest in the implementation of instructional interventions for students with learning disabilities stemmed from my teaching experiences within a variety of educational contexts. For example, I have worked as a special education teacher supporting the full inclusion of students with learning disabilities in general education classrooms. I have also implemented targeted literacy interventions for students, including students with learning disabilities, as individuals or in small groups outside of their general education classrooms for a portion of the school day. Finally, I have taught students with learning disabilities in educational programs delivered in self-contained special education classrooms.

My interest in the diversity of instructional contexts for students with learning disabilities began with my experience developing and teaching a full time special
education program for students with reading disabilities in an urban school district in British Columbia, Canada. In 2007 the school district in which I taught decided to create a district-level program that provided an adapted curriculum for students with learning disabilities that would provide access to grade level curriculum in addition to providing intensive reading intervention. The mandate of this program was to provide intensive reading intervention for students in a full time, special education classroom for just one school year and then for students to return to general education classrooms in their neighbourhood schools. Having just completed a Master of Arts degree in Reading and Learning Disabilities, I accepted the position and spent three years developing and teaching the LDP before leaving the position in June of 2010. The school district adapted and expanded the number of locations such that in the fall of 2013 the program was offered in four classes at four different schools spread geographically throughout the school district. Of the four locations, two classes enrolled students in Grades 3 and 4, one class enrolled students in Grades 4 and 5, and one class enrolled students in Grades 6 and 7.

After teaching the LDP program for three years, I taught in the teacher education program of a local university, began my doctoral studies, and subsequently took a position as a literacy support teacher for students in the early primary grades. My decision to conduct research regarding the LDP as a full time special education program was influenced by my teaching experiences at the university and my teaching in elementary schools in both inclusive and self-contained classrooms. While teaching at the university, I espoused to students that I believed in inclusive educational practices
that support the view of all students as unique learners and prevent the highlighting of individual differences as anything but a natural part of human diversity. On the other hand, I had first hand experience in schools viewing the difficulty of many general education classrooms in meeting the needs of the diverse learners enrolled in those classes, and felt that I had made a positive impact on the learning of students with learning disabilities enrolled in the LDP when I taught the program. It was interest in the broader view of the lived experience of children in a self-contained classroom that prompted me to undertake this research. I embarked upon this inquiry to both describe this educational context and examine student engagement in educational practices in the classroom. I was also interested in examining the opinions of students and their parents regarding students’ experiences in this self-contained classroom across a school year.

While designing this research I was keenly aware that my generally positive view of the experience for most students when I taught the LDP might lead me to be looking to confirm that bias through highlighting the positive. I was also concerned that my relative familiarity with the program might impact what aspects of the educational context and student interactions that I focused on during observations and interviews. However, on the other hand, familiarity with the program might provide insight into potential areas of difficulty for students and staff within the program and may allow me to focus on potentially illuminating aspects of the experience for children. Qualitative research does not aim to suppress the bias of the researcher, but rather acknowledges that it is inherent within the process. I designed this research cognizant of the fact that my previous experiences coloured both what I chose to observe, and my interpretation of events.
3.2. Theoretical Framework

This research was undertaken to explore questions regarding the lived experience of students in a self-contained special education setting. Specifically, this inquiry focused on the participation, interactions, and perceptions of students as they participated with staff in the educational practices of the classroom throughout the school year.

As discussed at length in chapter two, this research is informed by SDT. SDT posits that the meeting of basic psychological needs within socio-environmental contexts impacts individuals’ engagement and personal development through the integrating of behavioural regulation into one’s sense of self. Within educational contexts, students are theorized to autonomously regulate their engagement in learning behaviours when their psychological needs for relatedness, competence and autonomy are met as they engage in educational practices with teachers and peers.

SDT was utilized as the theoretical framework in this inquiry as it provides a clear conceptual framework for examining the classroom context in terms of how the educational practices enacted within the classroom supported students’ sense of relatedness, competence and autonomy. Further, patterns of student engagement (both observed and self-reported) were examined in relation to classroom supports for these three basic psychological needs. The research was designed, therefore, as a case study of the LDP as a context for learning for students with learning disabilities over the course of a school year.
3.3. Research Design

This research was designed as a case study in order to study the LDP as a case of special interest through looking for the detail and complexity of interaction within its context (Stake; 1995). As outlined by Yin (2009) this case study may be described as,

…an empirical inquiry that: investigates a contemporary phenomenon in depth and within its real-life context especially when the boundaries between phenomenon and context are not clearly evident; copes with the technically distinctive situations in which there will be many more variables of interest than data points, and as one result; relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result; benefits from the prior development of theoretical propositions to guide data collection and analysis (p. 18).

This research was designed as a single case study with two main levels of analysis. As outlined in Figure 3.1, data collection and analysis focused on:

1) **The whole class** including the program design and curriculum, the instructional practices implemented by the teacher and EA, and student engagement in the educational practices of the program.

2) **Individual students** including observations and interviews regarding the active engagement of three students selected for in-depth study.
Case studies, such as the one exemplified by this research, may serve several purposes and therefore, may be considered exploratory, explanatory, or descriptive (Yin, 2009). This case study was designed as a descriptive case study with the aim of describing the situation within the bounded system of the LDP and to provide detailed, rich descriptions of the LDP as an educational context for students with learning disabilities. These descriptions rather than detailing a true reality, aim to provide clarifying description and sophisticated interpretation of the lived experience of students gained through in-depth data collection and analysis (Stake, 1995). Thick description of social interactions within the educational context of the LDP is provided through the interpretation of particular episodes detailing the circumstances, intentions and meanings within (Freeman, 2014).
3.4. Selection of an LDP as the Case

At the time that this research was designed there were four LDPs enrolling students for the 2013/14 school year. As described by Yin (2009) this location was selected as the case due to factors that suggested it would yield useful data. Furthermore, the teacher and education assistant (EA) working with her were interested in participating in the research. And finally, the teacher was in her fourth year of teaching in the LDP and reported that she had developed a consistent instructional program.
3.5. Study Participants

Parents of students enrolled in the LDP during the 2013/14 school year were informed of the opportunity to participate in the research at the beginning of the school year. Participation in the study was described to students and an information package, including a written consent form for parents to sign, was sent home with each student. Parents were asked to give informed consent for their child to participate as a class member, and possibly for in-depth study that involved further data collection and parent participation in two interviews. If selected as one of three students for in-depth study, parents of these students would receive a $25 VISA gift card at the end of the school year. Participation as a student selected for in-depth study required that parents provide signed consent for photograph and videos to be used in data analysis and in public dissemination of findings. Once parental permission to participate in this research was received students were asked to provide their own assent to participate.

Eleven of the fourteen students enrolled in the LDP were given parental permission to participate in the study. Student participants included one girl, and one boy in Grade 4, as well as three girls and six boys in Grade 5. Nine of the eleven students with parent permission to participate as class members also had permission from their parents to participate as students for in-depth study. Three of the nine children whose families provided consent were chosen as students for in-depth study: one girl in Grade 4, and two boys in Grade 5. Several factors were taken into consideration identifying these students as interesting candidates for in-depth study.
Emma was selected for further study because in general, female students with learning difficulties are less likely to be identified as having learning disabilities than male students (Coutinho, Oswald & Best, 2002). This gender imbalance was evident in the make up of the LDP class, which included nine males and five females. Several other factors influenced the selection of Emma for in-depth study. Emma had repeated Kindergarten, and so was a year older than her Grade 4 classmates. She also had experienced social difficulties at her former school as reported by both Emma and her mother. As the need for relatedness is viewed as a universal psychological need within SDT, Emma’s experience developing relationships with her peers in the LDP and the broader school community was of interest to the study.

Michael was selected for further study because his previous school history had been marked not only by consistent and severe difficulties in acquiring literacy skills, but also by behavioural difficulties to the extent that he received a designation as a student requiring moderate behaviour support, according to criteria established by the BC Ministry of Education (2016). Behavioural difficulties in the classroom can impact both students’ engagement as well as their relationships with both their peers and teachers. Therefore, Michael’s extremely weak literacy skills and history of behavioural difficulties prompted his selection for in-depth study.

Finally, Zack was selected for in-depth study based on early observations of his limited engagement in the educational activities of the LDP. Zack rarely raised his hand in the classroom and when he did it was usually in what seemed a casual manner with his elbow resting on his desk. Early in the year he required considerable prodding and
oversight from the teacher and EA to complete classroom assignments. Taken together, these behaviours appeared to be indicative of a pattern of minimal engagement in educational practices. Due to SDT’s emphasis on motivational processes, Zack’s behaviour suggested that he would be an interesting student to study in-depth.

The mothers of these three students were also research participants along with the classroom teacher and the EA assigned to the class. These participants also provided informed consent. Copies of all consent/assent forms approved by SFU Ethics are included in Appendix B.

No participants withdrew from the study over the course of the year.

3.6. Data Collection

Within qualitative research designs such as case studies, understandings of students’ experiences within the classroom are gleaned through in-depth observation and data collection focused on documenting the socio-environmental context in which their reality is constructed (Guba & Lincoln, 1998). Data for this research study were collected over one school year from September 2013 to June 2014 following approval from the school district and the SFU Office of Research Ethics. Data collected included field notes from school and classroom observations; photographs of the classroom and school environments; photographs and video tapes of student activities and educational practices; transcripts from semi-structured interviews with three students, staff and parents; notes from informal conversations with students and staff; assessments of
students’ reading; and program artifacts such as student work, student file documents, and teacher assessments and instructional plans.

### 3.6.1. Observations.

Observations were conducted in the classroom approximately once per week throughout the school year. Each observation ranged from a minimum (and not usual) one hour to six hours (the entire school day) in length. In total, over the course of the year, more than 103 hours of observation were conducted over 30 days. The first observation occurred on September 26, 2013 and the final observation occurred on May 20, 2014. Twenty single date observations occurred on Thursdays, as this was the day that had been arranged for me to be released from my own classroom teaching each week, to conduct the research. However, observations also occurred for one full week from May 5th to May 9th, and on three Tuesdays, one Wednesday, and one additional Friday. Observations that occurred on days other than Thursdays were conducted on these days to accommodate changes in my own teaching schedule, or in the case of the extra Friday observation at the invitation of the teacher to observe a special National Literacy Day celebration in the classroom.

Observations focused on classroom instruction and activities, the physical layout and details of the classroom and school setting, individual student behaviour during class time, and students’ social engagement during recess and lunch periods. During these observations my role in the classroom varied. During most formal instructional lessons I was a passive observer in the classroom. However, at other times I became a participant
observer. For example, on occasion the teacher would directly ask me a question during a lesson or activity, or I would volunteer to help with an activity such as wrapping Mother’s Day gifts. At other times students would engage me directly as I observed in the classroom or I would ask them questions about what they were doing. I did not discuss with students that I was a teacher. I wanted them to view me as a researcher that was interested in their experiences at school rather than a teacher.

Observations were recorded in the form of field notes on a small MacBook Air computer, or in a handheld notebook, particularly if a drawing would best capture the situation. After each observation I reread these notes and fleshed them out by adding to the documents written in the classroom including details that I observed, but didn’t have the time in the midst of capturing classroom practices and interactions to record.

3.6.2. Photographs and video recordings.

While observing in the classroom I frequently took photographs of the classroom, the school, student work, and students and teachers as they engaged in educational practices. Using an iPad, I also made video recordings of students individually, and in groups as they engaged in independent and teacher-directed educational practices.

3.6.3. Interviews.

Semi-structured interviews were conducted with parents of students selected for in-depth study in the fall and again in late spring. At the end of the school year the teacher and EA were interviewed to learn more about the educational practices of the
classroom. The three students selected for in-depth study were also interviewed in the spring to obtain their perspectives on their year in the program. Interview protocols were developed and used as the starting point for each semi-structured interview (see Appendix C), however the interviews were permitted to follow other lines of thought as topics arose during the interviews. Interview questions were designed to explore students’ previous school experiences, their experiences within the LDP, as well as their impressions and interpretations of their experiences or outcomes resulting from their enrolment in the LDP.

Semi-structured interviews were conducted in a quiet, private location. Most were conducted at the school; however, one parent was interviewed at her place of work for both the fall and spring interviews. All semi-structured interviews were tape recorded on an iPad using the free version of the program, Record HD. Two parent interviews and the interview with the EA were conducted over the telephone rather than in person, as originally planned, as the school year ended abruptly more than two weeks early due to a labour dispute. All interviews were transcribed for the purpose of analysis.

Comments from informal conversations with all students involved in the study as well as the teacher and EA occurred frequently throughout the school year. These were recorded in writing in a study journal or on my MacBook Air computer at the time they arose. Some of these informal discussions took place in a quiet, private space outside the classroom, while others occurred in the classroom or throughout the school as they arose during my observations.
3.6.4. **Surveys.**

Student participants were asked to complete two written surveys. In the fall, students were asked to complete a single page sheet describing, “What it was like in my class last year,” and “What it is like in my class this year.” This survey was introduced to students without the teacher or EA in the classroom. They were told that the staff would not see what they wrote and that I was just interested in their thoughts about what it was like to be in their class the previous year and what it was like to be in the LDP. If students had been enrolled in the LDP the previous year they were asked to respond regarding what it was like in their class the last year that they hadn’t been enrolled in the LDP.

At the end of the school year, students were asked to complete a written survey indicating “Plusses,” “Minuses,” and “Interesting Facts” about the LDP. The survey was completed without the teacher or EA in the room. Due to the difficulties students experienced with written output, all surveys in the fall and at the end of the year were reviewed individually with students to determine whether they had any further information to relay verbally to supplement and/or clarify what they had written on the paper.

3.6.5. **Artifacts.**

Brochures published by the school district and distributed to parents by the students’ neighbourhood schools outlining details of the LDP, as well as documents emailed to schools regarding the application process for students, provided information
on the design of the program from the perspective of the school district administration. Teacher daily/weekly/monthly academic plans and overviews were collected as sources of data regarding the daily implementation of the program.

The Permanent Record Files of the three students selected for in-depth study were reviewed to identify schools attended, attendance patterns, assessments that resulted in students being designated by the school district as in need of special education supports, previous special education supports received, and previous academic achievement. This included reviewing permanent student record cards, psycho-educational reports, other district-based assessments of achievement, report cards, school district documentation, behavioural assessments/comments, Individual Education Plans, behavioural infraction reports and any other pertinent documents found in these files. Reviewing documents in the students’ files was used as a source of background information on the students, which provided a glimpse into their educational history within the school district.

Student work samples were collected either by photocopying or taking photographs of student work. Writing samples were collected from their Monday journal notebooks, written responses were copied from their reading response notebooks, and work samples were documented from student duotangs for social studies, science, healthy living, spelling, writing and math.
### 3.6.6. Literacy assessments.

Literacy assessment information for all students was collected from the classroom teacher’s assessment records. Additionally, for descriptive purposes I completed standardized reading assessments with students.

#### Classroom literacy assessment.

The Teacher conducted curriculum-based reading assessments with her students at intervals throughout the school year. These included a reading level assessment using the PM Benchmark Assessment Kit (Nelley & Smith, 2001) in September, March and June. In September and June the Teacher also completed a phonemic decoding assessment using the Houghton Mifflin Phonics/Decoding Screening Test (2001), and a spelling assessment using the Primary Spelling Inventory from *Words Their Way* (Bear, Invernizzi, Templeton & Johnston, 2008). Also in September and June the Teacher collected an unedited writing sample. In September this sample was evaluated using the Quick Scale rating scales Writing from Experience (British Columbia Ministry of Education, 2009). However, due to the abrupt end of the school year due to teacher job action, the final writing sample was collected, but not evaluated by the teacher.

#### Standardized reading assessment.

In the fall and again in June, all study participants were administered the Test of Word Reading Efficiency (Form A) (Torgesen, Wagner & Rashotte, 1999). Subtest I: Sight Word Efficiency and Subtest II: Phonemic Decoding Efficiency were administered as per the administration and scoring guidelines in the examiner’s manual. Standardized instructions were read to the students from the manual and practice items were
administered. Students were then given 45 seconds to read the test list of words (subtest I) and pseudo words (subtest II).

At the end of the school year Michael, Emma and Zack were also assessed using the Gray Oral Reading Tests, Fifth Edition. (GORT-5:) (Wiederholt & Bryant, 2012) Form A. Although these three students were in Grades 4 and 5, due to their limited literacy skills all began reading at Story 1 that is the recommended starting point for students in Grades 1 to 3 or students with very limited reading skills. Standardized instructions were read to the students from the examiner record booklet. The performance summary was completed on the examiner record booklets. These were then filed in Michael, Emma and Zack’s research files for descriptive purposes.

3.7. Ensuring Data Authenticity

The authenticity of the data collected was evaluated through member checks conducted with study participants. The teacher and EA reviewed observation field notes from three separate observations across the school year – one from each of the fall, winter, and spring school terms – to provide feedback regarding their accuracy and whether any important details or contextual information had been left out of the observation. Periodically throughout the school year, students were also consulted regarding my understandings of how things worked in the classroom as well as my interpretations of the educational practices within the program.
All interview data were transcribed from audio recordings by a transcriber. I then also transcribed half of the interviews, with an agreement rate of 97%.

3.8. Analysis

As outlined by Elo and Kyngas (2007) analysis of qualitative data involved three main phases: preparation, organization - including inductive and deductive analysis, and reporting. Figure 3.2 provides an overview of these phases described below.

3.8.1. Preparation.

As part of the iterative process of data collection and analysis, observation field notes, photographs, videos, and audio recordings were saved on a password-protected computer by date of observation. File folders were used to organize all physical data gathered such as artifacts that had been photocopied or collected. Files were established for each research participant, the district/school context, and the classroom context and stored in a locked filing cabinet.

After each visit to the LDP physical data were reviewed and filed in the appropriate file folders. Field notes recorded on my laptop computer during observations in the classroom were re-read and added to, fleshing out details of the situations observed such as who was speaking, the educational practice taking place, and any event details that might have happened but were not recorded due to time constraints in the moment of observation. In red font research memos were recorded at the bottom of each day’s observation field notes such as questions that arose, or possibilities for any future focus
of observation. Initial research codes were then applied to the observation field notes that appeared to capture the meaning behind excerpts of the data. This was done using the review function of Microsoft Word. Sections of text ranging from phrases to whole paragraph descriptions of the classroom context, as well as single remarks to whole conversations with multiple participants were highlighted and commented on in the review pane on the Microsoft Word document labeling them with emerging codes ascribing meaning to the data throughout the process of data collection and analysis.

The preparation phase also involved selecting whole observation protocols and interview transcripts as the unit of analysis for open coding as these are considered large enough to be considered in combination and small enough to provide a salient context for meaning during analysis (Elo & Kyngas, 2007).
Figure 3.2 Phases of data analysis
3.8.2. Organizing phase.

*Inductive analysis.*

As the iterative process of data analysis and collection continued throughout the school year and beyond, an inductive approach to data analysis, as described by Elo & Kyngas (2007) was undertaken. Open coding was completed on observation field notes throughout the school year. Questions asked while coding included: Who is involved? What is happening? When did this happen (time of day, during which educational practices, following what events)? Why did this happen? With these questions in mind, explanatory codes were attached to excerpts of the data within each day’s observation or interview transcript. Photograph and artifact data were also coded and sorted electronically or physically into file folders. Video data were first time stamped, transcribed, and then coded and sorted. To ensure authenticity of the data analysis ten percent of the observation field notes, interview transcripts, and video data were independently coded by my senior advisor of this work, and compared with my initial coding. See Appendix D for an example of open coding of the data.

In order to clearly identify possible relationships within the data, a coding sheet was developed using an Excel Spreadsheet on the computer. Initial codes became column headings while excerpts of data assigned to those codes were input in cells under each code. Data excerpts ranged from single sentences to lengthy descriptions of complex classroom interactions and these excerpts were often included under more than one descriptive code.
Identified codes were then further analyzed and grouped leading to three tentative categories initially labeled: Valuing Relationships, Becoming Capable Learners, and Demonstrating Agency. Aligning well with SDT, the uncovering of these three categories through inductive analysis led to the addition of sub-questions. Additional sub-questions often become necessary in qualitative studies in which the research takes place over many months (Agee, 2009) as is the case over the course of a school year. The sub-questions developed were: 1) In what ways did the implementation of the LDP support students’ needs for relatedness, competence and autonomy? and 2) How did the relative supports for relatedness, competence and autonomy as enacted within the LDP impact student engagement in educational practices within the classroom?

**Deductive analysis.**

A deductive approach to data analysis as outlined by Elo & Kyngas (2007) was undertaken to address these sub-questions. At this point structured analysis matrices were created for each psychological need outlined in SDT including supports/threats for relatedness, competence and autonomy. The previously coded data were re-read and initial codes were organized as to whether they demonstrated evidence of contextual psychological need support or need threat. Following this initial coding and sorting procedure using the a-priori codes based on SDT, axial codes were developed that represented categories of meaning within the data. See Appendix E detailing the structured analysis matrices.

Finally, the data for the three students selected for in-depth study were analyzed by matching data collected regarding their social and academic engagement within the
LDP and the evidence of contextual supports for relatedness, competence and autonomy that are theorized to support student motivation for learning. Differences across the three students were then analyzed in light of classroom support for these three basic psychological needs. This was undertaken through the creation of two sets of descriptive data for the purposes of pattern matching (Yin, 2009). One data set described the context of the classroom and the other described each student’s actions under each of the theme headings of relatedness, competence and autonomy. When comparing these data sets matching patterns of expected student behaviours predicted by SDT based on the environmental context were sought. Evidence of contradictory data that did not fit the expected patterns was also identified. Contradictory data were colour coded to identify it as such. This pattern matching, or lack thereof, enabled me to check that my assertions were well supported while forcing me to reconcile any data that did not fit the theoretical underpinnings of SDT through further analysis of the data and further exploration of the research base involving the theory. In particular, the analysis was informed by, and the data were analyzed specifically in light of, prior educational research into SDT and student motivation. See Appendix F for an example of pattern matching data analysis.

During this stage of the analysis triangulation of the data occurred through analyzing different sources of data while looking out for evidence that was contrary to these codes. For example, when the finding emerged that Michael was a very engaged student with the exception of times when his competence was threatened through the lack of reading material that he could read successfully, interview data from his mother suggested that his reading might not be as weak as it appeared. His mother stated that
Michael’s reading had improved considerably over the school year, and that she was very pleased with his literacy acquisition. However, her examples of his reading improvement at home were all examples of Michael being able to figure out single words, such as when his parents would spell things like “ice cream” so that their children wouldn’t know what they were talking about. Never once did Michael’s mother mention him reading a book at home other than the required home reading books that consisted of prose written with simple words that he was able to decode automatically as sight words. She also stated that she believed Michael would benefit from another year in the program.

Therefore, these interview data did not contradict the finding that Michael’s weak reading skills combined with a lack of accessible reading material impacted his sense of competence and his engagement during independent reading times.

Throughout data collection and analysis frequent debriefing sessions regarding the data and emerging interpretations occurred with my senior supervisor. Data analysis involved reviewing data consistently looking for evidence that might suggest other more explanatory codes or themes beyond that suggested by SDT. The classroom teacher and EA provided a review of the main findings of the study as a means of member checking.

Triangulation of the data occurred through gathering and analyzing data from multiple sources. Classroom and school observations formed the bulk of the data analyzed in this study. However, data were also collected through semi-formal interviews with students, staff and parents, informal discussions with students and staff, photographic and video data collection of educational practices, collection of artifacts related to the design of the program within the school district and as evidence of
educational practices that students participated in such as student work samples. For example, when analyzing the data for supports for or threats to students’ sense of competence the structure of the educational practices of the classroom were examined. Evidence of structure was sought within the classroom observation field notes, the teachers’ day plans and weekly overviews, as well as in the photograph and video data collected in the classroom. Interview data from students, parents and staff also revealed evidence regarding the provision of structured routines both in class and for homework completion.

3.8.3. Reporting results.

Through the process of inductive and deductive analysis four major themes were identified regarding students’ lived experience within the LDP through the lens of SDT. This was accomplished through meaning abstraction from the identification of descriptive categories from the entire data set, and patterns of engagement of the three embedded case study subjects. These themes were labeled: Supporting Students’ Need for Relatedness; Building a Culture of Competence; Supporting Autonomy in the Classroom; and Engaging in Educational Practices and are reported in chapter five. However, prior to presenting the results in chapter five, chapter four presents a description of the LDP including a description of the program, the students, the staff, and implementation of the educational practices of the classroom including literacy intervention instruction.
Chapter 4. The Literacy Development Program

This chapter provides a detailed description of the LDP as a context for learning during the 2013/14 school year. Descriptions include: the school district’s description of the program, the students, the staff, the day to day implementation of the program, and the delivery of special education within the LDP.

4.1. School District Program Description

During the spring of the previous school year, the school district distributed an email to all elementary schools with an attachment including information outlining the goals and objectives of the LDP, the locations and grade levels offered, the application process, and the selection criteria for acceptance into the program. This information is outlined in brief below and can be seen in its entirety in Appendix G.

4.1.1. Purpose and description of the LDP.

During the 2013/14 school year there were four LDPs running throughout the school district that differed only with respect to grade level. Two LDPs enrolled students in Grades 3 and 4, one LDP enrolled students in Grades 4 and 5 and one LDP enrolled students in Grades 6 and 7.

The information letter for schools to share with parents included the following information:
The purpose of this program is to provide intensive literacy skills development for students in elementary school who have a severe learning disability in reading and written language. This will be the most intensive level of service we offer for these students.

Students whose scores fall within the learning disabled range in reading as identified by School Board criteria, can be considered for this class. Placement is for one school year if accepted into the program. (Note: It is expected that families will make their own transportation arrangements for their child, however if transportation is a significant barrier for the child to attend this program, a formal written request for bussing will be required.)

The class holds a maximum enrolment of 14 students. It is staffed by a Special Education Teacher and one Education Assistant.

Students will be enrolled in a self-contained classroom and receive all of their instruction from their classroom teacher. This is an adapted program that delivers core curricular learning outcomes in each subject area. The program will emphasize Language Arts and Math development by employing a number of methodologies including explicit instruction in phonemic awareness, phonemic decoding, fluency, vocabulary and reading comprehension.

Each child’s Individual Education Plan (IEP) will be reviewed and revised to reflect his or her instructional needs. Individual and group instruction will
reinforce taught skills. Parents are expected to support this program with nightly homework.

4.1.2. Selection criteria.

As outlined in the information package to schools, eligibility for enrolment in the LDPs was limited to students meeting the following selection criteria:

Psycho-educational assessment has been completed and indicates a learning disability on the severe end of the spectrum (e.g., a significant gap between expected achievement and school performance).

Primary presenting issue will be a reading disability.

Secondary issues may include:

Mild Speech/Language difficulties: articulation, language delays.

Mild behavioural difficulties which do not require Child Care Worker support – a current Conners’ Profile or current teacher comments are required.

4.1.3. Application procedures.

The application procedure and selection of students for the program was well defined by the school district. Information given to schools regarding the application process included:
Parents/guardians will attend an information meeting at the respective program school prior to an application/referral package being completed,

The school will send a completed “Education Services Referral’ District form with all supporting documents to Education Services by the deadline for application,

Education Services will process the referral and set aside a copy for the appropriate program,

In late spring, the selection committee (teacher, principal, and district staff from Education Services) will meet to consider referrals, and

If accepted into the program, the parents/school will be sent a letter immediately after the meeting regarding this placement option.

Parents will attend a mandatory orientation meeting in order to complete registration forms, sign a support agreement, and provide a transportation request letter if applicable.

Referral package requirements / checklist provided to schools included:

1) A completed Education Services referral form including the following attachments:
a) A psycho-educational assessment identifying a learning disability in the area of reading,

b) A copy of the current IEP indicating reading interventions,

c) A copy of reading assessments (e.g., DRA, PM Benchmarks, Fast ForWord RPI etc.),

d) Copies of the two most recent report cards,

e) A recent behavioural assessment (e.g. Conners’ Profile, teacher comments etc.),

f) Recent School Based Team notes (if available), and

2) A signed parent consent form.

4.2. Students

There were fourteen students enrolled in the LDP during the 2013/14 school year. This section describes the fourteen students enrolled including the eleven study participants and their literacy development when they entered the program in the fall. Finally this section describes three students selected for in-depth study.
4.2.1. Students enrolled during the 2013/14 school year.

Following the application, selection and enrolment procedures the LDP selected as the case for this study during the 2013/14 school year enrolled five girls and nine boys. Three students were in Grade 4, including one girl and two boys, while eleven students were in Grade 5, including four girls and seven boys. Bussing from the students’ homes to the school where the LDP was situated was provided for eleven of the fourteen students.

Of the fourteen students in the class, eleven had parental permission to participate as class member research participants. Appendix H outlines student characteristics including grade, gender, language of the home, and school history of these eleven students. This consisted of four girls and seven boys. Two students were in Grade 4 and nine students were in Grade 5. One student was in her third year in the program (Grade 3 in another location and Grade 4 and 5 with this same teacher in this program). Two more students were in their second year in this classroom, and one was in his second year of the program, but first year in this classroom. One student had previously been enrolled in a French Immersion Program. The remaining students had attended their catchment area elementary schools within the school district. All data and analysis describing aspects pertaining to the whole class within this research refer to this group of eleven students.

4.2.2. Literacy achievement in the fall.

The selection criteria for this LDP class ensured that all students enrolled had significant delays in the development of their literacy skills. At the beginning of the year
the teacher conducted curriculum based literacy assessments consisting of assessing each student’s approximate reading achievement level using the PM Benchmark reading assessment, assessing decoding skill using the Houghton Mifflin Phonics/Decoding Screening Test, as well as assessing spelling skill using the *Words Their Way* Primary Spelling Inventory, and assessing writing ability using Grade 1 – 3 Quick Scale Writing from Experience rubrics (BC Ministry of Education, 2009). Appendix I shows the information recorded by the teacher regarding students’ literacy skills in the fall.

According to the teacher’s fall PM Benchmark reading assessment measures, the in-context reading ability of the students in this Grade 4 & 5 class varied considerably. Michael demonstrated such weak decoding skills and had retained so few sight words that he was unable to independently read even simple sentences in a PM Benchmark Level 1 book. The Level 1 book in this assessment required students to know some common sight words and use picture and context cues to complete reading of the text. For example, the text that Michael was unable to read accurately included a repeating pattern: “Look at me. I am reading. Look at me. I am painting. Look at me. I am singing.” This pattern continued with the verbs eating, drinking, running, climbing, and sliding. The most able reader as identified by the teacher’s PM Benchmark assessment, was able to read at PM Benchmark Level 20. This level required students to read relatively simple, non-patterned text including sentences such as, “I’ll race you back to our place,” said Nick to his sister, Sarah. He sped off down the path on his skates… Suddenly, Nick lost his balance and fell into Mrs. Miller’s garden.” The teacher considered this a mid-Grade 2 reading level.
Standardized reading assessments using the Test of Word Reading Efficiency were conducted for research purposes in the spring and fall. These assessment results, tabulated and displayed in Appendix J, show fall and spring standard scores based on age for each student.

The curriculum-based reading assessments conducted by the teacher and the standardized reading assessments conducted for the purposes of this research clearly paint a picture of a class of students with word level reading skills that were severely depressed, relative to same age peers.

4.2.3. Student participants selected for in-depth study.

Three students were chosen for in-depth study in order to focus more closely on possible differences in the experiences of students within the LDP. Michael, Emma and Zack were chosen as each one provided a unique lens through which to consider the interaction of students within the context of the LDP.

Michael.

Michael was a male student in Grade 5 who lived at home with his mother, father and younger sister. Michael was chosen for in-depth study for three main reasons: his previous schooling in French Immersion, his very delayed reading achievement, and his history of behavioural difficulties at school. Michael was enrolled from Kindergarten through Grade 4 in a French Immersion program. His mother went through French Immersion in school and wanted her children to have the same experience. A review of Michael’s permanent record file and discussions with Michael, his mother and his teacher
indicate that he had experienced difficulty in school both academically and behaviourally since Kindergarten. According to Michael’s mother, his younger sister, although only in Grade 1, was not showing the same difficulties as Michael had.

Michael struggled with the acquisition of literacy skills in both French and English. His report cards highlighted difficulty with learning to read, spell and develop vocabulary in French from Kindergarten on, however, his overall language arts skills were not assessed as “Not Meeting Age Expectations” until Grade 2.

A psychoeducational assessment was completed in the spring of his Grade 4 year. The psychoeducational report identified Michael as meeting ministry criteria for a learning disability of a severe nature in the areas of reading and written language. Michael’s performance on the reading and writing scales of the Woodcock-Johnson-III: Tests of Achievement Normative Update (Woodcock, McGrew & Mather, 2007) fell in the well below average range relative to age peers (i.e. Broad Reading Standard Score (SS)=39; Broad Written Language SS=36.) His performance on the mathematics composite fell in the low average range as compared to age peers (Broad Mathematics SS=83).

As recommended in the psychoeducational report, the school applied for Michael to transfer out of the French immersion regular education program and into the LDP for Grade 5. He was accepted into the LDP, and in September began the school year with very limited literacy skills and relatively stronger math skills. Following the teacher’s reading assessments in September, Michael was placed in Reading Group 1 with three
other students who also demonstrated extremely weak decoding skills. This group of students received instruction on the least advanced decoding skills of the four instructional groups.

Michael was aware of his difficulties with literacy acquisition. Regarding the reason that he was enrolled in the LDP, he reported, “I have a reading and writing disorder.”

Michael’s report cards suggested he was generally successful in math with some support. Overall, his math skills were assessed as, “Within Age Expectations,” from Kindergarten to Grade 3 and he received a “B” letter grade for math in Grade 4.

Reports in Michael’s permanent record file show that he received Learner Support Team (LST) support from Grade 1 to Grade 4. The focus of this support was French reading and writing from Grades 1 to 3 and reading in English was the focus of LST support in Grade 4. Michael’s name was brought forward to the School Based Team to discuss difficulties with behaviour and academic progress beginning in Grade 1. Continued behavioural problems through Grade 3 led the school to suggest to his parents that Michael see a paediatrician, which his mother reported resulted in Michael being identified as a student with ADHD.

Michael’s mother described Michael as an emotional child:

He just acts out sometimes. He can’t always control his emotions, and so they come out - sometimes in a big explosion, sometimes in a little explosion. You’ve
got to get Michael…. He can be very high maintenance if you’re not clear with your boundaries with him. And some teachers just can’t deal with him.

Michael’s report cards and school based team minutes in his permanent record file consistently described Michael using as energetic, social, and friendly. All of his report cards also documented Michael’s behavioural challenges at school including, “challenges, or progress in respecting other’s personal space; keeping his hands to himself; and learning to self-regulate when he becomes frustrated or angry.”

Michael’s school submitted an application to the school district for a designation as a student requiring moderate behaviour support to the school district at the end of his Grade 3 year. His permanent record file includes documentation stating that Michael met the criteria for “Learning Disability” and “Moderate Behaviour Support/Mental Illness”.

Michael received support from a Youth and Child Care worker during his Grade 4 year, however, reports stated that he was only seen as part of a friendship group as it was reported that his Grade 4 classroom teacher felt she could support him sufficiently in the classroom to develop his self-regulation skills when problems arose. Michael’s classroom teacher worked with him to take a time-out in the hallway when she saw him getting upset, and this was reported to work for him throughout the year.

Michael attended the LDP from the beginning of the school year, taking the school bus for approximately an hour each way to and from school. He was the second
student on his bus picked up in the morning and the second to last student dropped off at the end of the day.

**Emma.**

Emma was a female student in Grade 4. She lived at home with her mother, father and her older brother who was in high school. Emma’s mother reported that Emma’s brother had not experienced the difficulties in school that Emma had. Emma was selected for in-depth study for three reasons: her gender, as there were only five female students in the class and four female student participants; the fact that she had repeated a year in school and was therefore enrolled in Grade 4, but was age appropriate for Grade 5; and her history of social difficulties at school.

A review of Emma’s permanent record file as well as discussions with Emma and her mother demonstrated that Emma was enrolled in one school from Kindergarten to Grade 3 and experienced difficulties in acquiring academic skills beginning in Kindergarten. Emma did not meet grade level expectations in literacy or numeracy in Kindergarten and repeated Kindergarten for a second year. Teacher progress reports as documented on her permanent student record state that following her second year in Kindergarten Emma met the widely held academic expectations for Kindergarten and continued to meet grade level expectations in math from Grades 1 to 3. In language arts Emma was reported by her teacher to minimally meet grade level expectations in Grade 1, however, teacher reports suggest she did not meet expectations in Grades 2 and 3. She received instruction from a Learner Support Teacher throughout Grades 1, 2 and 3.
In Grade 3 Emma was referred to the school psychologist for a psychoeducational assessment. This report concluded that Emma met the Ministry of Education diagnostic criteria for a learning disability in the areas of reading and writing. Emma’s performance on the reading and writing scales of the Wechsler Individual Achievement Test – Third Edition (2010) fell in the below average range relative to age peers (i.e. Reading Composite, SS=76; Spelling, SS=72; Writing SS=74.) Her performance on the Mathematics Composite fell in the low average range (SS=88) relative to age peers.

Emma was referred by her neighbourhood school to the LDP for Grade 4 and was enrolled in the program from the beginning of the school year. Following the teacher’s reading assessments in September, Emma was included in Reading Group 2 with three other students who demonstrated somewhat more advanced decoding skills than the four students in Michael’s reading group. Emma’s group received instruction and practice activities that focused on similar, but slightly more advanced decoding skills than Michael’s group.

In addition to her academic difficulties, Emma and her mother also reported that she had considerable difficulty making friends at her former school. Emma also reported that she disliked her previous teacher. Emma and her mother both made frequent comments regarding her preference for the LDP and the broader school community in which the LDP was situated in comparison to her former school and regular education programs. This preference consistently focused on the social aspects afforded by the program and the school. Her mother drove Emma to and from school each day.
Zack.

Zack was a male student in Grade 5 who lived with his mother. Zack attended one elementary school in the school district from Kindergarten to Grade 3. He was chosen as a student for in-depth study for two reasons: the fact that this was his second year in the program; and his considerable lack of engagement in many classroom activities at the beginning of the school year despite demonstrating relatively high decoding and spelling skills in comparison to the other students in the class.

Zack’s school history showed ongoing academic difficulties. His permanent student record and report cards indicate that Zack did not meet expectations in language arts or math from Grades 1 to 3. His mother reported she suspected that his academic difficulties were evident as early as Kindergarten:

Grade 1 it was mentioned really. Yes, he wasn’t really learning his alphabet properly or just reading…Just reading with him was an experience. Just his patience. He’d run out of patience…. In Kindergarten the teacher said there was nothing wrong with it, but he wrote his name completely backwards. She said that’s normal for a kindergartner. I’m not sure.

In Grade 3 Zack was referred to the school psychologist for a psychoeducational assessment. The assessment described Zack as a student with a Learning Disability in reading. On the Wechsler Individual Achievment Test – Third Edition (2010) Zack’s performance on the reading composite fell in the below average range relative to age peers (i.e. Reading Composite, SS=76). His performance on Writing subtests and the
Mathematics Composite fell in the low average range relative to age peers (i.e. Spelling, SS=85; Sentence Writing SS=80; Mathematics Composite SS=85).

In the spring of Grade 3, the school-based team at Zack’s neighbourhood school applied for him to be accepted into the LDP for his Grade 4 year. Zack’s application was not initially approved, and he and his mother moved to a different area of the city. Zack was enrolled in a regular education classroom in a different school in his new neighbourhood for Grade 4. However, on September 19th, 2012, a letter from the school district to Zack’s mother indicated that space had opened up in an LDP and Zack was accepted into the program. Therefore, for the first month of Grade 4 he was enrolled in a regular education classroom in his new neighbourhood school and then was bussed to the LDP from the first of October for the remainder of the year. Zack then returned to his neighbourhood school to begin Grade 5 in a regular education classroom but was again accepted shortly after the start of the school year for a second year in an LDP albeit a different location than he had attended in Grade 4. He enrolled in the LDP that was located very close to his neighbourhood school on the twelfth of September. Therefore, the year of this research study was Zack’s second year in an LDP, but at a different location with a different teacher. Both years he joined the program shortly after the start of the school year. When asked whether joining the programs after the start of the school year both years had been difficult, Zack replied, “No. I make friends easily.”

After 9 months in an LDP the previous year, based on her initial reading assessments the teacher placed Zack with two other students in Reading Group 4 working on the most advanced decoding skills of the four instructional groups. During the course
of this school year, Zack was driven to and from school and did not require bus transportation.

4.3. Staff

Information sent to schools and parents regarding the four LDP locations running during this particular school year described the staffing at each location as, “a Special Education Teacher and one Education Assistant.”

4.3.1. Ms. Campbell, Teacher.

Ms. Campbell, the teacher of this program was a qualified LST teacher within the school district. School district qualifications for LST teachers included Bachelor of Education degree or equivalent, valid B.C. teaching certificate, minimum of two years' satisfactory classroom teaching experience, one course in assessment and evaluation of student learning, one course in differentiated instruction or inclusive teaching practices, and two courses from a published list of courses on special education and English language learning topics.

The year of this study was Ms. Campbell’s fourth year teaching the LDP. Prior to teaching this class she had been a regular education classroom teacher for thirteen years teaching intermediate grades from Grades 4 to 7. Ms. Campbell stated that she was looking for a challenge when she applied to teach this specialized program and enjoyed the opportunity to learn more about effective literacy instruction. When Ms. Campbell first accepted the position she made an effort to meet with me after school to discuss the
program and how it was set up at that time, as I was the previous teacher. She appreciated that when she first started teaching the LDP she had been introduced to the specialized reading instructional program, *Seeing Stars* (Bell, 1997), and that the school district paid for her to attend a seminar on how to implement the program.

### 4.3.2. Mrs. Chin, Education Assistant.

Mrs. Chin was the EA in this LDP who supported students in collaboration with the teacher. She had been the EA for seven years and started the first year the LDP opened up in this location. Prior to working in this program, she had worked as an EA supporting students with severe special needs in other elementary schools. She reported that she took the position because she was very interested in working with students with learning disabilities. Mrs. Chin worked within the LDP classroom for the majority of the school day with the exception of approximately 45 minutes in which she supported other students with special needs within the school while other EAs took breaks.

### 4.3.3. Collaboration between teacher and EA.

An interesting facet of the program that became evident from the observational and interview data was the deep level of collaboration and synchronicity between the teacher and the EA. While there was a clear division of labour between Ms. Campbell and Mrs. Chin, their roles were synchronous and notable for the considerable collaboration between the two. Zack, who had been in a different LDP classroom for Grade 4, told me at the end of October that there were, “two teachers and no assistant here.”
The EA explained that she actively sought out instructional ideas for use in the classroom, but always consulted with the teacher:

I come up with some ideas, which I do get from Pinterest, or some other people. But, I always talk to Ms. Campbell about it first, because she’s ultimately the teacher in charge of the program. But, anytime I have an idea or I see something that I think will really benefit the kids, I’ll approach her and tell her about it.

The EA reported that she enjoyed planning art activities. An interesting exchange between the two occurred one day as the EA demonstrated for the students how they were to complete a Mother’s Day card. The EA described the steps involved in the art project and showed a picture of a finished card on the SMART Board. The teacher was standing at the white board writing down a list of the steps for the students to follow as the EA described them. The teacher said, “Would it be best to glue the poem inside before painting the front?”

The EA replied, “Oh, ya. That would be a good idea.” She then held up a variety of coloured construction paper for the students to choose from.

The teacher asked, “Will the picture show up on some of those colours?”

The EA replied, “Ya, it should be fine. It’s pretty bright paint.”
This example of team teaching and negotiated decision making was an interesting exchange that demonstrated the instructional influence of both adults in the room and the potential for powerful collaboration to support student learning.

4.4. Implementation of the LDP

4.4.1. The physical environment of the classroom.

The LDP was held in a classroom that was rectangular with a large window and a door to the outside along one wall. The white board was at the front of the room with the SMART Board perpendicular to this on the window wall. Five desktop computers, a printer and the EA’s desk were situated along the back wall next to the door to the inside hallway. Located along the wall opposite the windows were the students’ coat hooks, the teacher’s desk and instructional supply cupboards, and the classroom sink. Although changed almost weekly, student desks were in the middle of the room generally arranged in connected rows directly facing or angled toward the front white board and the SMART Board.

Reading instruction took place at a rainbow shaped table (commonly called a rainbow table) at the side of the classroom. This allowed the teacher to sit at the centre and four students to easily wrap around her. The classroom was not large; however, the supplies were highly organized with shelf and wall space well utilized for storing student and instructional supplies. There were two similar desks in the room. The teacher’s desk
was at the front of the classroom near the side of the front wall and the EA’s desk was at the back of the classroom near the door to the hallway.

Students in the LDP also used the unoccupied classroom next door at times. During the Literacy Centres time period two of the group activities would take place in this room including the EA’s instructional centre and one independent centre. This room was set up for this purpose with two round tables and chairs; however, other unused school furniture was also stored in this room. I also observed students using this class when performing reader’s theatre skits for their Grade 1 little buddy class, and when making apple sauce and cookies to celebrate National Literacy Day.

4.4.2. Classroom routines.

By the time I had obtained parental permission and began observing in the classroom on September 26th, it was apparent that there were very clear routines for each part of the day and each day of the week. Each morning students entered the classroom and popped a balloon with their name on it on the SMART Board to indicate their attendance. Students then took out their planners and homework to be checked by the EA. On Mondays, or the Tuesday following a holiday Monday, the routine involved having the students set up their journal page as shown on the SMART Board which always looked the same. The teacher did a think aloud and demonstration of writing on a topic that she assigned as she introduced the lesson. The students were then to do their own journal entry while the teacher pulled the students in Spelling Group 1 to the rainbow table at the side of the room to introduce the week’s spelling program word sorts
and complete the spelling lesson for the day. While the teacher instructed Spelling Group 1, the EA took Spelling Group 3 to the room next door to introduce the week’s spelling sort and complete the spelling lesson. The other two spelling groups were working independently at their desks on their journal writing. The teacher then saw Spelling Group 2 at the rainbow table and the EA then instructed the single student that was the sole student in Spelling Group 4 working on the most advanced spelling patterns.

The instruction during this spelling time was also very routinized and consistent throughout the year. The lesson began with the students telling either the teacher or the EA about their weekend. Each student had a turn to speak, while the others listened. The teacher or the EA would ask a few questions of each student before moving onto the next student. After everyone had had a chance to tell her about their weekend, the spelling rule was reviewed and the spelling words for the week were introduced. The words were written on a half piece of chart paper that was later pinned up at the back of the classroom near the door. The students returned to their desks with the week’s spelling sort to cut up and sort after they were finished their journal writing. Once all the groups had been introduced to the week’s spelling with either the teacher or the EA, students were invited individually to the rainbow table to edit their finished journal writing with the teacher or to the EA’s desk to edit their writing with her. After students had completed their editing and their spelling cut and sort they found a partner from their spelling group and played hangman using their spelling words on individual whiteboards. Once all journals had been edited and spelling complete students took part in the daily two-minute math drill followed by a math lesson until recess.
Tuesday to Friday mornings were just as routinized. Monday’s morning routine was replaced by a routine in which students first had their homework and planner checked for completion by the EA, and then read their home reading book with the teacher or EA. These books were chosen by the child from a selection of photocopied Reading A to Z (Learning A to Z, n.d.) levelled books as each child worked through all the books in each level beginning with the level assigned by the teacher in September based on her informal reading assessments. The students were to read their selected book at home to a parent and then read it to the teacher or EA during this morning routine. If the students were able to read their book fluently to the teacher or EA then they put a checkmark beside the book on their own copy of a list of all the books in each level, and went to the side of the room to pick another book from that level or the next level if they had completed all the books in the current level. If, however, the teacher or EA decided that the student did not read the book fluently the student would be required to read the same book again that evening.

As students were taking turns reading aloud to the teacher or EA, they completed an activity labeled by the teacher as “The Big Four.” The Big Four described an activity that the children were to complete independently. This activity involved the students answering four questions in their Big Four exercise books. Students were to write their name, the title Big Four and the date at the top of the page, then copy from the SMART Board and complete three math questions and one cloze activity question (see Figure 4.1). The math questions were projected on the SMART Board and varied across the year reflecting the math concepts that had been taught to date. The teacher or EA created the
cloze activity from jokes or riddles that the students submitted to them throughout the school year. The teacher or EA would remove many of the vowels from the words in the riddle or joke and then project it on the *SMART Board* as question number four. Words that students could find in their photocopied personal dictionaries or on the word wall on the classroom bulletin board were underlined. The students would copy the words and attempt to decipher the riddle and fill in the missing vowels to spell the words correctly with help from their personal dictionary, the word wall, or the vowel chart hanging on the wall at the side of the room near the rainbow shaped table where the reading instruction occurred.

![Figure 4.1](image)

**Figure 4.1** The “Big Four” projected on the *SMART Board*

After all students had read aloud to the teacher or EA and completed the *Big Four* assignment, the students participated in a whole class review of the *Big Four* questions.
Students marked their own work with a red pen they kept in their desks. Students raised their hands to be chosen to go to the SMART Board and write the answer on the board with the stylus used with the SMART Board. Once a student had filled in the answer on the board that student would ask their fellow classmates if they thought the answer written on the board was right or wrong or if they were unsure. Students would then indicate their responses by making a thumbs-up, thumbs-down or thumbs-sideways gesture. The teacher would then indicate whether the answer was correct or incorrect, helping to correct it on the board if necessary. Students would then mark their answers correct in their books by placing a check mark next to the question or mark it as incorrect by placing an x next to the question. Students were not observed correcting their mistakes. When all the questions had been answered by students on the SMART Board and marked in their exercise books, students put a score out of four on the top of their page and put their book away in their desk.

Following marking of the Big Four, students engaged in educational practices to improve their spelling as outlined for the week. The instructional sequence for the day was projected daily on the SMART Board. On Tuesdays students in spelling Groups 1 and 2 alternately worked with the teacher at the rainbow shaped table and the students in Groups 3 and 4 alternately worked in the empty classroom next door with the EA. Each group would work with the teacher or EA sorting their words and orally creating sentences with each word. The teacher or EA gave instruction regarding grammar and vocabulary development in the context of the sentences produced by the students. When not working with the teacher or EA students read and sorted their words three times and
then independently completed the day’s spelling activities. On Wednesdays students read and sorted their words three times, raised their hands to read to the teacher or EA, and then completed the day’s spelling activities until all students had read their word sort aloud to the teacher or EA. On Thursdays, students read and sorted their words three times, raised their hands to read their words to the teacher or EA, glued them onto a sorting sheet, raised their hands to have their sorting sheet checked by the teacher or EA, put the sheet into their spelling duotang, and then retrieved a word search for their spelling words which they chose to complete either independently or with a partner or partners. The word search activity went home for homework if not finished during the allotted time in class. On Fridays the spelling activity consisted of a spelling test. The teacher dictated words alternately to Group 1 and Group 2 in the classroom, while the EA dictated the words to Group 3 and Group 4 in the empty classroom next door. Once the spelling tests were completed and collected by the teacher or EA for marking the students participated in a differentiated two-minute math drill organized by the EA followed by participating in a math lesson until recess designed and taught by the teacher. The only deviation to these routines occurred if there was a day off school, or a special event that interrupted the instructional sequence. In that case, the protocol was consistent and known to the students varying slightly depending on which day of the week was missed.

During the instructional period between recess and lunch (10:45 – 11:50 am) students participated in two instructional sessions and two independent practice literacy centres. The only variation to this was on Wednesdays when students participated in the literacy centre instructional routine for a longer time period that began before recess at
approximately 10:05. On Wednesdays, students engaged in the literacy centre activities immediately following the spelling activities and the two-minute math drill.

Math fact drills also followed a well-established instructional routine. Students worked on a variety of math facts, moving through a pre-set order. Students took a set of flash cards home for homework and practiced them each night until they passed their two-minute drill in class with a score of at least 38/40. The math fact drill was completed daily before moving on to Literacy Stations. At the end of the day, the EA announced who the “passers” were. She collected students’ old flashcards and stored them for them in an envelope with their names on them and supplied the students with the next set of flashcards to take home. This was an organized system that was consistent throughout the school year.

Consistent procedural routines were also in place for instructional activities such as handing out duotangs, where to access spelling sheets, and what to do when finished assigned work early. Routines such as dismissal for recess, lunch or end of the day were also well known. By the end of October, when the bell rang during a lesson, students often glanced up at the clock, but continued to raise hands seeming to realize that the lesson would continue despite the bell until the teacher said that the lesson was over.

During the afternoons students participated in instructional activities including social studies, science, health and career, art, music, library and physical education in addition to other educational activities such as buddy activities with a Grade 1 class. There was a set schedule of these activities for each day of the week. For example,
students participated in science lessons on Wednesday afternoons, social studies lessons on Thursday afternoons, and art lessons on Friday afternoons.

4.4.3. Access to general education curriculum.

Observations throughout the school year suggest that the students had access to grade appropriate curricular learning outcomes in all subject areas except French. The teacher’s weekly timetable, which she used for planning, is outlined in Table 4.1.

Table 4.1 Number of instructional minutes allotted per week per academic subject

<table>
<thead>
<tr>
<th>Subject</th>
<th>Weekly Time Allotment (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Language Arts</td>
<td>794</td>
</tr>
<tr>
<td>Mathematics</td>
<td>220</td>
</tr>
<tr>
<td>Physical Education</td>
<td>110</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>70</td>
</tr>
<tr>
<td>Music</td>
<td>60</td>
</tr>
<tr>
<td>Social Studies</td>
<td>55</td>
</tr>
<tr>
<td>Science</td>
<td>33</td>
</tr>
<tr>
<td>Health and Career</td>
<td>33</td>
</tr>
<tr>
<td>Flex Time (planners, end of day clean up)</td>
<td>75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1450</strong></td>
</tr>
</tbody>
</table>

Observations in the LDP class confirmed that these time allotments were generally realized with the exception of transition times between subjects and, most notably, after recess and lunch breaks. The majority of observations revealed a match between the standard week plan and the instruction and activity in the classroom. On
some occasions unusual events and activities took place that were school wide, such as assemblies, or class specific, such as the National Literacy Day celebration. These special occurrences disrupted the usual routine and resulted in less instruction of one subject area or another, however certain key elements were always maintained such as morning reading aloud to the teacher or the EA, weekly spelling tests, and daily math fact drills.

The Required Areas of Study in an Educational Program Order from the BC Ministry of Education (deleted) stated that during the 2013/14 school year it was the responsibility of school boards to see that all prescribed learning outcomes were addressed in each of the prescribed curricular areas as outlined by grade level. Clearly, in the LDP, much greater emphasis was placed on Language Arts, and much of that was remedial in nature and not focused on grade level prescribed learning outcomes. Therefore, B.C. Ministry of Education prescribed learning outcomes for each grade level (deleted) could not be fully addressed in the LDP. Instead, student academic goals and rates of learning growth were monitored through the use of Individual Education Plans that included adaptations to the prescribed learning outcomes for each student in the LDP.

Student report cards (see Appendix K) show the intended learning outcomes for each of the first two reporting periods and demonstrate there was a greater emphasis on language arts and math. With the exception of core French, British Columbia (BC) Ministry of Education Prescribed Learning Outcomes were addressed in all curricular areas. Unfortunately, due to the teacher job action in the province of BC at the end of the
Across the school year students were observed to participate in physical education lessons aimed to develop a wide variety of skills such as basketball skills, physical fitness, and sportsmanship. Music class observations documented students participating in activities in which they learned to read music, develop music appreciation, and play the ukulele. Every week there were new art projects on display in the classroom or in the school hallway. Health and career lessons were observed such as instruction on healthy eating, and bicycle safety.

Instruction and practice in math, social studies, and science were modified to accommodate students’ significant weaknesses in literacy skills. For example, social studies lessons were observed in which the teacher read out the content regarding the major physical and economic features of Canada, and then the group discussed and copied notes into their social studies duotangs as she wrote the notes on an overhead projector. A large map of Canada was visible on the back wall in which the students placed resource markers to display the types of natural resources available in each geographic region of the country. These visual representations supported students to access the concepts and content of the curriculum.

4.4.4. Access to general education activities.

In addition to experiencing adapted access to the standard provincial curriculum, it was evident that enrolment in the LDP afforded students the opportunity to experience
activities that support the curriculum and promote a culture of learning and relatedness among students in the class that are typical of general education classrooms. For example, birthdays were celebrated and students were observed to share cupcakes sent in by their families. On Fridays, designated “Fun Friday” by the teacher, students had the opportunity to play with tub toys such as math manipulatives, board games, and fun computer games on the computers. The classroom was decorated in December with Christmas lights, decorations, and even a chocolate advent calendar. Students wrote letters to Santa and the teacher and the EA took the whole class on a walk to the post box to deliver them. Two days before spring break the students were very happily making book marks to send to students at a school in Ghana, and the teacher told the students that as the next day was the last day before spring break they could bring in a movie to watch and some snacks to share. And in the spring, students made Mother’s Day and Father’s Day gifts for their parents.

The students in this class took part in all school wide activities. They took part in celebrating Vaisakhi with a samosa lunch provided by the Parent Advisory Committee and a school wide assembly including students wearing traditional dress. They participated in fundraising events such as the annual Terry Fox run, Jump Rope for Heart and hot lunch orders. The class took part in school wide instructional programs such as bicycle safety and riding lessons and Zumba classes with a final performance. They also participated in school spirit days by wearing pajamas to school or sporting wild hair for “Wacky Hair Day”.
4.4.5. **Access to students in general education programs.**

The students in the LDP were also able to interact with students in the wider school community. The LDP students acted as big buddies to a class of Grade 1 students, performing reader’s theatre for them, and regularly doing buddy class activities including completing art and sharing eating noodles together to celebrate Chinese New Year. They participated in school wide activities such as Zumba in large groups with same grade peers from other classes. Students in this class also had opportunities to experience participation in activities outside of those mandated as part of their classroom program. For example, one student told me that she and Emma had tickets and were going to wear their pajamas and attend the evening showing of the movie Frozen in the school gym. In the spring during a full week of observation two of the students were not back in the classroom after lunch. This was because they volunteered each Tuesday as monitors who sign out playground equipment to students during the lunch period. Similarly, Emma was observed coming back to class from the gym after lunch one day during badminton season as she had taken advantage of signing up for badminton. She took part in the school practices scheduled on Mondays and Thursdays at lunchtime.

4.4.6. **Remedial instruction within the classroom.**

The teacher and the EA delivered both general education instruction and remedial literacy instruction within the classroom. Students did receive support from the school counsellor and the child and youth care worker as needed when social or behavioural issues arose, however, students did not receive any instructional support or intervention through the school’s pull-out LST program. Therefore, the students experienced literacy
intervention, and all academic support, within a classroom program that might be considered a hybrid of regular and special education.

4.4.7. **Literacy instructional practices.**

Although this program was designed to deliver an adapted regular education curriculum, the majority of the week was spent engaging students in literacy experiences. This included both direct, explicit instruction from the teacher and/or the EA as well as built in opportunities for students to practice their reading and writing skills.

Literacy instruction was very multi-faceted in the LDP and included a variety of instructional techniques and opportunities for application or practice of skills learned. Instruction in literacy included both typical prescribed learning outcomes for Grades 4 and 5 as well as remedial word level reading and spelling instruction not normally found in the curriculum of intermediate grades.

**Guided reading time and literacy centres.**

In order for the teacher and EA to work with small groups on differentiated literacy learning outcomes they organized the students into groups based on their initial reading assessments in the fall. During what was known as “Guided Reading” time, students rotated between four different literacy stations during the one-hour time period between Recess and Lunch. One station was their “guided reading” instructional session with the teacher, another was an instructional session with the EA which usually involved spelling instruction, but toward the end of the year involved a “book club” during which the students read independently and completed reading response activities with her
support. Two other independent work stations varied daily and were selected by the EA. One was always at the computers and observations indicated that this station involved either typing practice with the program, *All the Right Type* (https://www.atrtonline.ca/) or reading practice on *Raz Kids* (https://www.raz-kids.com/). The other independent literacy station involved students in some form of individual or group literacy practice. During my weekly visits I observed this station to include: work in *Explode the Code workbooks* (Hall & Price, 2005) assigned by the teacher based on their initial decoding assessment and worked through independently at their own pace; packages of photocopied phonics worksheets; commercially produced and purchased literacy games to play as a group; and occasionally catching up with other class work. The teacher’s station and the computer station were in the classroom, whereas the EA’s station and an independent station were in the empty classroom next door which the teacher and EA had set up to use for this purpose. This room was also used as storage and by another EA in the school to do physical therapy with a student with special needs from another classroom.

**Word identification.**

The most targeted, explicit reading instruction was provided through delivery of the *Seeing Stars* program at the teacher’s instructional literacy centre. This program focused on teaching the phonic patterns in English and applying them out of context to read real words and decodable non-words. The teacher had attended a training session put on by the publisher. This program provided the core of the teacher’s instruction during the part of the day labeled, “Guided Reading”. In preparation for beginning this
instruction the teacher had assessed her students’ decoding abilities, by completing the Houghton Mifflin Phonics/Decoding Screen Test with each student. She divided the class into four groups with four students in each of the two groups with the least advanced phonemic decoding skills, and three students in each of the two groups with relatively more advanced phonemic decoding skills. The groups were organized with like decoding skills ranging from the least advanced (Group 1) to the relatively more advanced (Group 4).

Reading Group 1 included four students. Three of these students had extremely weak decoding skills and overall reading ability including very low reading levels as assessed by the PM Benchmark levelled assessment. However, one student in this reading group, Tyler, had a functionally higher reading level, but had severe difficulty decoding an unknown or pseudo word. Therefore, he was placed in this reading group, because the focus of instruction in the group was decoding and he required decoding instruction at a very beginning level as did the other boys in this group.

On Mondays, Tuesdays, and Thursdays group instruction followed the Seeing Stars phonemic decoding program. Wednesdays also included Seeing Stars phonemic decoding instruction, but additionally included a first read of a Primary Phonics (Makar, 1966) decodable book. Friday’s group lesson included phonemic decoding instruction plus a second reading of the same book. Groups one and two read the same book and Groups 3 and 4 read the same book that included practice of more advanced phonic elements than the book read by Groups 1 and 2. During the book reading each student had a copy of the book and students took turns reading a page aloud. The teacher
reinforced using their knowledge of phonics to read any unfamiliar words. The stories chosen did not match the instruction in the Seeing Stars lesson but provided the students with practice reading decodable text with teacher support and further instruction in phonemic decoding in the context of reading connected text.

On the first day of each week the order of rotation through the literacy stations was reorganized meaning that each group’s scheduled position to meet with the teacher for “Guided Reading” was set for the week as either the first, second, third or fourth group to see her. The length of time spent at the teacher’s station varied considerably from day to day with an observed range of three to twenty minutes. The time spent was not consistent across days, or groups, however the final station time was consistently shorter than the previous three blocks of time. Therefore, the group in the final reading group spot for the week would generally receive the least amount of direct reading instruction from the teacher that week.

The teacher reported that informal assessment of student progress during instruction occurred daily as she observed how students were responding to instruction. The teacher stated that she monitored how the students were doing to decide the pacing and instructional components involved in the Seeing Stars instructional reading program. For example, from experience the teacher found that the “air writing” involved in the Seeing Stars program was too difficult initially for students, so she had them actually write the words they were to read on individual white boards and then read what they had written. She then monitored how well they were doing at that to decide when to introduce the “air writing” component of the program. She also informally assessed the
groups to determine when to progress to the next set of word cards in the program kit. The teacher reassessed students’ reading level using the PM Benchmarks assessment in March. No changes in reading group placement were observed throughout the school year.

**Reading fluency.**

Further reading practice was provided through the implementation of a repeated reading program utilizing word lists and reading passages from The Six Minute Solution (Adams & Brown, 2003) and Great Leaps (Campbell, 1995) reading fluency programs. At the beginning of the school year students were placed differentially and individually for reading fluency practice by the EA. Students read word lists beginning with sight word lists then moving on to decodable words beginning with short vowel consonant-vowel-consonant (cvc) words until they reached a list in which they could not yet read the whole list in 1 minute. The EA would then assign the student a fluency word list for daily practice at home. Once students could read all of the word lists within one minute they would move on to reading passages of text. After spring break, on March 31, 2014, all students were given reading passages for fluency practice even if they hadn’t finished all the word lists.

Each week the student read aloud to the EA for one minute. The EA then recorded the words read correctly per minute on a graph in the student’s fluency duotang. This fluency reading then went home each night to practice and the following week the student read the assigned fluency reading to the EA again, and the new words correct per minute score was recorded on the graph. If the student could read the whole reading within one
minute with reasonable accuracy as evaluated by the EA a new word list or reading passage was assigned. If not, then the same reading was to be practiced for another week.

The EA utilized informal assessment of students reading of the word lists and/or passages to assign students particular word lists or reading passages. She relayed that she would have some students start with more advanced word lists or passages than others if they had more decoding skills and were able to read the lists or passages accurately within one minute. When I observed her timing a student in the spring, I noticed that she had a timer that counted up from zero to one minute rather than counting down from one minute to zero and sounding an alarm. She told me that, because some of the students didn’t actually complete the fluency practice at home, some would never move along to the next list or passage without giving them a little bit of extra time, so she chose to use the count up timer so that she could tell them when to stop, rather than a countdown timer which would ring the alarm leaving no room for her to adjust the time she gave the student to complete the reading.

*Reading comprehension.*

Also scheduled into each week was a read aloud and student reading response. This involved the teacher reading aloud a chapter of a novel and then posing a response question for the students to write about in a notebook labeled, “Reading Response”. The teacher would discuss the day’s question with the students taking several oral responses. Then she would ask the students to help her write the beginning of a response sentence, which would then be printed on the board for students to copy as the beginning of their
reading response. The EA would mark these reading responses focusing on content rather than spelling and follow up with any student who either didn’t complete the task or didn’t seem to understand the story or the question posed.

**Independent reading.**

Daily reading practice was accomplished in several ways. Monday to Thursday, students took home a book referred to as a “reader” to read aloud to a parent for homework. This was followed Tuesday through Friday mornings by reading the book aloud to either the teacher or EA while all the students were working independently on an assignment referred to as the “Big Four” that involved three math review questions and one cloze activity sentence labeled, “Fill in the Missing Vowels”. This read aloud homework and in-class practice was highly organized. The teacher utilized photocopied books from *Reading A to Z*. These books were levelled readers which in the early levels A to C include patterned reading involving sight word reading supported by picture cues. The teacher determined each student’s starting level based on her initial reading assessments in the fall. Once students had read aloud to either the teacher or EA and finished their Big Four they were to choose a book for independent reading practice from either the classroom or school library. Further independent reading practice was scheduled for those students first finished copying the daily planner message into their planners after lunch.

**Spelling.**

Spelling instruction comprised a large portion of weekly literacy instruction. The teacher implemented the spelling program, *Words Their Way*. Students were initially
assessed with the primary level spelling assessment included in the program and grouped into 4 groups according to relative spelling skill. The groups were organized to include students with similar spelling skills ranging from the least advanced (Group 1) to the relatively more advanced (Group 4). Group 4 consisted of only one student who had the most advanced spelling skills in the class.

The first school day of the week involved the teacher and EA instructing each spelling group in the new spelling patterns to be learned with the week’s words. The teacher instructed the two groups learning the least advanced spelling patterns while the EA instructed the two groups working on relatively more advanced spelling patterns. With each group, the teacher or EA reviewed the spelling patterns, and then asked the students to sort the words based on the sounds heard in the word. The next day the teacher again reviewed the spelling patterns for the week and had the students give her a sentence using each word as she wrote them on chart paper under the appropriate spelling pattern. For example, a word sort might include words with the short /i/ consonant-vowel-consonant spelling pattern compared to the long /i/ consonant-vowel-‘e’ spelling pattern. Each weekly sort also included what were termed “oddball” words that did not fit the spelling pattern for the week’s sound/symbol correspondence(s). After this instruction, students were to read and sort their words daily, both at school and at home as homework. The last day of the week culminated in a spelling test for each group. Students remained in the same spelling groups throughout the year.
Writing.

The first day of each week the teacher also provided the students with explicit writing instruction involving the use of a web as a graphic organizer for writing. She would provide the students with a topic, model how to generate and record ideas onto the web using a think aloud procedure, then turn the ideas from the web into sentences to construct a paragraph on the given topic thinking aloud as she did so or asking students to help her turn her ideas into full sentences. She would include incidental instruction regarding spelling patterns, or writing conventions as she did so and as opportunities for this instruction came up within the context of her writing demonstration. Students would then construct their own web of ideas and paragraph in their journal notebook. Each student would then review their writing with either the teacher or EA who would spend time individually with each student to review and correct spelling and ensure the student had used complete sentences that addressed the topic at hand.

In the spring, students also engaged in story writing. Students were observed completing graphic organizers as they planned their stories and then received one-on-one support from the Teacher and the EA to review their plan and then to edit their story once it was written.

4.4.8. Special education instruction within the LDP.

Analysis of weekly observations, collected artifacts, as well as student and parent interviews highlighted that students in this program experienced access to specialized
literacy instruction and resources with enhanced opportunities for incidental instruction throughout the school day.

Torgesen (2002) suggests that students who struggle to acquire literacy skills in the early grades require instruction that is more explicit, more intensive and more supportive than can be provided in a classroom of 20 to 30 students. In the LDP students had access to instruction and resources that enabled explicit daily instruction of decoding and encoding skills in small groups and the opportunity to receive incidental support and instruction throughout the school day and across curricular areas.

Access to specialized literacy instruction and resources.

As described a variety of literacy instructional resources and instructional approaches were implemented within the LDP. Many of these resources are commonly found in regular education classrooms or LST programs within the school district such as the Words Their Way and McCracken Spelling (McCracken & McCracken, 1982) spelling programs, Raz Kids on-line reading practice program, Reading A to Z levelled reading books and the Six Minute Solution fluency intervention program. However, the Seeing Stars program was a specific remedial program that was not commonly utilized in this school district.

Classroom observations and examination of the teacher’s day plans showed that students received approximately 75 minutes of small group direct remedial instruction per week following the specialized remedial reading program, Seeing Stars. The publisher’s website (Gander Publishing) states, “The Seeing Stars® program develops
symbol imagery—the ability to visualize sounds and letters in words—as a basis for orthographic awareness, phonemic awareness, word attack, word recognition, spelling, and contextual reading fluency.”

A search of peer-reviewed journals identified two research articles that have been published that evaluated the efficacy of the Seeing Stars program. The first study (Sadoski & Wilson, 2006) reported results of a multifaceted research program in an American school district that included the implementation of three intervention programs in elementary schools. These programs, all published by Gander Publishing, included Seeing Stars, Lindamood Phoneme Sequencing (LiPS, Lindamood & Lindamood, 1998), and Visualizing and Verbalizing (Bell, 1986). Statistically significant gains in reading comprehension results on state wide testing measures were found for students in Grades 3 to 5, relative to controls, following the implementation of a comprehensive adoption of these three programs.

In a recent study, Krafnick, Flowers, Napoliello, and Eden (2011) investigated growth in grey matter volume within the brains of eleven students with dyslexia following an eight-week intervention program provided at the subjects’ schools by trained employees of Lindamood-Bell Learning Processes implementing the Seeing Stars program. Measures of reading skill and grey matter volume were assessed at the start of the intervention (Time 1), at the end of the eight-week intervention (Time 2) and eight weeks following the end of the intervention (Time 3). Results showed positive, significant within subject effects from Time 1 to Time 2 for single real word reading, pseudoword reading, reading comprehension, phonemic awareness, rapid naming of
letters and numbers, and symbol imagery. Working memory showed no significant effect of treatment. There were no statistically detectible changes in test scores between Time 2 and Time 3, and all effects remained significant from Time 1 to Time 3 with the exception of phonemic awareness.

**Intensity of literacy instruction.**

Intensity of instruction is an important aspect of reading intervention for students who struggle to acquire literacy skills including students with reading disabilities (Torgesen, 2002). Intensity of reading interventions can be increased for students with reading disabilities in several ways. Often, the number of remedial lessons provided through an intervention program describes intensity. Wanzek et al. (2013) conducted a meta-analysis in which they reviewed studies of intensive reading intervention for students in Grades 4 – 12. Studies were considered to involve intensive intervention if they provided 75 or more treatment sessions. The LDP in this school district provided daily remedial literacy instruction over a complete school year. Due to the teacher job action resulting in 12 missed school days, the students participating in the LDP during the 2013/14 school year, were in session 169 days. This many daily sessions certainly appears to provide for intensity in terms of number of sessions.

Weekly observations documented that small group reading intervention instruction lasted approximately 15 minutes per group. The exact number of minutes per group varied per day and recorded lengths ranged from 3 minutes to 20 minutes. These small group sessions were generally longer on Wednesdays as the Reading Group time began before recess on this day and carried over until lunchtime. Using 15 minutes as an
approximate estimate of daily small group instruction with the teacher, students received approximately 75 minutes per week of direct, specialized instruction from the teacher and another approximately 60 minutes from the EA. One day per week the EA spent the literacy centre time completing fluency timings with students one-on-one. Further small group spelling instruction occurred on the first two days of each week. This lasted approximately 10 minutes per group. The EA completed this spelling instruction with two groups in the adjacent room. The teacher instructed two spelling groups in the classroom at the rainbow table. Including the additional 20 minutes of spelling instruction weekly, students received approximately 155 minutes per week of small group remedial word level skill instruction. Seventy-five to 95 minutes of this was delivered by the teacher depending on skill level, while the EA delivered an additional 60 to 80 minutes of instruction.

Increasing intensity for students can also be accomplished by reducing instructional group size (Vaughn & Wanzek, 2014). Findings from observational studies demonstrate that students with learning disabilities make greater gains when in individual or small group instructional groupings of five or fewer students, than when interventions are provided in larger groupings (Elbaum, Vaughn, Hughes & Moody, 2000; Wanzek & Vaughn, 2007). With the class size reduced to fourteen students from the district average limit of thirty students in intermediate grades, even whole class instruction in this class amounted to a considerably smaller group size. However, the group size for explicit literacy instruction during the literacy stations instructional portion of each day was limited to three or four students per group. The spelling instruction was also conducted
in small groups. Spelling Group sizes for Groups 1, 2, 3 and 4 were three, four, six and one student respectively. Therefore, intensity of remedial literacy instruction was supported through small instructional groupings. Students were also provided regular opportunities for individual instructional support during the morning reading time and weekly journal writing activities. Additional individual support occurred incidentally across subject areas and throughout the days and weeks as a result of the low student to adult ratio in the class.

**Access to technology.**

One of the most salient physical aspects of this classroom program was the technology available for student and teacher use. At the back of the classroom five iMac desktop computers were set up for student use. These computers were used daily at reading group time. The students accessed programs such as Raz Kids, and All the Right Type to support their reading and typing skills. At the side of the front of the classroom a laptop computer was connected to a projector that was directed at a SMART Board. Observations showed this technology to be used for a variety of instructional purposes including taking attendance by having students pop a balloon on the screen with their name on it as they entered in the morning, projecting and having students mark the daily Big Four questions, projecting routines for students such as the daily spelling routines for the Words Their Way program, projecting the daily planner message for students to copy into their planners, and projecting art projects taught by the EA found on websites such as Pinterest.
In addition to the five desk top computers, the program had its own printer in the classroom and five iPad tablets. The iPads were observed in use during the Literacy Stations time. Michael was particularly pleased with the access to technology in this program. In fact, in the fall he listed it as one of the reasons he had looked forward to attending the program after having a tour the previous spring. At the end of the year Michael listed access to technology as a positive aspect of the program on the student survey and noted it in his year-end interview as well. He said that he would tell prospective students that they would like, “the technology you get to use.” He declared, “(I) love Raz-kids!”

Extended incidental literacy instruction.

In the LDP classroom remedial literacy intervention as well as all regular curricular subjects were taught by the classroom teacher and supported by the classroom EA. It became evident over the year that beyond the small group direct instruction in reading and spelling students received in this program, having the classroom teacher and EA deliver both the literacy intervention and the general education instruction allowed for increased intensity of literacy instruction through opportunities for incidental instruction across the entire day. The teacher utilized modeling, “think alouds”, direct instruction, and asking for student participation during activities that involved literacy skills regardless of the curricular subject being taught.

This extended incidental instruction and reinforcement of skills occurred throughout the day on a regular basis. The morning routine combined both math and literacy instruction. The Big Four assignment always had three math questions and a
“Fill in the Missing Vowels” cloze question, which was a daily riddle or joke often submitted by the students. When it was time for marking these four questions, decoding and spelling instruction often occurred regarding the completion of the math questions as well as the cloze activity question.

The fill in the missing vowel question was consistently used as an opportunity to review what the teacher referred to as, “the vowel rules” on display in a pocket chart at the side of the room. Most students worked on the filling in the vowels independently and would correct any errors as they marked together as a class. Observing Michael highlighted that he made connections between what he learned during small group reading and spelling instruction and whole class instruction throughout the day. During one observation, Michael raised his hand to ask about the spelling of the word ‘eats’. He asked, “What if you had two e’s?”

The teacher said, “‘ee’ would be a good guess because they say the long e sound also, but the correct spelling is ‘ea’ making the long e sound.”

Michael further commented, “That was just for other people. I had ‘ea’.”

Another day Michael commented, “Mother is spelled wrong. It should be ‘m-u-t-h-e-r.’” The teacher acknowledged his accuracy regarding the pronunciation of the word but stated that it was not spelled that way and that he could find the word in his dictionary.
Another example occurred during math instruction one day in May as the teacher was teaching the concept of division with a remainder. As she wrote the word ‘remainder’ on the board she over emphasized the boundaries of each syllable. This was a common occurrence during any lesson in which the teacher needed to record something on the board. She also used this technique of overemphasizing the phonemes that corresponded to graphemes in words when correcting student writing in their journals, or when they had made mistakes copying the planner message for the day. Even when the assignment was to copy from the board, feedback from the teacher drew attention to the sound-symbol relationship of the spelling.

Early in the spring, students participated in an independent inquiry activity in the library referred to by the teacher and the librarian as, “Genius Hour”. This instructional activity also provided opportunities for incidental reading instruction. During one observation Michael was reading his report on dragons to the teacher. He misread Australia as Africa. The teacher responded to him, “That doesn’t say Africa. Let’s sound it out. What does ‘au’ say?” Michael looked at the word and was able to read the word Australia accurately. Another student read his report to the teacher. She supported his reading with comments including, “What’s the last sound you hear?” and, “It can’t say ‘famous’” (emphasizing the /f/ consonant at the beginning of the word.)

Additionally, a notable instructional stance on the part of both the teacher and the EA was to refuse to provide the correct spelling of a word to students until it was time to correct their writing either as a group, such as when marking the Big Four, or one-on-one such as when editing journals or story writing. Students were expected to utilize their
knowledge of sound-symbol correspondences when completing written work. The response to the student question, “How do you spell …?” would invariably be, “Sound it out. Don’t worry about correct spelling until we edit it together.” Very often, targeted support would be given such as, “Check the vowel chart,” or, “What are the options for that sound?”

As described above, observations of classroom instruction which included both remedial literacy instruction and curricular instruction showed that by having their general education instruction and their remedial literacy instruction provided by the same teacher and EA there was considerable opportunity for remedial literacy instruction to be integrated within the curricular instruction throughout the school day. Therefore, students were given the opportunity to see the transfer of these skills across subject areas such as using their newly acquired, albeit for some students fledgling, decoding and encoding skills to read and spell words independently or with some teacher support across curricular activities.

Conversely however, because activities in the content areas such as social studies, science, and health and career were carefully scaffolded by the teacher to minimize the impact of students’ weak literacy skills by reading aloud to them or writing on the overhead projector for them to copy, opportunities for in-context application of their developing reading and spelling skills were limited. For example, only once did I observe students take turns reading aloud the directions on a math worksheet. While this does not mean it did not happen at other times, it was not a common enough occurrence that I observed it during my weekly visits. Nonetheless, this careful scaffolding made it
possible to have students work with the content in these areas, while minimizing the time spent on lessons with primary learning outcomes other than literacy.
Chapter 5. Findings

SDT posits that within school contexts supports for relatedness, competence and autonomy lead to increased motivation to engage in behaviours that are extrinsically motivated and initially prompted by significant others such as parents and teachers. Because the focus of many school related instructional activities are not intrinsically motivating to many children, SDT is of great utility as it proposes ways in which educational contexts may support or thwart the meeting of these needs and positively or negatively affect student engagement and adoption of self-regulated learning behaviours. Chapter five is divided into two sections that describe ways in which implementation of the LDP impacted student need satisfaction, and student engagement in the LDP during the year of this study. First is a description of the design and implementation of the LDP as a context for learning for students with learning disabilities including an examination of support for relatedness, competence and autonomy as described by SDT. This is followed by an examination of individual differences in the adoption of self-regulated learning behaviours and engagement in the instructional practices of the program among three students selected for in-depth study.

5.1. Meeting Student Needs Within the Context of the LDP

This section provides an examination of supports for relatedness, competence and autonomy within the context of the LDP. Findings highlight themes that arose from the
process of inductive analysis and subthemes identified through both inductive analysis as well as deductive analysis through the lens of SDT.

5.1.1. Forming relationships.

According to SDT, for students to internalize learning behaviours prompted by their teachers they must feel connected to their teachers. In other words, students will be motivated to engage in learning behaviours, even if those behaviours are not of direct interest to them, if they feel positively related to the teachers who prompt such behaviours. Developing a high quality, supportive relationship with students will support students to access their inner motivational resources and deeply engage in learning opportunities (Reeve, 2006). Within school settings students also need to feel connected to their peers and the school community. Research into determinants of feelings of relatedness has shown that several factors are positively related to feelings of relatedness. These include, discussing personally relevant matters, spending informal social time with a group of friends, feeling understood and appreciated, participating in enjoyable activities, and avoiding feelings of self-consciousness or insecurity (Reis et al., 2000).

As described in chapter four, the LDP within this school district was a special education program. However, students’ experienced support for their sense of relatedness in the LDP that parallel the experiences of their peers without learning disabilities in general education programs. Although the LDP would not be considered an education program that was inclusive of students with a range of learning profiles and
abilities, students were supported to connect with the broader school community, as well as supported to develop positive relationships with the staff and each other.

*Connecting with the school community.*

As described in chapter four, the students in the LDP took part in all school wide activities, providing them with the opportunity to participate in these activities as regularly as students in the general education classrooms in the school. This participation provided the opportunity for students in the LDP to feel connected to and part of the school community as they participated as lunchtime equipment managers, played badminton, or attended evening concerts and movie nights.

Emma was observed to take advantage of opportunities to participate in voluntary school wide activities involving students from other classes. She participated in lunchtime volleyball games, and attended the evening showing of a movie sponsored by the school parent advisory committee. At the end of the school year Emma’s mother articulated that she appreciated the opportunities that Emma had to interact with students in the rest of the school: “Even though their class is a separate class, they’ve never been excluded in the whole school. That was a big deal for me. They’ve never been made to feel different.”

For Emma’s mother, the social aspect of her experience at the school in which the LDP resided was a large part of the overall positive experience of her daughter’s enrolment in the LDP. Furthermore, because Emma’s name was not put forward for a second year in the LDP, her family had applied to have her enrolled in a regular Grade 5
classroom at the school where the LDP was held. Even though Emma’s mother had pointed out to her that her friends from the program this year would no longer be at the school next year, she reported that Emma told her, “That’s okay, mom. I’ll make new friends and I already know some other kids in the school.”

Gina also took advantage of the social opportunities offered by the broader school community. She was seldom observed playing with her classmates, but rather played almost exclusively with a group of girls from the school’s regular education classes. These relationships that extended beyond her immediate classmates may have been due to the fact that the year of this study was the second year Gina had been enrolled in the LDP in this school.

Participation of the students enrolled in the LDP in all grade appropriate school wide activities provided students access to other students in the school community without learning disabilities and a broader community of students and staff to connect with beyond the parameters of their classroom program. However, most LDP students were observed playing solely with other students in the program at recess and lunchtime. This may have been because most students were enrolled in the LDP for a single year and friendships beyond students’ immediate classroom may take more than a single year to develop sufficiently for students to initiate play together at recess and lunch. However, the fact that students from this class volunteered as lunchtime equipment monitors, took part in lunchtime volleyball games, and came back to the school in the evenings to attend a movie night and participate in the evening winter concert suggests a certain level of comfort within and connection to the school community.
Developing relationships among students and staff.

In addition to participating in remedial literacy instruction as well as instruction in the standard provincial curricular learning outcomes, it became very evident that the LDP included typical general education activities that support students to feel connected to each other, the staff and their classroom. As described in chapter four the classroom program included typical regular education classroom activities such as celebrating birthdays and holidays.

On the Friday before Family Literacy Day students baked cookies and apple crumble in the morning in preparation for their families coming to class to visit and take part in a celebration of literacy and learning. In the morning students took turns reading the recipe steps and baking the cookies and the apple crumble. Students were clearly happy and excited to be participating in this activity. There were lots of smiles and eager faces. Michael commented, “This is cool. We’re cooking at school!” He then volunteered to read from the recipe, and in this context was able to fluently read aloud Step 4 of the directions for the apple crumble, “Bake for 45 minutes at 350 degrees.”

When their parents arrived at 1:40 pm students first served them coffee, hot chocolate or juice, and apple crisp or a cookie and then served themselves as well. After everyone had enjoyed their snacks, students then read aloud to their parents from a pre-selected book and completed a Family Literacy Day book review together. This included responding to the writing prompts: “What we liked best. What we didn’t like. Would we recommend the book to someone else? Why or why not?”
After this, students took their parents out into the hall to look at a sample of their written work that was displayed on a bulletin board. Once this was done, the teacher welcomed everyone and addressed the group. She shared with them the history of Family Literacy Day in Canada and discussed the importance of engaging in literacy and learning outside of school and developing a shared culture of learning.

She further encouraged parents to cook with their children, read with their children and talk with them and to see this engagement as a learning opportunity. Following the teacher’s talk students took turns in small groups performing reader’s theatre skits to end the celebration of Family Literacy Day. After the reader’s theatre performances the teacher and EA took time to speak casually with parents and students before they left for the day. Participation in the Family Literacy Day celebration supported the relationship between home and school for the students and their families.

In addition to the inclusion of activities designed to support connections between students, staff and the school, one activity that was part of the larger instructional design, promoted the development of relationships between the teacher and the students supporting students to feel appreciated and understood. On Mondays students would take turns talking to the teacher or EA about their weekend. The teacher did this with two groups of students while the EA did this with the other two groups of students. This time allowed the teacher and EA to get to know the students and their families, and for the students to feel cared for as the staff took the time to listen and ask questions. For example the teacher had a conversation with Michael in which she made a connection to him and his family:
Teacher: “Okay, weekend. Who wants to go first?”

Michael: “We went camping in our trailer. We went to Oliver. It was really fun.”

Teacher: “What is there that’s fun to do in Oliver?”

Michael: “Well, if you’re a wine drinker there are lots of wineries. My mum really liked that.”

Teacher: “What did you do while your mum was at the wineries?”

Michael: “Oh, kids can go too, but you just can’t taste.”

Teacher: “Thank you. I think I am going to consider Oliver for our summer holidays.”

Michael and the teacher smiled at each other.

On another day, I observed as the teacher created an opportunity for students to relate to her through the revelation of personal information. Philip related that on the weekend he had been swimming in a lake. The teacher asked, “When you swim in the lake is it murky or is it clear?” Philip told her more information about the lake and his adventures. The teacher leaned forward and nodded as he spoke. Then she told him some very personal information, “I have a fear of lakes. I’m afraid of all the fish and things that are in there – especially when they swim by and touch your legs. If it’s murky I can’t go in.”
It was evident that the students developed positive relationships with the staff. When asked to write about their class students wrote comments such as: “I like Mrs. Chin.” “My tehr Ms. Campbell she is vere fun!” “I like my techer this year,” and I scribed for one student as she elaborated on her written response: “The teachers pay more attention to me.”

In the fall, Michael demonstrated that he had not formed a positive relationship with the teacher and EA. When asked to describe his class this year he wrote, “miane tanes” [mean teachers]. However, over the course of the school year it was obvious that the teacher and Michael had developed a positive relationship. In June, when asked to list positive, negative and interesting facts about the LDP Michael wrote the following under positive aspects of the program, “tygrs.” When asked what this said he stated that the LDP had good teachers.

Another indication that Michael had developed a positive relationship with the teacher was observed one day in May when Michael had been involved in an incident of excessively rough play with a boy in Grade 1. The teacher said that if Stephen could tell that this wasn’t fun and play then Michael could probably tell that, too. She said that she thought that he joined in, but not to play but to keep the problem going. She said that she thought, “he made a bad choice to keep the problem going.”

Michael responded, “You’d probably be right.” and hung his head.
The teacher commented, “I know you now, Michael. We’ve been together for months now.”

Through this exchange between Michael and the teacher she related to Michael in an empathetic manner even though addressing a significant behavioural issue. Michael felt comfortable enough to admit his part in the incident. Furthermore, when the teacher called the Grade 1 student involved in the incident to hear his side of the story, she acknowledged the younger child’s role while still holding the older students accountable. At one point in this exchange the younger boy stated that it was Tyler that pushed him down the hill. At which point Michael spoke up and admitted, “Tyler didn’t push him down the hill. I did.” Evidently Michael felt connected to his teacher to a degree that allowed him to trust he could admit to this error in judgement even when he could have allowed the blame to be placed on his classmate.

The implementation of this program within the classroom supported students to develop positive relationships with each other and the staff. Students participated in many enjoyable activities that are typical of general education classes. The goals of these activities were not specifically academic learning outcomes. Rather these activities aimed to create positive student affect and support students to feel connected to each other and the teacher and EA.

*Forming peer relationships.*

Throughout the year, this group of students demonstrated what might be considered typical social interactions for their age. With only fourteen students in the
class it was a very intimate group. All students involved in this study were observed to behave in ways that facilitated connection with each other and several supports for relatedness were evident regarding the formation of peer friendships. Specifically the aspects of the LDP that supported peer relationships included time spent together on the bus, explicit teacher support for positive peer-to-peer interactions, the routine instructional design, and the adoption of student interactions that failed to highlight academic difficulties.

As all students were from other schools in the district and none of them lived within the catchment area of the school in which the LDP was run, the result was a very tightly knit social circle. As discussed previously, the students in this class had access to students in the general education classes within the school, however for the most part this group of students socialized exclusively with each other. Only one student was ever observed to socialize with students from other classes at recess and lunch other than when involved in a school organized activity. This student had been in the program at this school the previous year and had made some friends outside of the LDP who she frequently played with at recess and lunch. However, all playground observations recorded the other students in the class playing all together, or in small groups. No student was ever observed to be completely isolated without a friend to socialize with informally at recess or lunchtime.

Throughout the year, tight friendships were evident as well as the inevitable squabbles and disagreements. Early in the year, the bussing appeared to support the establishment of tight-knit friendships amongst a group of students that all traveled on the
same bus. None of the students in the program during this school year lived within the catchment area of the school. Of the fourteen students, 11 students, including one of the in-depth study subjects, Michael, were bussed to the school, while the other three were transported to the school by their families.

An early sociogram examined reciprocal friendships in the fall. Students were asked to name three students that they liked to play with. Reciprocal friendships were considered those in which two students identified each other as a preferred playmate. This sociogram demonstrated that there was a group of more popular students as well as a number of less popular students (however, due to the fact that not all students in the class participated in this study, all reciprocal friendships may not have been visible.) Michael was clearly a popular choice for play in the fall in large part due to reciprocal friendships between four of the students on Michael’s bus. Michael’s mother reported that he became particularly good friends with Ben, playing with him on the weekends and inviting him to his birthday party and sleepover at the end of October.

Contrary to the majority of positive interactions observed between students, in early April a change in the social dynamic of the classroom was observed that also had its origin on the bus. Michael had a “falling out” as he described it with his friends on the bus that was quite upsetting for him:

It started off good and then it went downhill. It went up in flames. Me and Ben had falling outs. Kylie had falling outs. Ben and Kylie don’t want me to have Kristen’s key cards – it’s a game we have on the bus.
Michael said that the problems started on the bus. He reported spending approximately an hour on the bus each way, being the second student picked up in the morning and the second to last dropped off on the way home.

The reality of problems on the bus was reinforced by Kristen who said, “Michael’s so mean. He wrote a note to Ben saying, ‘I hate you.’ I don’t get Michael. No one gets Michael. Michael’s the reason my bus has assigned seats.”

Ben also relayed that there was a problem amongst the group, “Michael has temper tantrums on the bus. No one wants to play with him, because he’s being rude to everyone.”

During this time the school counsellor was observed coming into the classroom to take students to her office to discuss the problem. Michael and Kristen, as well as Ben and Kylie were observed going to the counsellor’s office. Whatever happened on the bus, it appeared to have become a difficult situation for Michael socially and an issue that the other three students bonded over.

During this falling-out Michael quickly and demonstrably struck up a friendship with one of the less popular boys in the class. This change in the social dynamics of the group was marked, but short lived. Observation of this social rift occurred one week during the spring. By the time of my next weekly visit, Michael was back to working and playing with the more popular group of students and no further observations of this nature were noted.
The teacher’s explicit, supportive instructional style also appeared to play a role in supporting students to interact positively and feel related to each other. When problems arose on the playground the teacher would spend time with individual and small groups of students, and refer them to the school counsellor or principal as she felt appropriate. However, I also observed her facilitating appropriate playground interactions with the entire class. One day the teacher said to the class, “I think we should have our gym time outside today. Since there’s been some problems playing tag, I think we should play a tag game. What tag games do you like to play outside?”

Many hands went up and Zack was chosen to explain the rules of a tag game they could play outside. Zack gave a long and detailed explanation of a tag game.

The teacher asked clarifying questions and then reviewed, “what tag is and is not”:

I am a runner. I know that when you’re running you can run fast and still stop quickly. You can redirect your direction so that you don’t run into people. So that’s not an excuse for physically running into people or tagging too hard.

She then took the students outside to the playground and facilitated the playing of several games of tag in which she chose several students to be “it”. Under her direct guidance the playing of tag was not problematic, and the students were active and smiling throughout.
Another situation arose in the spring when Michael was suspended for a day for being involved with another student in the class in pushing a boy in Grade 1 down the hill on the playground. Michael admitted his part in the incident and received a one-day suspension. I was at the school to observe every day for a full week when this incident took place. The incident took place on Wednesday at lunchtime. Michael was suspended for the day on Thursday and returned to school on Friday.

On Thursday, as the students entered the class, they were very excitedly saying to each other, “Michael got suspended.” Two students came up to me directly to inform me that Michael was suspended, one of whom was Kristen. She said, “Michael’s been suspended. It’s not a rumour!”

The teacher and EA did not explicitly address the issue, but rather encouraged the students to begin the morning routine as usual. The following day when Michael returned to class the following exchange took place as I jumped in to help the teacher as she was rushing to help the students wrap their Mother’s Day gifts before the end of the day:

Teacher: “Would anyone else like their present wrapped with ribbon?”

Michael: “Yes, please.”

Me: “Who was that nice, polite person?”

Teacher: “That was our lovely Michael.”
Hayden: “Oh, ya. Michael who was suspended yesterday.”

The teacher sent Hayden out to the hallway. She finished wrapping presents with the students and then took Michael out to the hallway to see Hayden. I followed out to the hallway about a minute later. I was not able to record exact quotes, but later wrote down what had transpired. The teacher had Michael and Hayden facing each other and she had asked Michael to tell Hayden how he’d felt when he’d made the comment about Michael’s suspension. She admonished Hayden, and then sent him back to class. She told Michael that she didn’t really think that he should have cheered when Hayden made the negative comment. She said she thought, “he got caught up in the moment and cheered” but that, “being suspended wasn’t a positive thing” and, “missing school wasn’t good”. She also commented, “it’s pretty fun to be here” and, “missing school isn’t fun.” She told him next time someone said something that hurts his feelings he should let the person know how he feels.

Across the school year, the teacher provided support for positive peer-to-peer interactions through explicit teaching regarding game playing and student interactions as problems arose between students over the course of the school year. She also referred students for further adult support for social interactions to the principal or the school counsellor to develop students’ social skills and foster positive relationships among classmates.

The daily routine of the LDP including small group remedial reading instruction conducted through the routine of literacy centres also created opportunities to satisfy the
students’ need for psychological relatedness. Instructional groups were formed based on the teacher’s assessment of their decoding and encoding skills at the beginning of the year.

Over the course of the year it became evident that the students in these groups became very familiar with each other, the routine of the literacy centre period, and each of the activities that were assigned at each centre. It also became evident that many of the students disliked working on the typing program at the computers and completing the phonics workbook or worksheet activities at the other independent literacy centre. Furthermore, this common dislike of these activities became a source of bonding for many of the students.

During one observation in mid-March I observed students going to the independent computer station to work on the All the Right Type program. There were two computers that were turned away from the teacher so that she would be able to see the students, but not their computer screens. The students that arrived first at this station chose those two computers and rather than practicing typing, pulled up another application that allowed them to view movie trailers. Only students sitting at computers at which the teacher could view the screen worked on the assigned typing program. Furthermore, the students watching movie trailers kept their hands on the keyboards and randomly pressed keys in a purposeful attempt to appear to be typing.

During my next observation, I spoke about the typing program with one of the students I’d seen watching movie trailers. She said, “We all don’t like doing All the
Right Type. Everyone in the whole class watched the movies. Whoever was first to get to the two computers facing away from the teacher could watch the movies.

She also told me that in addition to watching the movies her group wrote notes to each other as well. She said, “We’re still technically writing. We only do it when the teacher is away, because she watches us now.” The EA had checked the history on the computers and discovered that students had been going to other websites on the computers. This prompted closer monitoring.

During another observation, Ben, Gina and another student were at the computers and the assigned activity was to practice their typing skills. However, Gina was randomly pushing keys on the keyboard. Ben noticed what she was doing and reached over to push some keys on her keyboard, too. He then returned his attention to his own keyboard, typing a row of silliness on his as well. Gina then reached over and played with the mouse on his computer. Ben looked over at her computer again and asked, “What are you doing? Are you trying to get it all wrong?” Gina didn’t respond. The bell rang to signal the time to switch centres.

Students were also observed collaborating to avoid participating if the independent literacy centre in the room next door to the LDP involved working on phonics workbooks or worksheets. Students were seen with their backs to the EA, chatting and even one day sneaking to eat sunflower seeds without being noticed.
At the end of April, I asked the students in one of the reading groups which literacy station they liked best. This group was a group of three readers, including Kristen, Stephen and Zack whose reading skills were advanced relative to those of students in the other reading groups. The following exchange occurred in response to my question about their favourite station:

Zack: “The computers, because on Fun Fridays we get to play games.”

Kristen: “Workbooks, because it’s the funnest.”

Stephen: “It’s fun to talk and goof around at.”

Kristen: “That’s basically what we do.”

Me: “How can you do that with Mrs. Chin in the room?”

Kristen: “Because we do it quietly.”

It is important to note, however, that this bonding over avoidance of some activities that students found uninteresting did not spill over into a generally negative stance toward other instructional activities or the teacher and EA. The students involved in collaborating to avoid these activities, did so without taking on disengagement as a generalized learning stance. These same students participated actively when the activity at the computers was to play a game on Fun Friday, or when it was the reading practice program, Raz Kids. At the other independent centre, these students would practice
spelling words if that was the assignment or participate in playing an assigned reading game.

The students themselves, through their interactions with each other, played a role in creating a culture of acceptance that fostered psychological relatedness. There were many examples of students behaving in ways that demonstrated their desire to make friends throughout the school year. One such incident occurred during one observation when Zack fell in gym when tagged by Stephen in a game of tag. Stephen stopped after tagging Zack and said, “Are you okay?”

Ben chimed in from across the gym, “You okay, Zack?”

Zack, smiling, replied, “Yeah. I’m good.”

Conversely during that same gym period Zack pointed at Emma and yelled, “Emma’s cheating. She’s not staying on the lines.”

Although the students certainly seemed for the most part to naturally treat each other well, as one might expect at this age level, not all social interactions between students were supportive. However, as discussed in detail regarding supports for competence, students also completely refrained from making judgemental comments regarding relative academic skill levels or pointing out each other’s mistakes.

Further, an interesting finding related to peer interactions was that one student, Gina, was often observed to remove herself from the social interactions of the group.
The year of this research study was the third year Gina had been enrolled in the LDP and this was her second year in this particular location with the same teacher and EA. At recess and lunch-time she was often observed playing with a group of girls from the broader school community. She was the only student from this class who was ever observed to play with students from other classes outside of school organized activities. Furthermore, Gina would often choose to work independently in the classroom at times when students were permitted to work with others. She was even observed to turn down invitations to work with others. In the fall when she was asked to compare her previous school and class to this year’s class she indicated a preference for her friends in previous regular education classrooms. She wrote regarding this year, “ok friends.” Regarding her previous experiences in regular education she wrote, “better friends.” However, despite this stated preference, she wrote in the end of the year survey that positive aspects of the program included, “nice class,” and “had a lot of fun with the class.”

Most interestingly, it appeared from the behaviour of the other students that this girl’s behaviour did not offend them or affect their behaviour toward her. Throughout the year there were no observations of Gina being excluded, she was positively regarded for work and play, and no negative comments were overheard or reported about her during interviews. Regardless of her apparent ambivalence toward them, this group of students were friendly toward her throughout the school year.

In this LDP classroom students experienced access to typical classroom and school activities that support the development of relationships and positive affect regarding school, the opportunity to interact with and develop relationships with students
enrolled in the broader general education community within the school, support from their teacher and EA to develop feelings of relatedness to the staff, and took part in a learning community that supported peer to peer relationships through the design of the program, the implementation of instructional activities and the manner in which the students interacted with each other. As such, this classroom context within this school community supported students’ need for relatedness through the provision of opportunities for the forming of positive relationships between each other, the staff and the school and the avoidance of feeling insecure or self-conscious due to their academic difficulties.

5.1.2. Building a culture of competence.

The need for competence is related to the satisfaction that is derived from demonstrating and enhancing one’s capabilities (Stroet, Opdenakker & Minnaert, 2013). Thus, the need for competence provides the motivation to learn. According to SDT, internalization of behavioural regulations, such as those required for learning in school, are more likely to occur under conditions of support for the development of students’ sense of competence. Students with learning disabilities have been found to demonstrate lower perceived academic competence and lower intrinsic motivation to engage in classroom learning activities than their peers without learning disabilities (Zisimopoulos & Galanaki, 2009). Therefore, it is pertinent to examine how aspects of classroom contexts mediate students’ feelings of competence for students with learning disabilities.
The LDP was a specialized classroom for students with reading disabilities. As such, enrolment for students in this segregated special education classroom would present a threat to students’ sense of competence as capable learners through being removed from regular education and identified as having special learning needs. However, several school and classroom factors supported students to feel included within the broader school community and provided support for students’ sense of competence within the classroom.

Supports for students’ sense of competence resulted from a variety of instructional and interactional styles enacted by staff and students including: a) including the LDP in the school community, b) supporting competence through program design, c) supporting competence through instructional design, d) differentiating learning for optimal challenge, e) providing educational structure, f) maintaining high teacher expectations and support for student participation in all classroom instructional activities, and g) accepting differences through the adoption of interactions that created a culture of acceptance within the classroom.

*Including the LDP in the school community.*

In some ways this class of students in the LDP reflected the human diversity found in any class of Grade 4 and 5 students. There were a variety of personalities and the usual interplay between them. However, in several, very marked ways the LDP was visibly distinct as a special education program. Notably the LDP enrolled only students with reading disabilities and was capped at fourteen students making the class size much smaller than regular education classes that enrolled an average of thirty students at these
grade levels. Other differences related to the location of the class within the school and school district. Unlike the general education classrooms in the school that were populated with students in the local neighbourhood, the LDP was populated with students from other schools across the district. None of the students knew other students from the general education population before coming to this school to enrol in the LDP. Three students received rides to school from their families. However, two different school buses arrived daily to drop off eleven of the fourteen students in the morning and pick them up after school. This was a very salient (large yellow school bus) indicator that these students were unique at a school where no other students arrived on a school bus. Additionally, the classroom location was in the primary wing next to the Kindergarten and Grade 1 and 2 classes, and right at the front of the school rather than in the intermediate wing at the back of the school with the other Grade 4 and 5 classes. This was a historical factor based on which classroom was empty when the program was first introduced to the school. However, this visible difference in location added to the visibility of these students and the program as “different”.

These differences identified this program as “special education” and the students who attended the class as “students with special education needs.” For students enrolled in the LDP these obvious differences would present a salient threat to students’ sense of competence as capable learners.

However, the school staff was clearly aware of the potential for stigmatization of students and enacted several design and interactional protocols aimed at minimizing observable differences between the LDP and the regular education classes. Similar to all
classes in the school, the LDP was assigned a division number within the school that aligned with the grade level of the students. They were Division 4 of 12 divisions. The title “Literacy Development Program” was not visible anywhere. The class was referred to by the rest of the school community and their own teacher as, “Ms. Campbell’s class”, or Division 4. The inclusion of students in Division 4 in all grade appropriate school wide activities prevented singling them out as different through being excluded from activities that students in the general education classrooms participated in.

In conclusion, enrolment in the LDP and several key program design aspects would have presented a threat to students’ sense of competence. However, the ways in which the staff at the school in which it was located included the students within the fabric of the broader school community would have to some degree minimized rather than highlighted the difference between the students in the LDP and the students in the regular education classrooms.

**Supporting sense of competence through program design.**

Within the classroom, identification of students as more or less capable was minimized. All study subjects enrolled in the LDP had previously experienced “pull-out” learning support in which they had been removed from their regular education classroom for a portion of each day to receive literacy intervention from a LST teacher. In contrast, during their year of enrolment in this program students didn’t receive any additional intervention. The classroom program provided all instruction. Students would read the day’s learning activities outlined on the white board each day. A typical day’s outline would read: “Attendance; Planner/Homework Check; Big Four; Spelling; Guided
Reading; Recess; Math; Lunch; Planners; Art; Gym; Social Studies.” Nowhere were the words, “intervention” or “support” or the acronym “LST” which was used within the district to describe learning intervention or academic support for students who required extra learning support.

Lists of student names and times for LST support are commonly found on the walls or white boards of regular education classrooms within the school district. While this is a convenient scheduling reminder for both students and staff it is also a very visible identifier of students who have been selected as requiring additional learning support. There were no such identifiers within the LDP classroom. All students participated in reading instruction at one of the four literacy stations during “Guided Reading” time. No student had to wonder which activity he or she would miss when they would leave the classroom to receive specialized literacy instruction. All of the students participated in all classroom learning activities scheduled for the day. Perhaps most notably however, students didn’t participate in any “special” learning activities that other classmates didn’t participate in or receive any special adaptations or learning support from an EA or special education teacher that other students didn’t. Consequently, students participated in all classroom educational practices, which in turn, may have minimized feelings of self-consciousness or insecurity and permitted students to view themselves and their classmates as competent learners as opposed to highlighting students with the most limited literacy skills as exceptional.

Literature from the school board described the LDP as the most intensive level of literacy intervention offered for students with learning disabilities. The adult to student
ratio of 2:14, that was greater than typically found in general education classes, provided students increased guidance, encouragement and feedback throughout the day including during whole class instruction. This level of staffing also permitted the teacher and EA to provide small group and individual instruction throughout the day.

The LDP was designed to provide both remedial literacy instruction for students with reading disabilities, as well as an adapted academic program including all subject areas of the provincial curriculum with the exception of Core French. Observations throughout the school year showed the students participated in instructional activities that addressed grade appropriate curricular learning objectives in all subject areas other than French. Students participated in Physical Education lessons aimed to develop a wide variety of skills such as basketball skills, physical fitness, and sportsmanship. In music class students participated in activities in which they learned to read music, develop music appreciation, and play the ukulele. Every week students created new art projects that were then put on display in the classroom or in the school hallway. Students participated in instructional activities on topics such as healthy eating, and bicycle safety within the Health and Career curriculum. Furthermore, the students in this program experienced supported access to grade level academic subjects such as math, social studies and science.

Comments made by the mothers of the students selected for in-depth study demonstrated that they were pleased by this aspect of the program and were concerned about their children’s place in the broader educational community. Michael’s mother was particularly pleased that the program included regular education learning outcomes
for Grade 5 in addition to remedial literacy instruction. She said, “It’s very exciting that they follow the curriculum, but it’s just modified for them. I’m happy that it’s modified for him. You know, that he’s able to do it.”

At the end of the school year, Michael’s mother expressed that at the beginning of the school year she had been concerned that the teacher might not be able to cover the whole curriculum and that when Michael returned to a regular classroom program he might not be able to, “be up with his peers … knowledge-wise.” But, by the end of the school year she believed that the teacher had covered everything. She stated, “I know that they did the whole Grade 5 curriculum and I do know this. He’s learned a lot. He was telling his sister the other day about the digestive system. A little too much information, especially when they’re eating.”

In contrast, Emma’s mother stated that she wished there had been more of a focus on math: “I know the program is a literacy-based program, but I thought that they would’ve focused on all subjects. And I just find that her math - it’s very low.” However, observations demonstrated that Emma experienced very supportive math instruction, often sitting at the rainbow table with the teacher and several other students to receive re-teaching and support to complete the day’s math practice.

Although enrolment in a program for students with learning disabilities may have posed a threat to students’ perceptions of themselves as capable learners, in several ways it may also have supported their sense of competence. As suggested by theories of social comparison such as the big-fish-little-pond effect, (Marsh, 1984, 1987; Marsh & Parker,
1984) students compare their own academic achievement with the average achievement of their classmates and view their own achievement and competence more favourably in lower achieving classes.

Although it was beyond the scope of this research to collect data regarding students’ self-perceptions of competence in this special education context and compare that to their perceptions upon return to regular education classrooms, it was evident that students believed that their literacy skills had improved over the course of the year and felt more competent in June than they had previously. When asked in June about their literacy development over the school year all three students selected for in-depth study articulated that their skills had improved. Michael said, “Last year I wasn’t able to read ‘four’…I couldn’t write ‘four.’ Now I can read almost ‘supercalifragilisticexpialidocious.’ I could almost, probably, write it!”

Zack and Emma also felt that their reading had improved over the year. Zack stated in June that his reading had become a lot better. He also said, “I’m doing a lot better than in other years.”

Emma said that her reading had changed a lot since September. She elaborated, “I went from reading at an early Grade 3 level to an early Grade 4, because I actually like reading now!”

Like their children, the mothers of the case study subjects believed that their children’s reading had improved over the course of the year. During the year-end
interviews without exception all three mothers felt that their child’s literacy skills had improved over the course of the year. Emma’s mother reported that her reading had improved. When asked how Emma’s year had been, she answered:

Really good. I’ve seen so many changes in her for the positive. Her reading has gone up almost two grade levels…. She’s gone from an early Grade 1 to an early Grade 3, so she’s not quite there, but she’s doing better and she loves to read now. She reads books all on her own! She hated reading before.

Similarly, when asked about Zack’s reading growth over the year, his mother stated that she felt his reading had improved: “It’s good. Even if he’s sitting in front of the television, he’ll read things that are on the television. He’s never done that before. Or we’re driving by something.”

Like her son, Michael’s mother was very articulate regarding her feelings about his year in the program. She believed he’d made considerable progress:

It has been a series of wonders. He has gone from not being able to identify all of his letters, never mind the sounds of his letters, to being able to work out words and how to read them on his own. It’s like the change is night and day. He has just come leaps and bounds this year. Last year at this time, if we’d decided we didn’t want (Michael) to know something, we’d spell a word. The only one we couldn’t do was ice cream, because he’s pretty quick and that’s one of his favourite things. But now, if I spell a word out to my husband, he’s pretty quick
and he’ll catch it. And he knows what the words are and he’s, like, ‘we’re going to go do this?’ You know, it’s very exciting!

In contrast to his self-assessment of his reading growth and his mother’s assessment of his reading growth, reading assessments completed at the end of the school year described Michael as a very weak reader. The teacher’s reading assessments using the PM Benchmark reading assessment did show some growth over the year suggesting that Michael was a complete non-reader at the beginning of the school year unable to read even the simplest Level 1 text. At the end of the school year the teacher reported that Michael could read words in Level 8 books with 98% accuracy. The teacher considered level 8 to be an early first grade reading level and consequently referred Michael for a second year in the LDP.

In June I completed reading assessments with the three case study subjects using the GORT-5 reading assessment. For Michael, the descriptive terms provided by the test publisher for performance in word reading accuracy, fluency and reading comprehension based on age fell in the lowest category of “very poor.” Regardless of assessment used, for a student completing Grade 5, such limited reading skills at or near the Grade 1 level, even if much improved from being a non-reader, were severely depressed and may not have been of much practical significance when he entered Grade 6 the following September.

According to the teacher’s PM Benchmark assessments Zack, who was in Grade 5, entered the program able to accurately read the words in books at Level 12. She
considered Level 12 to be a mid to late Grade 1 level. In June the teacher’s reassessment suggested that Zack could read the words in books at Level 23 with 95% accuracy and 50 words correct per minute. She considered Level 23 to be an end Grade 2 reading level. Zack was not referred by the teacher for a third year in the program. When I assessed Zack in June using the GORT-5 reading assessment the descriptive terms provided by the test publisher for reading performance was “below average” for word reading accuracy and “average” for reading fluency and reading comprehension.

Emma’s reading assessments completed by the teacher in the fall showed the highest reading level on entry into the program of the three students selected for in-depth study. She was in Grade 4, but age appropriate for Grade 5. In September the teacher’s assessment showed that Emma was able to read words in books in the PM Benchmark assessment at Level 19. The teacher considered this to be an early to mid-Grade 2 level. At the end of the school year the teacher’s assessment indicated that Emma could read words in books at Level 25 with 95% accuracy and at a rate of 72 words correct per minute. The teacher considered Level 25 to be an end Grade 3 reading level. According to the teacher’s assessment at the end of her Grade 4 year she considered Emma to be one year behind in reading skill. She did not refer Emma for a second year in the LDP. In June, when I assessed Emma’s reading using the GORT-5 reading assessment, the descriptive terms provided by the test publisher based on age for word reading accuracy, fluency and reading comprehension were all “below average”.

Regardless of reading assessment results it was evident that the study subjects in this program, including the three case study subjects and their mothers, felt strongly that
their reading had improved considerably over the year. This sense of improved competence may be attributed to a number of factors within the LDP including academic comparisons with classmates who all have learning disabilities and limited literacy skills.

Observations and artifacts collected during this study showed that all instruction was provided within the classroom by the teacher and EA and no students were identified as less capable than their classmates through leaving the classroom to receive instruction from a specialist teacher or through the provision of extraordinary support or instruction within the classroom for students with relatively greater learning challenges. Students also had access to regular education curricular prescribed learning outcomes and instructional activities typical of general education classrooms allowing them to develop a broad range of academic skills and knowledge. According to SDT, this regular education curricular focus, and the opportunity to develop their academic skills in a broad range of curricular areas, would support students’ sense of academic competence. Further, participating in educational practices with other students with learning disabilities provided a comparison group that allowed students to view their skills more favourably than might be the case when comparing with higher achieving classmates in regular education classes.

*Supporting competence through instructional design.*

In addition to the inclusion of both regular education and special education learning objectives, the higher adult to student ratio than found in most regular education classrooms and the inclusion in the LDP solely of students with reading disabilities was an element of the program design that influenced the instructional design in ways that
supported students’ sense of academic competence. Although there were relative differences in students’ literacy and other academic skills, this group was more homogeneous in terms of instructional need than generally found in regular education classrooms. Therefore, literacy instruction was highly explicit and supportive and instruction across all subject areas was adapted to the level of students’ literacy skills.

For example, students participated in a weekly journal writing activity. Journal writing is a very common instructional activity throughout the elementary grades. However, in the LDP this weekly journal writing activity involved writing instruction that included explicitly modeled instruction in completing a web of ideas. Students then collaborated with the teacher to produce a cohesive, well written paragraph from those ideas. For example one Monday standing at the front of the class the teacher said, “Okay, so now let’s see what our topic is: My favourite colour is: Red.”

The teacher began demonstrating the writing procedure by writing one reason on the SMART Board. After she wrote each one, she had a student read it aloud to the class and continued. Once all of the reasons were recorded on the web graphic organizer drawn on the whiteboard the teacher said, “Now I have to put these into sentences, because they’re just thoughts. I need to make a paragraph. So, I start with my topic sentence, which is already written. My favourite colour is red. Now I need to turn these thoughts into sentences. What’s one reason why I like red?”

Michael raised his hand and answered when called on, “It is a traditional Indian colour for weddings.”
Ben then added, “It is a bright colour and makes me feel alive.”

The teacher suggested, “We’ve already said, “It”, so what is the “it” we are talking about?” She wrote, “Red is a bright colour.”

After this interactive lesson with the teacher, students then completed their own web and paragraph and finally, received individual feedback and support to review and edit their writing. Students were expected to complete their written paragraph using spelling rules they had learned in class and were not permitted to ask for help with spelling as they were writing, as the focus of this activity was placed solely on crafting their ideas into well written paragraphs regardless of their limited spelling skills. Spelling was reviewed individually with the teacher or EA after students had completed their writing. The message to students was that they were capable of journal writing regardless of their spelling.

Lesson design was often highly supportive of writing conventions that would typically be expected of students at these grade levels in regular education classrooms. For example, each week students listened to the teacher read aloud from a novel and pose a question about the reading. As a group, students would discuss the reading with the teacher and collaboratively compose a sentence starter that was written on the white board at the front of the classroom. Students would then copy the sentence starter and complete their own answer to the question in their reading response notebooks. Again, students were not permitted to ask for help with correct spelling, nor were they penalized for incorrect spelling. This projected the belief that students were capable of
understanding and analyzing a novel regardless of their difficulties with reading and the conventions of writing.

As previously mentioned, students had access to all other curricular areas included in the general education curriculum except Core French that normally begins at Grade 5. However, lessons were instructed in ways that allowed students to access the academic content without being hampered by their limited literacy skills. Students did not read textbooks or write paragraphs independently. Rather, students listened to information as the teacher read aloud or they watched recorded information. They collaborated with the teacher to articulate pertinent information that they then copied into their notebooks after the teacher wrote the notes on an overhead projector and completed hands-on activities such as designing posters of animal habitats. Students participated in Social Studies, Science and Health and Career lessons that had complex topics and learning outcomes normally experienced by students in regular education Grade 4 and Grade 5 classrooms. For example, students were observed learning about the human digestive system, animal habitats, the four food groups, and natural resources in Canada.

Early in the spring, students participated in *Genius Hour* supported by the teacher, the librarian and the EA once per week for 6 weeks. During this time the students identified a question that they wished to research, used computers to search the Internet for relevant information, wrote a draft response to their questions on a graphic organizer, and finally used a book creator app on the school iPads to produce a presentation to share the information they had learned with their classmates. This type of activity was fairly common in intermediate classrooms within the school district. The students in this
program were considerably supported to participate in this activity that would generally require a high level of literacy skills in order to search for information over the Internet and produce a final presentation.

The design of this program with a high teacher to student ratio and all students being identified with learning disabilities in turn led to instructional design that was highly supportive of students’ sense of competence. Classroom instruction refrained from highlighting students’ limited literacy skills and simultaneously provided explicit, supported instruction in all curricular areas enabling students to meaningfully engage in all classroom activities developing new knowledge and enhancing their capabilities. Students were able to view themselves as students who could learn new information and skills and share them with others whether that involved sharing with one’s classmates, Grade 1 little buddies, or one’s sister at home. In this way this classroom was highly supportive of these students’ sense of competence.

**Differentiating learning.**

Differentiation of many of the instructional activities allowed each student to meaningfully participate in opportunities for learning. Students participated in instructional and independent practice literacy activities throughout the day that were differentiated to provide levels of optimal challenge based on informal reading and spelling assessments completed by the teacher at the beginning of the school year. However, all students received differentiated instruction and no mention was ever made by the teacher or EA regarding relative skill levels between individuals or instructional groups although differences in instructional content were visible to students. During
literacy centres students rotated through four different activities that were almost entirely differentiated for each individual or small group. They experienced small group reading instruction from the teacher that she differentiated for each group in terms of instructional content and pacing using the Seeing Stars program. Students also participated in differentiated small group spelling instruction from the EA using the McCracken Spelling program.

As described in detail in chapter 4, throughout the rest of the day all students participated in further differentiated literacy instructional activities. This included the morning read aloud of their home reading book, their individualized reading fluency assignments, and Words Their Way spelling instruction and practice that was differentiated for each spelling group.

Differentiation providing optimal academic challenge in literacy skill development was the norm in this classroom, not the exception for those who could not access the regular instruction in the classroom. According to SDT optimal challenge is an important aspect of competence support in classrooms in that students need to feel competent to undertake the instructional activity successfully to become fully engaged in the learning process. The fact that the spelling groups were so unevenly distributed in size, including one group consisting of only one student, demonstrated the degree to which optimal challenge was considered.
Providing educational structure.

The need for competence involves the need to feel effective interacting within social contexts. Instructional structure, involving clear communication to students regarding what to do to achieve academic goals in the classroom, therefore, is an important part of competence supportive instructional contexts (Stroet et al., 2013). Structure involves providing students with plans, goals, standards, expectations, rules, models, feedback, learning strategies, direction and guidance in meeting the learning expectations of the classroom (Reeve, 2006).

Instructional routines and procedures are an important part of classroom structure including protocols for how students are to participate in all classroom activities. These include everything students need to know and are expected to do to effectively engage in the learning environment of the classroom, for example: how to enter the classroom in the morning, where student and classroom supplies are kept, how to complete each instructional activity, what to do when finished each activity, and how to transition between activities. Predictable instructional routines and well-developed procedures for completing instructional activities have been found to increase student engagement for students with and without special learning and behavioural needs (Stichter, Stormont & Lewis, 2009; Sutherland, Lewis-Palmer, Stichter & Morgan, 2008).

As described in chapter four the teacher and EA provided consistent routines and clear procedures for students to follow when engaging in each day’s instructional activities. Furthermore, the students followed a routine schedule of instructional
activities for each day of the week. This schedule was so consistent that students were well aware of what to expect each day.

In the fall, instruction and reinforcement of the classroom routines was frequently observed. Furthermore, the teacher and EA maintained high expectations that students follow classroom routines throughout the year and would remind students of these expectations if they failed to follow them. This included rules about appropriate behaviour as well as how work was to be completed, and effort applied to learning. Any deviations from these expected routines were quickly addressed, and students were reminded of the classroom routines or expectations and requested to align their academic behaviour and work completion to the expectations of the classroom. For example, during spelling activities the teacher and EA were very diligent in monitoring students to ensure that they were reading their words aloud to themselves and sorting appropriately three times. During the morning Big Four activity students were permitted to stay at their desks to mark their work unless they failed to follow the review lesson and mark their work in which case they were asked to come to the front and sit in front of the SMART Board where the teacher could monitor their engagement more closely. She also had the student who was standing up at the SMART Board writing in the correct answer ask the rest of the students if they agreed with the answer written, disagreed with the answer or were unsure about the accuracy of the answer by making a thumbs-up, thumbs-down, or thumbs-sideways gesture. This procedure encouraged students to stay involved in the lesson and allowed her to monitor understanding of the concepts covered in the activity - providing students answered honestly.
Students were never observed to be confused about how to participate in any morning activities. The classroom instructional procedures and routines provided consistent structure throughout each morning that allowed students to effectively engage in the educational practices of the classroom. Consequently, this effective engagement in instructional activities provided students with time for application of skills, as well as time for the teacher and EA to provide individual and small group instruction as well as feedback to students regarding their developing academic skills.

The consistency of each day’s instructional schedule throughout the year, and the fact that it was posted daily at the front of the room, enabled students to anticipate the learning activities of each day. One day in the spring, Zack asked the librarian for help in finding a book on rain forests that he could check out of the library. At the time, his class was studying the topic, “Habitats are Different”, and Zack was assigned to a group investigating rain forests. During one observation Zack asked me if I’d be there the next day. When I said that I wouldn’t be there, he told me, “That’s too bad, because we’re doing a really great picture of rain forest plants and animals.”

Zack was able to independently regulate his behaviour due to his knowledge of the consistent weekly schedule. He knew the scheduled day for science activities and had been able to make use of this information to check out a book from the library that would be of use to him during the upcoming science activity, and to let me know what I’d be missing by not being there to observe on Wednesday.
In addition to following well-established routines for regularly scheduled instructional activities, there were also well-established routines for students to follow after they completed the activities required of the whole class while they waited for the next instructional activity to begin. For example, while waiting for their teacher to mark the Big Four assignment in the mornings, the routine established was for students to engage in independent reading. This was also the case after students had finished copying the day’s message into their daily planner and were waiting for all planners to be checked by the teacher or EA. After completing activities related to mathematics, students played games in pairs, in which they practiced using their newly learned knowledge of mathematical concepts. On Fridays, deemed Fun Fridays by the teacher, students who finished their work early played board games or created structures with building toys.

The consistent educational procedures and practices were highly familiar to students and supported their sense of competence. They were able to effectively participate in all classroom activities without procedural assistance. Well established procedural knowledge allowed students to quickly and effortlessly make decisions about what supplies were needed to complete instructional activities and where these were located in the classroom (e.g., new books for home reading, papers on which to glue their word sorts, word search activity sheets for their spelling group). For example, on one Thursday morning, I saw Zack sort his words and go to the front of the class to find scissors and paper. He cut a piece of paper to the size of the headings previously provided in the word sort activity and wrote the heading word “Oddball.” This heading
had been lost from his set of headings and words to be sorted. Zack didn’t raise his hand to ask for assistance. He knew that he would need this heading to glue it onto the word-sorting sheet. He knew where to access the necessary supplies to make a new heading to replace the lost one and he solved the problem of a lost heading independently, without teacher or peer support.

Adherence to a pre-set instructional schedule and well established routine educational procedures and practices meant that after the first few months of school students participated in a classroom culture in which they spent little time each day deciphering what they had to do and more time each day actively engaging in the processes of learning. This was an important feature of students’ experiences in the LDP as this structure supported students to feel competent to effectively participate within the context of the classroom. Furthermore, routines and daily structures have the advantage of minimizing lost instructional time while students wait for procedural instructions increasing time available for students to benefit from direct instruction and feedback, and to apply newly acquired strategies and skills. Research has shown that reading interventions that provide ample time for students to practice and receive corrective feedback are associated with improvement in academic outcomes (Hattie & Timperley, 2007; Shute, 2008).

As evidenced by student reports such as, “You learn, like more work than in normal classes,” students experienced this program as one in which they spent more time engaged in instructional practices than in educational contexts they had previously experienced. In turn, any development of skills that may have occurred over the year as a
result of increased engagement in instructional practices would further support students’ sense of competence.

In sum, consistent routines and explicitly defined procedures for participation in instructional activities resulted in students participating in instructional activities for the majority of the school day with minimal time spent listening to directions on how to complete tasks or waiting to be told what to do next. The implementation of this instructional structure and the expectation that all students know and follow classroom routines supported students’ need for competence by allowing them to effectively engage in the learning opportunities available in the classroom.

Maintaining high teacher expectations.

In addition to teaching students the routines and procedures and supporting them as necessary throughout the year to follow these classroom protocols, interactions between the teacher and EA and the students reflected the belief that all students were capable and competent learners who were therefore expected to complete all instructional activities. No students in this classroom experienced exclusion from any instructional activity. All students participated in all aspects of the program including whole class, small group and individual instruction, as well as independent application of skills. Students were all held to the same high expectations that they could access the cultural learning tools of the classroom including attending to lessons, following instructional routines and procedures, completing written work accurately and neatly, and completing nightly homework.
In addition to differentiation of instruction to meet individual student needs, which provided students with access to all instructional activities, students were expected by the teacher and EA to participate actively and to a high standard in all classroom activities. Although there was a broad range of literacy and numeracy skills within the classroom and some activities would have proved more challenging to some students than others, all students were expected, and supported, to complete all learning activities and assigned work diligently throughout the school day and complete the nightly homework.

Another expectation that students experienced was that printing should be neat, and anything copied from the board should be spelled accurately. Students were asked to erase and redo planner messages if not meeting the standards set by the teacher and EA. During an observation in October one Grade 5 student was required to redo his entire planner message, because he hadn’t left spaces between his words. The teacher reviewed the need for spaces so that each word was separated in the sentence and could be read by the reader. No students were excluded from the high standards set for written work completion.

If homework was not completed then students were expected to complete it during the morning time block allocated to the Big Four assignment. Homework was completed in addition to the Big Four assignment. Not bringing your homework sheet back to school but saying you had done the homework did not exempt students from the requirement. They were asked to do the homework again so that it could be checked.
However, high teacher expectations do not in and of themselves support student success. Teachers must actively facilitate student learning in order for them to access the instructional activities in meaningful ways (Hawkins, 2005). Throughout the school year, there were many observations of the teacher and EA supporting students to complete learning tasks in ways that enabled students to view themselves as competent learners. Furthermore, the teacher very clearly transmitted her belief in the importance of students accessing the cultural tools for learning expected in this, and many, formal educational learning spaces, as well as her belief that they were capable of using these tools effectively.

Early in October the teacher and EA supported students to complete a journal writing entry about what they had done on the weekend. The teacher had already modeled the use of a web to brainstorm ideas and collaborated with students to write a journal entry about what she had done on the weekend. Following that all students had a chance to speak with either the teacher or EA about their weekend at the beginning of their small group spelling instruction. Therefore, this was a considerably well-supported journal writing activity for students in Grade 4 and Grade 5. However, Zack had not begun to write ideas on his web or write any sentences by the time the teacher had finished working with the spelling groups. The teacher had already begun working one-on-one with students at the rainbow table reviewing and editing their writing together once they had finished their journal composition while other students moved on to their independent spelling practice awaiting their turn with the teacher or EA.
The teacher called out to Zack from the rainbow table at the side of the classroom where she was working with another student,

Teacher: “Come on Zack. How far are we Zack?”

Zack: [replied from his desk] “I don’t really have any ideas.”

EA: “And he has a lot to say. He went camping and told me all about it.”

Teacher: “Come and sit over here then.”

Zack got up from his desk and moved to sit at the rainbow table with the teacher and another student.

Zack: “Ya, but it wasn’t really fun.”

Teacher: “Then you can say that. So, tell me about your camping trip.”

Zack told the teacher about his trip. He was not particularly animated or smiling, but the teacher was smiling, nodding and prompting. Zack began to write and the teacher turned back to the student that she had been working with before she asked Zack to join her. When she finished editing with that student she turned back to Zack and initiated another exchange:

Teacher: “Do you think you’re ready to go back to your desk now?”

Zack: “I think I’ll stay here.”
Teacher: “Okay. What else did you do while you were camping?”

Zack: “How do you spell…?”

Teacher: “Don’t worry about spelling I’ll help you with that when we go over your sentences.”

The teacher then invited another student to sit with her to review his writing. After a few minutes she tapped Zack’s book [presumably to refocus his attention on his page] and kept listening to the other student.

Zack looked at his page, but then stood up and walked back to his desk. He put his hand up to ask the EA a question, “How do you spell turkey?”

The EA replied with the consistent response to spelling questions during independent writing activities, “Sound it out and then we’ll help you later.”

Zack then returned to the rainbow table but didn’t write anything more. The teacher looked over and gave corrective feedback on his writing, “Remember to skip lines. Write, skip, point.” Zack erased and began to write. The teacher once again reminded him, “Skip a space, honey. Remember that.”

After finishing her instruction with the student she was working with, the teacher asked Zack, “Are you done? Okay, period to end a sentence. Oh, my goodness – trash.” She exaggerated the final phoneme as she wrote the correct spelling in his book in red pen. They discussed the bear incident with the trash. The teacher listened and
commented on his tale. As she continued reviewing his writing and correcting his spelling in red pen, the teacher said, “Good. You did a lot then. Good. Choose your sticker.”

This facilitation of Zack’s writing demonstrated a level of encouragement, guidance, support and feedback that allowed him to accomplish the task within the parameters of the activity while both the teacher and EA simultaneously supported other students consequently failing to single Zack out as being less capable than any of the other students. In fact, Zack had a story to tell and in terms of his spelling skills, Zack was one of the more able in the class. The support he needed was for the teacher to facilitate his adoption of the tools of this learning culture – including in this case ideas recorded on a web graphic organizer and then those ideas written double-spaced into sentences using a combination of conventional and invented spelling. Completion of the weekly journal writing instructional activity gave Zack access to the one-on-one interaction with the teacher regarding the topic of the journal entry (in this case his weekend camping trip) and instruction regarding spelling and writing conventions. The final feedback she gave him was regarding the quantity of writing that he accomplished, which was the issue he was having.

However, the teacher did not continue to provide students with this level of support throughout the entire year. She expected students to have learned from her instruction. One Monday morning in the spring during the journal writing activity, Zack had very little written on his page by the time the most students had completed their writing and had reviewed it with the teacher or EA. When the teacher realized this she
told Zack that he did indeed have to complete his writing. She said, “Zack, we’re going to go on without you and you’re going to have to finish that in your own time.” Zack then completed his journal writing and presented it to be reviewed within 4 minutes.

There were also incidental opportunities that the teacher seized to specifically instruct students and highlight her belief in the students’ abilities to participate effectively in the learning culture. One day as students were copying the daily planner message after lunch the teacher spoke with a student asking her to form one of her letters more precisely. As I was not specifically observing that student at the time, I missed the exact wording of the initial exchange between the teacher and the student, but began to record the interaction when the teacher stopped the whole class to address them,

Teacher: “Why is it important to change something if Mrs. Chin or I ask you to?”

Michael: “So your brain doesn’t think that’s the way the letter is and always do it that way.”

Teacher: “Printing is important. What you have to say is important and so people need to be able to read it. So, when you’re asked to correct something you need to do it. We’re asking to be helpful, not to be mean.”

The teacher’s high expectations for self-regulated, diligent participation even when the work might be difficult was evident one day when she spoke to the whole class regarding their learning behaviour when working on the computers during *Genius Hour:*
Give yourself a pat on the back if you put your hand up to ask for help when you needed it and didn’t just sit there. Computers at school are for learning not playing. It’s not fair to distract others from learning, but don’t blame others for distracting you.

Similarly, during an observation the teacher addressed Tyler’s feelings when an upset arose over his decoding difficulties. She commented, “This is a skill. All skills take time to develop. If you’re learning to play basketball you need to practice dribbling and shooting. This is a skill just like that. You have to practice.”

These exchanges demonstrated her communication to the students of her belief that the cultural tools for learning in a school setting were important and that the students could adopt these positive learning behaviours. This consistent reinforcement of the importance of identifying and engaging with the cultural tools for learning in combination with the supportive facilitation of learning those tools enabled students to participate meaningfully in a broad range of instructional activities.

The expectations of the teacher and EA for meaningful engagement in all instructional activities, the universal expectation that all students meet the standards set for that work, and the supportive instructional structure provided by the teacher and EA contributed to a classroom context in which students participated in all instructional opportunities in an inclusive culture of high standards. Participating in this culture of high expectation that all the students were capable learners supported the development of students’ sense of competence.
**Crafting a culture of acceptance.**

In concert with the teacher and EA, students in the LDP interacted with each other to constitute a culture of acceptance. Although I had seen a variety of social interactions between the students, I realized well into the school year that I had not observed a single incident of students highlighting each other’s academic errors or weaknesses. No students chuckled when a classmate made a mistake. Errors weren’t pointed out or loudly corrected by other students. Students were never overheard talking about who were the more accomplished readers or which students were in more or less advanced spelling groups.

Although Michael was one of the weakest students in terms of literacy skills, and wasn’t often chosen as a preferred classmate to work with, this didn’t appear to affect him socially. Early in the year Michael appeared to be well liked by his peers as evidenced by results of a sociogram that showed Michael was one of the most frequently picked by his classmates as someone to play with. The students did not appear to judge Michael harshly for his extremely weak literacy skills, which were relatively weak in comparison to most of the other students. For example, during *Genius Hour* in the spring Michael was researching his question, “How long ago did dragons live?”

As the students worked on the computers in the school’s computer lab, I observed the following exchange. Michael asked aloud to those sitting near him, “How do you spell ‘did’?”

Kylie helped by saying out the letters, “d-i-d”
The teacher asked the students to quit, log off, and line up to return to the classroom. Ben, who had been working across from Michael, lined up beside Michael’s computer as Michael stared at his screen before logging out and said, “But, I didn’t find out how long ago dragons live.”

Ben turned and questioned Michael, “What word did you want to spell?”

Michael reiterated, “‘Did’, but Kylie told me already.”

When I heard Michael ask aloud how to spell ‘did’ I was acutely aware of how public he had made his extremely limited literacy skills. Kylie sitting beside him however, spelled it for him without hesitation, and Ben who was perhaps the most popular and academically able of all the students, didn’t even flinch at this or show any negative body language or facial expressions when Michael revealed that he did not know how to spell the word ‘did’. He appeared to be truly just offering help without the appearance, at least, of judgement.

Similarly, during Genius Hour sessions in the library students were observed to ask other students for spelling assistance regardless of relative literacy skills. One girl asked Emma to spell the word ‘they’ and then ‘have’. In response Emma simply spelled out the word in a neutral, non-judgemental tone and went back to work. She asked no questions or made any comments. Another boy, with relatively higher spelling skills, asked Michael to spell the word ‘connect.’ When his suggestion proved unhelpful with the spell check feature, Michael said to the other student, “You know what? I’m usually
good with this stuff, but that’s weird.” While I noticed the discrepancy between Michael’s actual spelling ability and this proclamation of spelling skill, the other boy simply continued to puzzle over his computer and put his hand up to solicit help from an adult.

Michael, who had relatively high math calculation skills, was however, often hampered by his difficulty reading the instructions and word problems on math worksheets. One day in April after the teacher had reviewed the math sheet to be completed that day and moved to the rainbow table to work with a few students to complete the sheet while the EA supported the other students at their desks, Michael said aloud, “I don’t get this.”

Michael then asked Tyler to come and work with him at his desk and said, “Remember, you have to wait for me.” Michael needed someone to read the questions to him. Tyler made no comment about Michael needing help, nor showed any facial or body language that would suggest judgement or frustration with him. He just read the questions aloud to Michael and did his work.

Even though this classroom consisted entirely of students who were identified as having reading disabilities by school district staff, there was a considerable range of reading abilities, particularly by early spring as some students had made considerable gains in their reading abilities. One day in the library, Michael, possibly the least skilled reader in the group, and Ben, one of the most fluent readers, were both searching for the same book, *Storm Runners* (Smith, 2011), that had been previewed for them in the library.
during a previous book talk. Both boys raced through the library trying to be the one to check this book out. In the end Ben found the book first and then helped Michael to find another book, *Run, Marco, Run* (Charles, 2011), that had been previewed at the same book preview. Both books were much too difficult for Michael to read, but there was no mention of that from Ben. Later that day, the librarian brought Michael a second copy of the book *Storm Runners*. He eagerly tucked it into his desk with a smile on his face. Ben saw this and smiled, too. This exchange between the boys highlighted the absolute lack of observational data collected in which there were any comments about each other’s academic abilities.

As part of my data collection students were asked individually which classmates they would choose as a partner to work with and who they would not choose to work with. This was the only time any comments about ability arose. However, even then, students more frequently justified their choice of work partner based on social criteria rather than who had high skill levels.

Students made comments that justified their choices regarding who they would choose as a work partner such as, “She’s my friend;” “He’s nice and doesn’t talk that much when we’re working;” “Because I kind of like him;” “Because she’s one of my best friends;” “She’s fun to do it [work] with;” and “He’ll talk and work.”

Similarly, justifications for their choices of students they wouldn’t choose to work with focused on issues other than academic ability such as, “We talk too much;” “She
talks too much;” “Cause we talk about video games;” and “She just sits there and does her own.”

Two students did make very specific comments regarding working with students based on their positive academic skills. One student chose two students that she would like to work with because, “They can move at the same speed as I can.” She also justified her choice of someone she wouldn’t choose to work with as, “She’s too slow.”

The only other student to mention academic ability in her choice of work partners justified her positive choices this way, “He’s nice and really smart.;” and “He is like a math genius.”

Interestingly, her reason for the one person she said she wouldn’t choose to work with was regarding that student’s behaviour rather than a reflection of her perception of the student’s ability. She said, “Not with math ‘cause the last time we did she got crazy.”

This student was also quite concerned about keeping this information confidential. She commented, “Will the class see this? I don’t want to hurt anyone’s feelings.”

Whether this was a conscious decision on the part of the students or an unconscious pattern of behaviour that developed within the group, vocalizing relative academic skill was not ever observed within the classroom and only occasionally mentioned when students were speaking directly to me. Aside from the comments regarding which students they would choose to play and work with only two other
comments were made to me throughout the entire year that mentioned relative skills. One day Zack smiled and seemed proud as he showed me his envelope of finished math fact flash cards. However, he qualified his success, “These are all the ones I’ve already done. It’s actually not that much. Philip is the farthest in the class and he’s in Grade 4.”

Michael made the only other unsolicited comment articulated to me regarding relative skill level. When the class was working on animal habitat posters Michael said to me, “Deserts is the hardest one to do.”

I responded, “Oh? Why is that?”

Michael explained, “Because of the cactus and the animals and you have to do lots of mountains. Go look at Kylie and Kristen’s. They’re the best drawers in the class. Then come back and look at mine.”

These comments suggest that students were at least to some extent comparing relative skills and abilities. However, the majority of the very few comments made to me acknowledged student strengths rather than academic limitations. And most notably, there were absolutely no observations of derogatory comments to each other highlighting skill deficits.

In addition to the absence of comments or body language that would highlight relative academic skills posturing to appear more capable was also almost non-existent. Although all of the students in this program were identified as having a reading disability there were relative differences in reading ability within the group when they entered the
LDP in the fall. As the year progressed and students made varying gains in reading skill, there was considerable variation in reading ability within the group. This was reflected in the reading materials chosen by students during independent reading times. Several students with very limited reading ability consistently chose to look at Chickadee magazines that had many pictures and puzzles to look at, while others chose easy chapter books. In the spring a few were observed reading novels.

When asked to read aloud to me on occasion from their independent choice of reading material at independent reading practice times, other than the three students with very limited reading skills, students invariably had chosen books that they were able to read accurately. Some students would read books in which they would skip over some of the multisyllable words but were clearly able to read the selection accurately enough to understand the plot of the story or learn some interesting facts from a non-fiction selection.

Although two students appeared to consistently avoid the independent reading requirement by completing assigned tasks very slowly, the majority of students in the class participated in independent reading at least twice daily. Michael, however, was the only student ever observed to pretend to read books that were too difficult for him to read. He was observed on numerous occasions with a book in front of him, such as a book from the Magic Tree House series (Osborne, n.d.) or novels such as BONE (Smith, 2005) looking at the pages. When faced with the much too difficult text in these books and no pictures to look at Michael’s eyes generally wandered about the page for a bit, and then looked alternately between the book and around the classroom. He kept a bookmark
in the book, and turned pages after looking at the book for a few minutes. These were
times when he was clearly not engaged in any manner with the book other than to appear
to the teacher, the EA and perhaps his peers to be reading as required. The most notable
thing about this posturing was that Michael’s was the only student in the class ever
observed behaving this way. Michael’s was not the only student in this group with
relatively weak reading skills, but he was the only student who pretended to be able to
read more complex reading material than he was actually capable of. Furthermore, no
students were ever overheard commenting to Michael’s that they knew he couldn’t really
read the novels he was looking at.

The only other evidence of posturing regarding reading ability was observed at
the beginning of May when students participated in an instructional activity introduced
by the EA. She referred to this activity as “Book Club”. Students participated in “Book
Club” during the literacy centre instructed by the EA. She told students,

You’ll read a book and do a little book report. The first week we’ll read together
and at extra reading time you’ll read your book. You need to get it finished by
every second Friday. On Fridays at our reading group we’ll meet probably
outside. We’ll discuss your books and your book reports and see if you
recommend it. We’ll have popcorn and enjoy our book club. Something fun to
do.

On the day that “Book Club” was introduced, Michael’s reading group consisting
of four boys was the first group to meet with the EA to choose a book. The EA suggested
a graphic novel to the three students in this group with very limited reading skills. She told the boys that she was there to help them with a word or if they were confused about something. Michael read aloud to the EA while the other three boys in his reading group read silently. Michael was able to read the words in the story only with considerable support from the EA. He would not be able to read the book independently. Hayden also read aloud to the EA, also requiring considerable support to read the words. He too would not be able to read the book independently. The third boy was not a study participant. The EA said to the boys, “If this book is too hard then perhaps you should start with *Frog and Toad* (Lobel, 1970) and you can do this book next week.”

Michael responded, “It’s actually pretty easy.”

Hayden responded similarly, “Ya. And it’s pretty interesting, too.”

This was the only apparent verbal posturing that I witnessed throughout the school year and only involved two of the fourteen students in the class. Neither of the other two boys in the reading group responded in any way to these comments.

Interactions between students during the year certainly were largely typical of their age range, however, the lack of posturing or criticism regarding each other’s academic abilities was an interesting finding. There were many opportunities for students to compare literacy skills. Spelling words assigned, *Reading A to Z* levelled reader level, *Raz Kids* reading level, and *Explode the Code* workbook level were all determined by the teacher based on student skill and clearly visible for students to
compare and comment on. And yet I did not hear one incident of any student making an unsolicited comment to another student regarding skill level – either positively or negatively. Furthermore, Michael was the only student who pretended to read books that were much too difficult for him to read, and there was only one incident in which Michael and another student were observed verbally posturing to appear more skilled than they were when the EA suggested that the book that they had selected at her suggestion might be too difficult for them to read. Perhaps even more indicative of this culture of acceptance was the fact that no students, or staff for that matter, challenged this posturing.

In conclusion, although enrolment in a self-contained special education program would present a threat to students’ sense of academic competence, educational practices within the LDP classroom provided support for students to view themselves as capable learners. The instructional design of the LDP failed to single out any of these students with learning disabilities to receive extraordinary support or intervention in comparison to their classmates. All students participated fully in all classroom and grade appropriate school-wide activities. By providing differentiated small group literacy instruction within the classroom that addressed students’ literacy learning needs as well as adapted regular education curriculum which enabled all students to access grade level curricular learning outcomes despite limited literacy skills students experienced a classroom learning culture similar to that experienced by their more typically achieving peers in regular education classrooms. Furthermore, the students, the teacher and the EA collaboratively crafted a culture of capability within the classroom. Design of the program and instructional
activities supportively implemented with high expectations for success and accountability by the teacher and EA created a learning context that was inclusive of all students, including those with minimal literacy skills. This inclusion of all students in meaningful, supportive instructional activities with an appropriate level of challenge for each student contributed to a classroom culture in which students could view themselves as capable learners. In concert with this inclusive instructional design, the students created an interpersonal dynamic within the group in which highlighting each other’s relative skill levels was not part of this classroom culture. Examined through the lens of SDT the classroom context enacted in this LDP refrained from highlighting students’ academic differences and was highly supportive of students’ sense of academic competence.

5.1.3. Supporting autonomous engagement.

Ryan and Deci (2000) posit that supports for psychological relatedness and competence will facilitate the internalization of behavioural regulations, however support for autonomy is necessary for the externally motivated behaviours and values of significant others to be fully integrated into one’s sense of self. Therefore, in terms of educational practices that foster student engagement and self-regulated learning, it is pertinent to examine the extent to which the LDP was autonomy supportive.

The need for autonomy is related to people’s desires to feel agentic and to act in ways that align with their personal goals, interests and sense of self (Ryan & Deci, 2000). Based on SDT, autonomy supportive teacher behaviours include providing choice, fostering relevance, and allowing criticism. The corollary, autonomy suppressive teacher
behaviours, includes suppressing criticism, intruding on self-directed student behaviours, and forcing student participation in uninteresting activities. These teacher behaviours have been found to be associated with enhanced or depressed affect and engagement during learning (Assor et al., 2002; Reeve, Jang, Carrell, Jeon & Barch, 2004; Stroet et al, 2013). Reeve (2006) suggests that autonomy supportive teachers rely on non-controlling language. Instead, they communicate class activities and requirements through information and messages that are flexible rather than rigid in nature. Their communications with students involve information on progress relevant to the goals of the lessons rather than on deadlines, compliance requests and consequences. Further, autonomy supportive teachers provide rationales for student participation and effort in activities, and acknowledge and accept student complaints regarding the imposed demands of the classroom. The implementation of structure, however, is a necessary and complimentary component of teacher’s motivational styles in the classroom. Providing for autonomous participation does not negate the need for instructional structure that provides students with guidance in meeting the learning expectations of the classroom. Therefore, according to Reeve, teachers can enact learning environments that are highly structured in either an autonomy-supportive or controlling manner. Structure provides students with the impetus to participate in learning behaviours while autonomy support facilitates the internalization and integration of those behaviours resulting in greater behavioural and cognitive engagement and deep learning.
Providing choice.

Over the course of the school year it became evident that the teacher and EA in the LDP demonstrated a greater number of behaviours that would be considered supportive of the need for relatedness and competence than supportive of the need for autonomy. There was little choice in activities for the bulk of the school day. Students were expected to participate in many remedial literacy instructional activities that, for the most part, appeared to be uninteresting to the students. Many students appeared to be uninterested in the literacy centres activities, which involved instruction or practice of discrete literacy skills such as spelling, decoding, reading comprehension, or keyboarding skills that would not be expected to be inherently of interest to children of this age. Students were allowed to choose activities more often during physical education classes where the teacher was frequently observed asking students to suggest what activities they would like to participate in. Perhaps the greatest amount of student choice was in the selection of reading material for independent reading times and during the “Book Club” activity in the spring. Although these were opportunities that provided students with choice in reading materials there was also guidance regarding that choice. Students were expected to, and supported to, choose reading materials they could actually read with comprehension. This was especially the case during “Book Club”. The EA actively facilitated student choice of book from the classroom book collection within the parameters of their reading ability.

One day during “Book Club” Kristen demonstrated that being permitted to choose the book she read supported her personal engagement and motivation to read. She chose
a book that appealed to her. She read the back of the book and said, “This book has a
challenge in it. It says, ‘Find the word “fin” in every picture.’ I think I’m going to read
this book and take the challenge.”

However, choice itself is not inherently motivating. Assor, Kaplan and Roth
(2002) suggest that providing choice among instructional activities that hold little real
interest to students will not in and of itself be viewed by students as autonomy supportive
and therefore will fail to enhance motivation and engagement. Katz and Assor (2007)
posit that for choice to be motivating it must meet students’ needs for autonomy through
relevance to student interests and goals, competence through optimal challenge, and
relatedness through sensitivity to students’ cultural norms regarding choice. From this
perspective, Kristen’s motivation to read the book may have been due to her interest in
the challenge posed by the book to find the word ‘fin’ in every picture rather than in the
opportunity to pick a book from a selection of books.

In summary although there were some opportunities provided within the LDP for
student choice during learning activities, such as selection of reading materials at times
designated for independent reading and student input into games to play during Physical
Education, there were very few opportunities for student choice in learning activities
throughout the school day. The teacher and EA designed, planned and structured the
learning within the classroom.
Allowing criticism.

Allowing criticism and the recognition of negative affect regarding school tasks have also been found to be autonomy supportive teacher behaviours (Assor, et. al, 2002). Suppressing criticism demonstrates a missed opportunity for teachers to acknowledge that negative affect may be a reasonable reaction to the imposed demands of the classroom and may be interpreted by students as a lack of understanding of student perspectives (Reeve, 2006). Over the course of the year there were few observations of complaint or criticism from students, however, when they arose during observations, the teacher and EA used explanation or encouragement without actually acknowledging the validity of student feelings.

One day as the EA was handing out papers for the math drills Kristen voiced displeasure at having to engage in this daily timed activity, “I feel pressured. Ben feels pressured. Lots of people feel pressured. You pressure us because you only give us two minutes to do 40 questions.”

The EA continued to hand out the papers and replied, “That’s just to get it in your memory. If it was five minutes it wouldn’t be in your memory. I think you’ll be okay.”

Similarly, Philip experienced an upset during the morning Big Four assignment. He was upset with his inability to solve the division question on the Big Four: 22 divided by 6 = ____. The EA tried to help him, but he was not able to do it. He was sitting at his desk clearly upset and staring at his page. The teacher called him over to her desk so that she could help him. She helped him through solving the problem and then told him, “It’s
not worth getting upset over - there’s always a solution to your problem.” Philip still seemed upset, but went back to his desk and continued on with his work.

Observations showed that although there were not many instances of student complaint, when there was the teacher and EA reiterated the utility regarding the learning behaviour they were expecting of students without acknowledging that students may be upset by or prefer not to participate in such activities.

**Managing student behaviours in the classroom.**

The LDP was highly structured and provided students with clear descriptions of learning goals as well as clear standards and expectations for participation in instructional activities. However, the behavioural supports, prompts and reminders regarding participation in the classroom were, for the most part, done through the use of rewards and negative consequences. For example, rewards were used to prompt behavioural expectations such as dismissing students first at the end of the day based on being organized, and quiet. Jelly beans were used both as math manipulatives and as rewards. For example, the teacher made the following comments during math instruction using jelly beans as math manipulatives: “You only get to eat your jelly beans if you’re paying attention,” and “Jelly beans will go to those people working quietly and productively.”

The use of negative consequences such as the removal of privileges was also used to encourage students to meet the behavioural expectations for positive participation in instructional activities. The teacher made comments to students such as, “Kristen and Philip. Remember, if you want to stay together, you need to get to work,” and to Zack,
“You’ve been wasting your time. You shouldn’t be sitting there not working without your hand up if you need help. You won’t have any Fun Friday time. You’ll be working on this instead. Sit at the rainbow table over at the side and work there.”

The EA was also heard using rewards and negative consequences to encourage the desired behaviours the staff expected from students as they engaged in classroom activities, such as saying to the whole class, “You won’t get your paint brushes until you’re quiet.” Similarly, when preparing to go out to take their division’s turn picking up litter on the playground, the EA said to the students, “No running, no poking, no running at people with garbage or you will lose your tongs and have to walk next to me the entire rest of the time.”

The EA would also remove student privileges to encourage engagement in instructional activities. One day she said to Hayden, “Hayden keep working. Hayden. I’m going to write your name down for Fun Friday if I don’t see you working.” This indicated to Hayden that if he did not work diligently on the assigned work that he would lose his Fun Friday privileges that week.

Observations revealed that the teacher and EA used rewards and consequences as methods of encouraging student engagement in instructional activities within the classroom. In large part when the staff used such reminders students quickly aligned their behaviours with the expectations of the classroom.
Providing a rationale.

Although there was greater support for competence and relatedness observed during this inquiry, autonomy supportive teaching behaviours were also observed. Autonomy supportive teaching includes communicating to students the use, or value in an inherently uninteresting activity that justifies students’ efforts and adoption of the regulation of the behaviour (Reeve, 2006). The teacher frequently articulated her reasoning regarding how and why she wanted students to participate in instructional activities and the requests the teacher and EA made of students:

To Zack one day when I commented on his neat printing: “Did you just get a compliment on your writing? See, it’s worthwhile to do it carefully.”

To the whole class:

Read headings. It’s easier here, because there are fewer of us. In a big class, it’s easier to lose track of what’s going on. That’s why we read the headings. So the heading today is Journal. Now look at the date. The date should be separate from the heading. On your paper you should be able to put your hand between your heading and your date. Headings and dates don’t go together.

Could I draw an array? Takes forever. Could I use fingers? Yes, but takes forever. Could I draw a number line? Yes, but takes forever. The easiest way is to write it down this way.
To Zack as he read aloud to her, “Your finger also helps you to not skip words, so you get the meaning of what you are reading.”

To Gina regarding following along when marking the *Big Four*:

This is a multi-step question. Your eyes need to be up here. Gina. Because, there are three steps. You multiply the ones, multiply the tens and then you have your answer. So, each step is important in getting the right answer. So, you must be watching as we mark.

To Tyler during small group reading instruction:

Tyler you need to learn the sounds. So you should be practicing saying the letters, you should be saying the sounds. So, I shouldn’t see you practicing the letters in order, but sounds.

Providing a rationale for the adoption of learning behaviours in the classroom is an autonomy supportive teaching behaviour that supports students to internalize and integrate behavioural regulation that has been prompted by a teacher that the student feels related to (Reeve, 2006). The teacher regularly provided explanations that suggested reasons for students to expend effort within the context of the LDP. Viewed through the lens of SDT, the provision of a rationale for students to adopt the learning behaviours she wanted students to engage in combined with the positive relationship she had developed with her students would have supported students’ sense of autonomy in ways that would
promote the internalization and integration of the learning behaviours prompted by the staff.

*Providing positive feedback.*

The teacher also used another autonomy supportive teaching technique by praising signs of improvement and mastery (Reeve, 2006). For example, the teacher routinely gave positive feedback to students regarding their progress toward learning goals. One day in the fall, the teacher asked three students to practice reading their spelling words again and put their hands up to have her listen a second time when they felt they could read them more fluently. She then gave each student a smile and a “high five” in recognition of their improved reading fluency. This was a common observation as both the teacher and EA frequently gave individual students praise regarding successful completion of instructional activities.

The teacher and EA also provided general positive feedback to the class one day regarding their journal writing as they were reviewing work with students individually:

Teacher: “Mrs. Chin are you finding the ones you’re reading are really well written?”

EA: “Yes.”

Teacher: “Me, too!”
According to SDT praise can be autonomy supportive as long as students perceive it to be informational regarding their progress toward personally relevant goals, rather than as an external reward for undertaking an irrelevant task (Reeve, 2006). In this context, praise did provide students with information regarding their progress toward improving their literacy skills. Furthermore, praise also supports students’ sense of competence, which has been found to be particularly important for students with learning disabilities (Deci et al., 1992).

Although the instances noted during observations did not specifically demonstrate the teacher and EA fostering relevance to students’ individual interests and personal goals, they did provide information about the utility of the learning behaviours that they encouraged students to adopt. As this class was completely comprised of students with learning disabilities who were all enrolled in the program to improve their literacy skills, the goal of improving their academic skills and their ability to participate in classroom instructional activities may have been at least somewhat relevant to all of them.

For elementary students with learning disabilities self-reports of competence have been found to be greater predictors of achievement and adjustment than self-reports of sense of autonomy and perceived support for autonomy (Deci et al., 1992). Therefore, in this context that had high levels of support for competence and relatedness, support for autonomy may not have been as effective in supporting positive affect and engagement in instructional activities as the academically supportive, structured design and implementation of the LDP. Furthermore, the provision of a rationale for student adoption of learning behaviours in terms of the effect of those behaviours for increased
competence may have been particularly supportive of student’s sense of autonomy for this group of students with learning disabilities.

5.1.4. Summary.

During the year of this case study, the staff and students participated in and contributed to a classroom context in which differences between children were accepted and not viewed as problematic for participation in the instructional practices of the program. SDT suggests that meeting three basic human needs for competence, relatedness and autonomy supports students’ motivation to engage in and adopt the regulations involved in academic learning. The goal of this section was to examine the classroom context through the lens of SDT. This included outlining the ways in which the design and implementation of the program facilitated meeting students’ needs for relatedness, competence, and autonomy.

The distinctions drawn between the various aspects of the LDP regarding support for the three basic needs proposed by SDT was a practical decision for the purposes of this thesis. To avoid extensive repetition, each section was generally included as an example of support for only one of the three needs. However, student engagement in instructional activities and interactions among the students and staff created more of a kaleidoscope of supports for meeting students’ needs. For example, differentiating learning was discussed as a support for competence, when it also supported students to feel secure and able to connect with their classmates without highlighting differences in academic skill levels.
In sum, during the year of this inquiry the LDP as a special education classroom context provided many supports for students’ sense of relatedness to their classmates and the staff and to feel connected to the school community. In contrast, enrolment in the LDP both threatened and supported students’ sense of competence. The self-contained, non-inclusive nature of the program would have posed a threat to students’ sense of competence. However, within the classroom educational practices refrained from highlighting differences between students based on relative academic proficiency. In so doing, the LDP was considerably supportive of students’ feelings of relatedness and sense of competence. To a lesser extent support for autonomy was also evident, however this program was implemented in ways that would generally be characterized as teacher-controlled. Therefore, the LDP might be considered partially supportive of the emergence of self-determination in students. However, there were considerable differences in how children engaged in and responded to activities within the LDP learning environment. Next, variation in the adoption of self-regulated learning behaviours and engagement in instructional activities of three students selected for in-depth study is explored.

5.2. Engaging in Educational Practices

Self-determination is a theoretical construct described as autonomous motivation (Deci & Ryan, 1987). Within educational settings, self-determination and SDT have practical utility. SDT addresses issues regarding promoting student engagement and motivation to learn when the behaviours and/or learning that teachers and the curriculum
expect of students may not align with student interests (Ryan & Deci, 2002). Ryan and
Deci (2002) suggest that students will experience self-determination when they perceive
an internal locus of causality (I’m reading the book, because I’m interested in the book),
experience volition (I want to read the book, I don’t have to), and perceive that they have
choice (I can read, or I can do something else). To support students’ sense of self-
determination, and therefore their motivation to engage in learning opportunities, teachers
can provide students with activities that are of interest to them, promote tasks and how
they are relevant to students’ interests and goals without pressuring students, and provide
choice of how, when and whether to participate.

As outlined previously the classroom context of the LDP was considerably
supportive of students’ needs for relatedness and competence but was largely teacher
controlled and thus was not generally supportive of students’ sense of autonomy.
However, for students with learning disabilities sense of competence has been found to
be more strongly related to achievement and emotional well-being than sense of
autonomy (Deci et al., 1992). This section will examine the individual differences in
patterns of engagement within the classroom, among three students selected for in-depth
study.

5.2.1. Michael.

Of the three subjects selected for in-depth study, Michael was observed to be the
most actively engaged learner. Academically, Michael displayed among the weakest
reading and writing skills in the classroom. He was essentially a non-reader at the
beginning of the year, and could spell very few words accurately. His journal entry [with correct spelling in parentheses] dated September 9, 2013 read:


Although his reading and spelling skills improved somewhat, Michael scored below expectations for students his age on a standardized measure of reading achievement at the end of the school year. Despite his very weak literacy skills and school district designation as a student with a moderate behaviour disorder, Michael was an engaged participant in the classroom program demonstrating an eagerness to meet the teacher’s expectations for classroom behaviour and participation, a natural tendency toward curiosity, and a propensity to connect with others.

As mentioned previously, Michael clearly knew the classroom routines and expectations and frequently reminded other students of the rules. During the morning Big Four activity Michael would get right down to work, often being the first to complete the three math questions. Early in the school year he often took considerably longer to complete the “fill in the missing vowels” riddle. This daily writing task was difficult for him to complete with his limited literacy skills, however, he worked diligently and sought help to complete this as quickly as possible persevering until he had it done. When it was time for the class to mark the Big Four, Michael consistently raised his hand to volunteer to go up to the SMART Board and write the answer on the board. He followed along as
others were putting up the answers and marked his work in red pen accurately. He was vocal about his disappointment if not chosen to answer questions. Also, other than during the silent reading portion of this beginning part of the day, he rarely appeared to be attending elsewhere.

Michael consistently got to work right away on all class assignments and knew what the expectations were. After lunch Michael would come in and complete his planner without being reminded. Michael was also one of the few students consistently, though not always, on task when I observed him at the independent centres during the daily literacy centres rotation. Michael generally worked on learning to type at the computers when the assignment was to develop typing skills with the program All the Right Type. In contrast, many of the other students pretended to be typing and didn’t type, or typed random letters. Michael, however, often appeared to be both physically and cognitively engaged in learning to type. He worked diligently, for the most part, in his *Explode the Code* workbook, seeking help from other students in his group or the EA when needed.

The teacher of this program organized daily homework that was monitored by the EA. The homework consisted of nightly reading of a levelled reader, spelling practice, math flash card memorization practice, and reading fluency practice. The EA’s homework record log demonstrated that Michael consistently completed his nightly homework. Michael’s mother described his after-school routine saying, “He’s very good about doing his homework every night, and sitting down and actually writing out his spelling words and doing his math drills and he does it first thing, soon as he gets home.”
Beyond participating in classroom routines and activities as a rule following measure, Michael consistently demonstrated that he was cognitively engaged in the learning activities of the classroom. He would frequently make comments such as, “Really? That’s a new [phonics] rule. We haven’t learned that one before.” Or, when the teacher pointed out that the word “soup” is spelled s-o-u-p, Michael commented that in his opinion the word should be pronounced with the same pronunciation as the word “out” following the spelling rule he’d learned in his reading group.

Also, when he didn’t understand things in subjects such as math, Michael would make comments such as, “It doesn’t make sense,” or, “I don’t get this.”

Furthermore, Michael demonstrated a great deal of eye contact with whoever was speaking in the classroom, following the conversation from teacher to students with his eyes, and often making relevant side comments, or interjections, which prompted the teacher to comment on more than one occasion, “Michael, I’ve told you – I work alone!”

When games were played at the independent stations, Michael was an active organizer and tried to get the game going quickly. His enthusiasm was evident in his smile, and the slight urgency in his directions to the others in his group to, “Get going!” He appeared to be conscious that the time at each centre, and therefore the time to play the game, was limited.

Michael raised his hand to participate in classroom lessons and discussions considerably more often than either of the other in-depth study subjects. One day during
an observation of a social studies lesson on natural resources in Canada Michael raised his hand to answer a question or add to the discussion 13 times, compared to Emma who raised her hand only twice. Interestingly, and not typical for him Zack also raised his hand 13 times as he appeared to be very interested in the topic and both boys essentially had their hands raised to participate throughout the entire lesson. Michael was consistently one of the most active participants in the classroom across all subject areas and activities.

Based on my observations, Michael’s engagement in the classroom often appeared to be driven by his social awareness and desire to connect with others. Michael displayed rather precocious social awareness for his age. He was very involved in the social atmosphere of the classroom, planning recess activities for the group and generally observing and commenting on the actions of his classmates. Michael was rarely seen alone before school or during recess or lunch. He appeared to eagerly interact with his classmates although exchanges outside the classroom sometimes led to altercations and once even led to a suspension from school and Michael being sent to a three-day district program for students who have been suspended.

As previously mentioned, a marked departure from his demonstrations of rule following and cognitively engaged behaviour, Michael at times demonstrated behaviour that appeared to be socially motivated – especially when independent reading was expected. After Big Four work in the morning or planner completion after lunch Michael was often observed actively engaging other students in looking at the pictures or puzzles in Chickadee magazines. During one observation he had an optical illusions book
borrowed from the school library. He engaged both me and the EA in guessing the illusions before pulling out the decoder page to show us the actual answer. The EA acknowledged the interesting illusion, but then as he folded a decoder paper she reminded him, “You should be reading not constructing things.” He continued to look at the book, but no longer pulled out the decoder sheets to view the illusions.

As described earlier, another common behaviour for Michael during independent reading time was to pretend to read books that were much too difficult for him to read. While other students appeared to choose to avoid the expectation of independent reading by completing their Big Four and Planner work very slowly, Michael finished this work as quickly as possible. He was frequently observed looking around the classroom to see who had finished their Big Four work. Finishing work quickly may have supported his sense of competence. However, due to his extremely weak literacy skills throughout the school year Michael’s choices during independent reading times may have actually constituted a coping mechanism that demonstrated autonomous regulation based on his social awareness and need for relatedness in the face of an educational practice that was threatening to his sense of competence.

In addition to being sensitive to the social aspects of the classroom with his peers, Michael appeared to be interested and thoughtful regarding the world of the adults around him. One day when the EA was away, two Grade 7 students came into the class to take pizza orders. As this was a regular Grade 7 fundraiser at the school, the class all knew what was expected. The students raised one hand if they’d like one piece of cheese pizza and raise two hands if they’d like two pieces of cheese pizza. Students repeated this
routine to order pepperoni pizza and vegetarian pizza. No money was collected until the
day the pizza was delivered. On the day of this observation as the Grade 7 students took
the class order by show of hands, Michael raised his hand to order a slice of vegetarian
pizza. When questioned by the Grade 7 students if he really wanted to order a slice of
veggie pizza, Michael replied, “Yes, for Mrs. Chin.” Clearly Michael was aware of what
the EA usually ordered and was conscious of the fact that she was away on this day to
order and would miss out if he didn’t do it for her.

Another day, when discussing his weekend with the teacher, Michael told her that
his family had gone camping in their trailer. When asked what was fun to do in Oliver,
Michael responded, “Well, if you’re a wine drinker, there are lots of wineries. My mom
really liked that.”

Another time when Michael was clearly exercising personal choice and not
thinking about engaging with the learning opportunities offered in class was on a day in
early April when he had a fairly severe social falling out with the group of students with
whom he rode the bus to and from school. In addition, there was a Teacher on Call
teaching this day rather than their regular teacher. During this time when Michael was
estranged from his friend group, he began working and playing with a boy that was less
popular in the class. He displayed behaviours that didn’t follow classroom expectations.
For example, as I observed, Michael and his new friend walked into the classroom
brandishing their pencils at each other like swords. During spelling, the two were
frequently not working, but rather talking about zombies and making gun noises. This
new friend seemed quite pleased with the new friendship with Michael and sought him
out during *Genius Hour* to sit together on the library couch ostensibly to practice their presentations, but in reality to chat and take pictures with the iPads. This threat to his sense of relatedness had a demonstrable impact on his academic engagement within the classroom.

Michael demonstrated autonomous regulation of his behaviour within the context of this program based on his inclinations toward social and cognitive engagement. Despite being identified as a student meeting the BC ministry of education criteria for moderate behaviour support, Michael demonstrated that he was keenly aware of the rules and expectations for participation in the routines of the classroom and generally followed them consistently. This focus on rules and expectations may be seen as a developing understanding of social interactions within a group setting. His subtle social behaviours such as the posturing during silent reading time when he would pretend to read grade appropriate, but much too difficult, texts indicated his desire to be viewed as a competent reader by his peers. The awareness he displayed of the adult social world, and his radical departure in behaviour when he experienced a falling out with his friends on the bus were further demonstrations of his socially motivated behavioural regulation when participating in the classroom. Michael’s consistent engagement in classroom discussions and lessons, along with his active transfer of learning from the remedial literacy instruction to lessons in other areas of the curriculum suggest that his many engaged learning behaviours were based on his curiosity and propensity to be cognitively as well as socially engaged.
5.2.2. Emma.

Emma’s pattern of engagement within the classroom varied based on the activity. Observations of Emma and conversations with both her and her mother suggested that over the course of the year she became a very engaged reader. However, it was the social opportunities she experienced during the year that were a major focus for Emma.

Like Michael, Emma appeared to do her best to follow class rules. However, she spent considerably more time than Michael cognitively disengaged from lessons. During Social Studies and Science lessons observed, Emma rarely raised her hand to contribute to class discussions. She also spent more time during these lessons discretely writing on her eraser or playing with bits of paper in her desk and failing to make eye contact with the teacher although generally looking in the teacher’s direction. During math lessons Emma generally appeared to watch the lesson but did not volunteer answers.

During the fall interview Emma’s mother described many avoidance techniques implemented by Emma at home that made the nightly homework completion frustrating for her parents. She said, “She can make it a struggle to do her homework. She gets very distracted and goes off on tangents… On Thursdays she has a word search, and she hates it. Like, it’s horrible!” and, “She tries to talk us into only doing part of it [her homework] and then the rest of it later.”

At the end of the year Emma rated herself as “very good” at doing her homework. However, throughout the year she was often marked as having her
homework incomplete and needed to finish it during the school day. It seemed that homework avoidance was a fairly consistent occurrence throughout the year.

Emma did, however, actively engage in independent reading. As the year went on and her reading ability improved, Emma became a very engaged reader. She was frequently observed reading increasingly complex chapter books. One day, as I observed, I attempted to ask Emma what book she was reading. She didn’t respond to me and I tried to tip the book a bit to see the title. Emma contorted her head to keep reading as I was clearly disturbing her. In contrast, when she was not reading, Emma was very happy to engage with me in discussion.

Emma was also very engaged when the teacher would read aloud to the class from a novel for “novel study.” In early April I observed as the teacher stopped reading part way through a chapter. Emma called out in a disappointed and somewhat pleading voice, “You usually read longer!”

On another day Emma was seen reading along silently in her own copy of the read aloud novel the teacher was reading to the class. Emma had acquired her own copy of the book for this purpose. No other student had a copy of the book to follow along.

Emma was also frequently observed using a spare few minutes to read a chapter book. A particularly salient example of her regulation of reading behaviour in the context of this very routinized program involved managing time for independent reading. One day Emma completed her planner during the lunch hour to afford time for silent
reading during planner time after lunch. The planner message had several standard entries regarding the daily homework that were saved on the computer to be displayed on the SMART Board daily. Directly after lunch the EA would display the standard entries on the SMART Board and add any entries that were pertinent for that day only. Students would copy all the entries, put their hand up to have them checked for accuracy, and then read silently until all the students’ planners were finished and checked. During the lunch period one day in mid-February Emma was seated at her desk eating a sandwich in a bun with one hand and completing her planner with the other.

Hayden, sitting behind her, noticed that Emma was completing her planner message during lunchtime and said to her, “If you finish that now, you’ll just have to read.” His tone indicated that he didn’t find this an attractive option.

Emma replied, “I like to read.”

Shrugging his shoulders Hayden responded, “I don’t like to read.”

Emma completed the regular planner message while she ate her lunch and then turned her attention to socializing with the students around her. Emma could have chosen to read during the lunch period, however, she had greater freedom of choice during the lunch period that included, but was not necessarily limited to, eating, reading, and socializing. In contrast, during class time after lunch the routine dictated that students complete the day’s planner message, and then read silently until everyone’s planner had been written and checked by the teacher or EA. Emma negotiated this
routinized learning landscape by choosing to complete her planner and then chat and share food with her classmates during the lunch hour, thus allowing herself reading time during class when socializing was not an option. This episode and exchange between students demonstrated that although they had different objectives both students were very aware of the routine and expectations of the classroom and were actively regulating their behaviours toward meeting their own goals. Emma was negotiating opportunities to read, however, Hayden’s comments during this exchange and his slow completion of the Big Four work in the morning and planner message copying after lunch suggest that he actively sought to minimize his time spent reading.

Emma also regulated her reading behaviour through her choice in reading material. The type of books that Emma read and reported liking were all stories with a social theme. Emma read books from the classroom collection such as Valentine’s Day from the Black Lagoon (Thaler, 2008), and Bad Kitty vs Uncle Murray (Bruel, 2010). When discussing what she liked to read, she told me, “I like Bad Kitty and Diary of a Wimpy Kid (Kinney, 2007) that I have the whole series.”

Emma was never observed reading non-fiction text. One day I listened to Emma as she read a chapter in her independent reading book. It was evident that there were many words that she could not accurately decode. She would mumble read the word and keep reading. When discussing what she had read it was clear that Emma understood what she had just read and could relate it to the basic plot of the story. At the bottom of one page she volunteered an opinion. She was relating to the main character as she surmised, “I think she [the main character] is lying, because at the beginning of the book
her parents went missing. That’s why they don’t get any Christmas presents. Not because they don’t celebrate Christmas.” Although she had difficulty decoding a number of the words in this chapter, Emma, was able to follow the story, relate to the main character, and infer that the character was lying. She appeared to be enjoying reading this story with a complex socially focused story line.

The type of behaviours that Emma displayed during math, science and social studies lessons do not necessarily in and of themselves suggest cognitive disengagement, however, they were noticeable as they were in stark contrast to her considerable focus during opportunities for reading and her animated demeanour during activities that were more social in nature such as discussing Mother’s Day ideas, baking as a group, and playing games in physical education periods. At these times Emma appeared more animated and maintained eye contact with the teacher, contributing frequently to class discussions. Emma also was the only student from her class observed to play badminton at lunch with the broader school population during badminton season.

Further evidence of Emma’s personal focus on the social opportunities that the program offered came from surveys, as well as informal discussions and semi-formal interviews with both Emma and her mother. She clearly believed that her reading had improved and that she found it easier to learn in the LDP than she had previously in regular education classrooms. There was also a consistent emphasis on the social opportunities the program afforded.
In the fall, the study participants were asked to complete a survey comparing their class the previous year, to their class during this school year. The survey was completed near the end of October. Due to her limited literacy skills Emma’s page did not contain much writing. The only difference Emma wrote about was her dislike of last year’s teacher. When I reviewed her survey with her and spoke with her to allow her to elaborate without needing to write her ideas herself, she told me, “The work is easier and it’s a lot funner here. I know funner is not a word, but I like saying it.”

Emma was very focused on the social aspects of these two classes. She described a difficult social situation at her previous school, “I wrote something and showed it to a friend to see what it said. She wanted to show it. I didn’t know what it said or I wouldn’t have shown it. It said something weird. The kids here are nicer.”

During the fall interview with Emma’s mother, she too mentioned Emma’s difficult time with both her teacher and her classmates the previous year. She said, “It was a nightmare to get her to school every day. She was that unhappy with her teacher. And she didn’t have many friends.” Emma’s mother further stated that she was pleased that Emma was accepted into the program:

When we came for the meeting I really liked Ms. Campbell. I really liked the things she had to say about the social aspect as well. Which was really important to me, too. Because she struggled so much with friends and stuff, too.
Emma’s mother said that Emma was much happier at this school and that she was not balking at going to school as she had the previous year:

Since the second day we pulled up and as soon as the school bus [arrived] she was gone. Like boom. And that’s how it is every single day. Like, “Bye. Go.” It’s like amazing. She’s made two really good friends and the three of them are really close. It’s really nice. Like I said, it’s just like night and day for her. I am very happy.

By the end of the school year, Emma wrote that the plusses of the LDP were: “a) helps me learn easy, b) I met friends Gina, Kristin, and Susan, and c) Fun Fridays.” The only negative aspect of the program that she listed was the typing tutorial program, All the Right Type.

In June Emma’s mother again emphasized the social aspect of the program being as beneficial for Emma as the academic aspect:

Oh my goodness, it’s like night and day. And even her self-confidence level in herself. She’s made friends and she’s comfortable now and learning to stand up for herself more where her friends are concerned, which is a big change from the last few years.

Emma regulated her engagement in the activities of the LDP based on her interest in the social opportunities afforded her in the classroom and the school. Especially indicative of her emphasis on the social aspects of school was her desire to return to this
school the following year rather than her previous school based on the cultural aspects of
the school community and the opportunities for friendship she’d experienced in this
program. Emma’s improved reading skill over the year opened up a world of books that
gave her access to social stories which she actively pursued as she navigated the learning
environment of the program.

5.2.3. Zack.

Zack’s engagement, like Emma’s, seemed to vary based on the activity he was
participating in. This was Zack’s second year in a LDP classroom, but his first year in
this location with this teacher and EA. Zack described himself as someone who makes
friends easily and he reported that switching schools so many times did not particularly
worry him. I observed great variation in his engagement in lessons based on his interest
level in the subject of discussion.

Zack often demonstrated limited engagement in learning throughout the day. He
seemed disinterested in many of the activities and discussions in class sitting with
shoulders slumped, not making much eye contact. When it was necessary to raise his
hand for the teacher or EA to check his work or to receive help he frequently did so
seemingly half-heartedly with his elbow resting on the desk so that it was difficult to see
that his hand was raised. As a result, he was often overlooked for considerable periods of
time. One day the EA said to him, “Sorry, Zack. I only just saw your hand. You need to
put it up more so we can see it.”
As mentioned previously, Zack was consistently the very last or one of the last to complete most written work. This was very evident during the Big Four work in the morning. It was a rare occasion when Zack would finish in time to do any independent reading. If he did finish early he would fiddle with things in his desk or ask if there was something else he could do. Zack consistently fiddled with things during lessons being quiet enough and making just enough eye contact with the teacher to avoid drawing attention to his inattention. During independent literacy stations time, Zack was observed to sneak eating sunflower seeds with his group rather than working in his Explode the Code workbook, or spend time sharpening his pencil or pencil crayons rather than working. At the computers rather than focusing on learning to type properly with the All the Right Type program he was observed doing things like twirling and untwirling the headphone cords, plunking at the keys with one finger instead of using proper finger positioning, and drawing on another application in a window located under the All the Right Type window.

Although Zack appeared to be working and following class routines and expectations he was frequently reprimanded for failure to pay attention and often admonished for being slow to complete his work. However, the reprimands and admonishments did not seem to increase his pace suggesting they were insufficient motivation to promote active engagement in activities and lessons that failed to interest him.

In contrast, when Zack was interested in a topic being discussed or a classroom activity his demeanour changed. He smiled, he made eye contact, his hand would shoot
up to contribute rather than resting his elbow on the desk. Although he was usually careful not to call out in class, if not picked to answer a question or make a comment during a discussion of interest to him, he would frequently make side comments to other students. For example, one morning in mid-November during *Big Four* marking, Zack was disengaged from the activity. He was not making eye contact with the teacher and only occasionally looking at the *SMART Board*. He did not raise his hand to volunteer and played with his red pen by running it along his shoe and on the carpet. When the fill in the missing vowel riddle, “Where should a 500-pound alien go?” was read, students debated whether the answer might be Area 50 or 16 or 51. Suddenly, Zack’s interest was piqued. He began smiling and making eye contact with the teacher as his hand shot up to comment. He was not chosen to comment, but neither did he call out as others in the class had done. However, as he returned to his desk he asked a girl at his table group, “Have you ever seen *Men in Black*?” She didn’t respond, so he quietly spoke to a boy sitting across from him and the two of them laughed.

Zack was an active participant in gym, and told me his favourite subjects were math, art and gym. Zack reported enjoying the *Genius Hour* sessions. He chose to investigate the question, “Why do geckos eat their skin?” Even when clearly not feeling well due to a cold, Zack was observed actively focusing in the computer lab, researching his topic.

As described in chapter four, another day Zack asked the librarian for help in finding a book on rain forests that he could check out of the library in preparation for
participating in a science lesson the next day. He was clearly enthusiastic about the science unit to the extent of telling me about it and wanting me to be there to see it.

During certain classroom lessons or informal conversations that arose during the day Zack was observed to be keen to share information on topics such as tarantulas habitats, types of bees in a colony, the parts of a bicycle, and rules to a game of tag that students played at recess and lunch.

Other than during unstructured play, physical education and science lessons, Zack showed the most consistent cognitive engagement when working with the teacher during small group reading instruction. During these lessons in which he and two other students in his reading group sat directly across the rainbow table from the teacher, he watched the teacher and actively participated the entire time during all lessons observed. However, unlike Michael, he was never observed to articulate connections between the phonics rules learned during these lessons and instruction throughout the rest of the day and appeared to actively avoid independent reading.

Zack, who was in the reading group working on the most advanced decoding skills and the spelling group working on the most advanced encoding skills other than the single student who constituted her own spelling group, had relatively well-developed literacy skills in comparison to his classmates. Therefore, few lessons and activities would have proved more difficult for him than his peers in the program or presented a barrier to participation. Rather, the marked differences in his demeanour and engagement throughout the day suggested that Zack actively chose to engage in those lessons,
discussions and activities that he found of personal interest and to disengage or minimally engage in those activities that were not of interest to him.

5.2.4. SDT and student engagement within the LDP.

According to SDT, within school contexts support for relatedness, competence and autonomy will increase autonomous motivation and academic engagement as well as support students to adopt and integrate the regulation of positive learning behaviours. As described the LDP supported students’ need for relatedness to each other, the staff, and the school community. For many of the students, including Emma, enrolment in this program provided them with an opportunity to make friends with other students who also possessed limited literacy skills. The teacher and EA implemented the program in a way that supported students’ sense of relatedness. The relationships that developed over the year between the students and between the students and staff supported students to feel cared for and in turn caring toward each other as they worked and played together within the LDP.

Of the three students selected for in-depth study Emma and Michael appeared particularly sensitive to the social aspects of the classroom demonstrating fluctuation in engagement based on the meeting of their need for relatedness to the teacher, the EA, and their peers. Michael acted silly rather than working and following the behavioural expectations of the classroom when his sense of relatedness was threatened when he had a falling out with his friends on the school bus. This departure from his usual
behavioural and cognitive engagement in all aspects of learning was marked and brief ending quite suddenly when his relationship with his friends was repaired.

Unlike Michael, Emma was not observed to experience any major discord socially, but rather was very vocal about her preference for this school due to her positive impression of the teacher and her classmates. Emma was observed to be generally happy at school and was particularly engaged during subjects and instructional activities that were social in nature. Emma’s mother described Emma’s positive attitude about going to school in the morning compared to considerable reluctance to go to school the previous year. Furthermore, both Emma and her mother articulated that Emma’s reluctance to attend school the previous year was because she didn’t like her teacher and she had difficulty making friends. Within the context of the LDP Emma was able to feel connected to her teacher and the EA and was able to develop positive and close friendships with several of the girls. As posited by SDT this meeting of her need for relatedness, therefore, supported her to engage in the instructional aspects of the LDP and to adopt the learning behaviours promoted by the staff.

The implementation of the program was also very supportive of students’ sense of competence. This was evident across the three students selected for in-depth study. All three students had access to, and participated in, all instructional activities through differentiated levels of challenge, support from the teacher and EA to meet the expectations of participation, and informational feedback on progress toward learning goals. The staff provided very clear structure regarding the routines and procedures for student engagement in all instructional activities. Also, threats to students’ sense of
competence were minimized as no students were identified as less capable learners through participation in additional remedial instruction or exemption from classroom instructional activities. The fact that all of the students in the class possessed limited literacy skills providing a lower achieving reference group, and the lack of peer to peer criticism in the face of these challenges further minimized threats to students’ sense of competence and supported students to view themselves as capable learners in the classroom.

The one obvious exception to this support for competence was evident for the least skilled readers during all times of the day that required independent reading. Michael, whose reading skills were extremely limited in the fall and remained so throughout the school year, had no access to reading material that he could read for pleasure accurately despite an abundance of reading material within the classroom. Therefore, his lack of engagement in reading during these times may have been influenced by this threat to his sense of competence as opposed to disinterest as seemed to be the case for Zack who avoided independent reading by very slowly completing any class work that preceded independent reading so as not to leave time to read. The fact that Michael also pretended to read much too difficult texts during this time further suggested that his sense of competence was thwarted in these situations.

Despite support in the classroom for both relatedness and competence, Michael was the only student that demonstrated consistent behavioural and cognitive engagement. Both Emma and Zack were observed to engage more actively in learning activities and lessons that involved subject matter that was of personal interest or relevance to them.
According to organismic integration theory (Ryan & Deci, 2000) educational contexts will result in external regulation and engagement in learning behaviours if students feel competent to complete the task and teachers enact controlling teacher behaviours such as managing student behaviour through the implementation of rewards or consequences. Learning contexts may result in introjected regulation and engagement if students feel related to the teacher and competent to complete the task. However, autonomous regulation of positive learning behaviours will only be supported in classroom contexts that support student autonomy and in which students feel related, competent and autonomous.

As described previously there was some support for autonomy evident within the LDP. The teacher and EA often provided a rationale to students regarding why they were asking them to adopt the learning behaviours they were requesting of them. They also frequently gave positive informational feedback to students regarding their progress toward learning goals. However, for the most part this program was largely teacher controlled. Therefore, as suggested by organismic integration theory, one might expect the students in the LDP to demonstrate introjected regulation of behaviours for participation in activities in which they have little interest and for which they did not see any personal value that would justify expending the effort to engage, and more autonomous identified or integrated regulation for behaviours relating to activities of personal interest and perceived value.

Within the context of the LDP as implemented during this school year, three very different patterns of engagement were observed among the three in-depth study subjects.
Emma regulated her engagement based on her keen interest in social matters within the classroom and beyond. Emma’s personal interest in the social opportunities of the classroom was evident throughout the school year during classroom observations and interviews with both Emma and her mother. Zack regulated his engagement based on subject matter and instructional activities that he found of personal interest, which tended toward an interest in science and nature. Interviews and conversations with Zack clearly showed specific areas of interest and disinterest. Michael, on the other hand, consistently engaged both behaviourally and cognitively across all instructional activities with the exception of times when he experienced threats to his sense of relatedness (the falling out with his friends on the school bus in the spring) and his sense of competence (during independent reading times).

Michael’s broadly generalized behavioural and cognitive engagement across all subject matters and instructional activities including those that might be expected to be of minimal interest to children his age raises an interesting question: Why did Michael demonstrate such high levels of engagement in an environment that was not autonomy supportive? In their review of the literature of education studies guided by SDT, Guay et al. (2008) examined the findings of studies including those that explored the impact of parent and teacher support for autonomy on students’ academic motivation. The authors concluded that extant research supports the claim that both teachers and parents influence students’ motivation to engage in academic learning. Furthermore, they concluded that findings suggest that parental support for autonomy may be more influential than teacher support for autonomy as a predictor of students’ motivation and engagement.
As suggested by SDT, parents who are autonomy supportive recognize the perspectives of their children, offer choices, and provide their children with rationales for undertaking uninteresting tasks or activities not of personal value (Guay et al., 2008). Interviews with Michael’s mother suggested that she may have exhibited an autonomy supportive parenting style. During an interview in the fall Michael’s mother relayed that Michael, who had formerly been in a French immersion program, wanted to return to French immersion after completing his enrolment in the LDP. His mother stated that she did not intend for him to return to French immersion. Over time, Michael’s mother was providing him with a rationale for enrolment in the English program to have him understand and identify with the choice:

He’ll be going back into English. It’s too confusing for him, between the two languages. I want him to be able to excel, and to excel he needs to just concentrate on reading in English. Because that’s what’s going to get him through, and that’s what he needs to be able to do.

I then asked whether Michael was aware that he was not going back into the French immersion program. Michael’s mother described her conversations with him about this and her efforts to have him identify with this decision:

We’ve discussed it a few times. He’s adamant that he wants to go back into French. Just adamant about it. But I’ve slowly started to discuss it with him, and explain: “You know what? You need to be able to read. If you can’t read in French, why are you going back into the French program? You’re just going to
struggle again. I mean, when we’ve brought you up so far in the English program, you’re just going to have to stay in the English program.” And he, I think eventually, by the end of this year, while we keep talking about it, he will understand. It’s just… it’s going to take him a little while to process it.

During the interview in the spring, Michael’s mother described her interactions with Michael regarding the decision to enrol for a second year in the LDP despite a change in location of the program. Her answers to questions regarding Michael’s feelings and his involvement in the decision-making process suggest further support for Michael to identify with the decision to attend the program for a second year through continued conversations regarding positive aspects of enrolment. When asked whether Michael was involved in the decision to enrol for a second year, his mother replied:

He was to a degree. We kind of said, “You’ve been asked to take another year. Is that okay?” And he was, like, “Yes. Okay. Whatever. I’m going back to [name of former school]” And then it was changed to the other school and I told him and he was very disappointed that it wasn’t at the same school. But at the same time, he’s kind of excited about not being with his sister and about what this other school is like and how it’s going to change him and the program and everything else.

It is evident from these statements that Michael’s mother understood Michael’s reluctance to give up the French immersion program and his reluctance to attend another school when the program location for Grade 6 was changed from his neighbourhood
school where it had originally been located. It was also evident that although his parents were ultimately controlling these enrolment decisions based on what they felt was in his best interest, his mother was asking his opinion, providing rationales for these decisions, and was sensitive to his feelings giving Michael time to feel comfortable and possibly volitional in the decision-making process. Therefore, Michael’s generalized academic motivation and engagement may have been the result of autonomy support from his parents even within a generally teacher-controlled classroom.

In sum, three different patterns of self-regulation of learning behaviours and engagement in instructional activities support the organismic integration theory sub-theory of SDT. Zack and Emma behaviourally engaged in all learning activities that the teacher directly oversaw and controlled as their needs for both competence and relatedness were met within this context. However, as predicted by organismic integration theory, without support for autonomy in this context they demonstrated self-regulation of learning behaviours and deep cognitive engagement only for activities and educational topics that were of personal interest or value. Michael, however, who may have experienced considerable parental autonomy support, appeared to be autonomously motivated to engage in all activities across all subject areas with the striking exception of situations in which his needs for relatedness and competence were threatened.
Chapter 6. Discussion

This research was undertaken to examine the lived experiences of students with learning disabilities in a special education context. Data was collected over the course of a single school year including weekly observations in the classroom and semi-structured interviews with students, staff and parents as the main methods of data collection for this qualitative case study research.

This dissertation explores what is meant by meaningful participation in a community of learners among students with learning disabilities in special education settings. The previous chapters have explored ways in which this particular special education setting provided students with explicit reading instruction and adapted regular education curriculum, considered the ways in which interactions between students and staff within the educational practices of the classroom supported students’ sense of relatedness, competence and autonomy as outlined in SDT, and examined the engagement patterns of three students selected for in-depth study.

This chapter summarizes the findings and discusses the application of this research to educational research and practice for students with learning disabilities. First, the research questions posed for this inquiry are addressed and then implications for educational practice for students with learning disabilities are considered. The chapter concludes with consideration of the study limitations and directions for future research.
6.1. Research Questions

This research endeavoured to examine the lived experience of students with learning disabilities in a single year special education program provided in a regular education public school in an urban school district in British Columbia, Canada. In contrast to the majority of research regarding SDT that focuses on individual’s perceptions of psychological need support, this study considered observations of educational practices within the classroom and school context in combination with student, staff and parent interviews as the main sources of data. Through the iterative process of data collection and qualitative case study analysis two sub questions arose and were addressed utilizing SDT as a theoretical lens for examining the LDP as an educational context. This section begins with a discussion of the primary research question, followed by the two sub questions of this research and concludes by summarizing the overarching research question: What was the lived experience of students within the LDP?

6.1.1. What is the lived experience of students within the LDP?

This question regarding the experience of students with learning disabilities enrolled in a single year, self-contained special education program prompted the undertaking of this research. Through the iterative process of data collection and inductive analysis three major themes arose regarding the influence of the LDP as a context for learning on students’ self-concepts as learners and their engagement in the learning activities within the classroom. These themes involved students’ relationships,
students’ sense of themselves as capable learners, and the patterns of active engagement in learning observed as students participated in the educational practices of the classroom.

The first theme that emerged from the data involved the importance of relationships for students. Enrolment in a self-contained special education program provided both challenges and opportunities for students to develop friendships with their peers. In the fall the majority of student participants articulated that they would prefer to be enrolled in their neighbourhood school, because their friends were there. There were two exceptions to this generalized finding. Emma preferred being enrolled in the LDP and expressed difficulties she had experienced in developing relationships with peers in her former school as well as conveying considerable dislike for her teacher the previous school year. In contrast her experiences in the LDP were very positive with both her classmates and the teacher and EA. Zack also failed to express a preference for the social opportunities that enrolment in his neighbourhood school would have afforded him stating that he made friends easily.

Throughout the school year observations, informal conversations, questionnaires and semi-structured interviews all suggested that students had developed positive relationships with each other, the teacher and the EA. At the end of the school year all students expressed that they liked their classmates, the teacher and the EA. They made comments that indicated that they’d had fun, that their classmates were nice and that they had developed positive relationships with the teacher and EA. However, they also articulated a preference for their neighbourhood school. Reasons given were social in
nature rather than academic and students clearly stated that they would prefer to return to their neighbourhood school where their former friends were. Emma, who had experienced social difficulties with her peers and previous teacher in her former school, was the sole exception expressing a desire to remain in the LDP or a regular education classroom at the school in which LDP was located. Despite the positive relationships that students developed within the program, most students explained that the friendships and social opportunities of their neighbourhood schools and the regular education classrooms they had previously been enrolled in were important to them. This finding aligns with other research that suggests that students prefer the social opportunities available in regular education classrooms (Casserly, 2013; Klingner et al., 1998; Vaughn & Klingner, 1998).

A second theme that arose through the process of inductive data analysis involved building a culture of competence. Several ways in which the LDP was designed and implemented appear to have contributed to the development of a culture of competence in which the students were able to meaningfully and capably participate in a community of learners within the classroom. Students with learning disabilities struggle to acquire academic skills and to participate successfully as learners in comparison with same age peers. In regular education classrooms accommodations for limited academic skills are put in place for these students through Universal Design for Learning Principles (UDL) and in some cases additional instruction is provided outside the classroom. Structuring the classroom context to accommodate students with learning disabilities and the provision of extra instruction outside the classroom identify students with learning
disabilities to themselves and their classmates as having special learning needs, or as less academically capable than their peers who aren’t so identified.

Enrolment in the self-contained special education classroom of the LDP identified students as having special needs and would constitute a threat to students’ sense of competence as learners. However, within the classroom students experienced numerous supports for their sense of competence through the design and implementation of the program. Although all students enrolled were identified as having learning disabilities in the area of reading and writing, some students demonstrated greater literacy skills than others. However, students with lower academic skills relative to their classmates were not singled out as different through having to leave the classroom to receive specialized instruction or through receiving instruction by a specialist teacher who came into the class for students with extraordinary learning needs. Differentiation of literacy instruction and practice was the norm through small group instruction based on formative assessment, not the exception for select students who demonstrated relatively less advanced literacy skills. And no students were singled out as less capable than other students through the provision of exceptional accommodations such as reducing the quantity of written work expected.

Students with learning disabilities are often subjected to teasing or bullying related to their academic skills (Singer, 2005; Sullivan et al., 2015). However, in this classroom during this school year extensive classroom observations found that students and staff engaged in the educational practices of the classroom without highlighting relative skill levels among students. No student reported being teased or was seen to be
subjected to teasing about limited academic skills. No student was observed laughing at another student’s mistake. No student was observed showing any verbal or nonverbal sign that they were critical of another student’s limited academic skill. And students were never overheard comparing which instructional groups worked on the most advanced or least advanced literacy skills. In this manner the students and staff developed a culture of competence through acceptance of each other’s abilities as non-remarkable. Although it is possible that such teasing went on at other times, the absolute lack of any indication of such behaviour during the many hours of observation across the school year suggests that the students and staff adopted this interaction style as part of the classroom culture supporting student feelings of competence.

The third theme emerging from inductive analysis involved engaging in educational practices. Observations across the school year as well as comments from informal conversations and semi-structured interviews led to the finding that despite a generalized pattern of considerable behavioural engagement in the educational practices of the classroom, individual differences in student engagement were evident. The teacher and EA implemented very structured instructional routines and the students all demonstrated understanding of those routines. However, observational data consistently demonstrated that at times students only pretended to be behaviourally or cognitively engaged during classroom activities. Furthermore, upon close examination of the three students selected for in-depth study there was considerable variability in the degree of engagement and the instructional topics and activities in which each student
demonstrated the greatest observable engagement. Students were observed to be demonstrating autonomy over their engagement within the classroom.

It was this variability in patterns of engagement and student autonomy that led to further deductive analysis of the data through the lens of SDT and the development of two sub-questions that further informed the analysis. SDT posits that in learning environments students will be motivated to engage in learning opportunities when they feel related to their teachers and peers, they feel competent to undertake the learning activity successfully, and they feel a sense of autonomy over their participation. SDT further posits that social environments including schools either support or thwart these basic psychological needs for relatedness, competence and autonomy therefore impacting individual’s motivation and engagement in learning. The purpose of the sub-questions was to examine supports for relatedness, competence and autonomy within the LDP and to examine the patterns of engagement of three students selected for in-depth study based on the environmental supports for these three psychological needs. These sub-questions are addressed below.

6.1.2. In what ways did the implementation of the LDP support students’ needs for relatedness, competence and autonomy?

This section aims to summarize the specific educational practices that supported students’ basic psychological needs as outlined in SDT. Several educational practices provided support for two psychological needs, such as relatedness and competence or competence and autonomy, and are discussed in regard to each need.
**Relatedness.**

Previous research suggests that several factors are positively related to feelings of relatedness such as discussing personally relevant matters, spending informal social time together, feeling understood and appreciated, participating in enjoyable activities, and avoiding feelings of self-consciousness or insecurity (Reis et al., 2000). Within the LDP students were supported to develop positive relationships with their classmates, the teacher and EA, and the wider school community in several ways. Students developed positive relationships with each other through taking part together in a variety of enjoyable school and classroom activities, as well as supporting each other to avoid feelings of self-consciousness or insecurity through developing an interaction style that did not highlight relative academic skill comparisons. The teacher and EA developed positive relationships with the students through activities and ways of communicating with students that allowed students to view the staff as caring and interested in students’ lives and well-being.

Numerous educational practices within the LDP supported students to feel connected to each other, the staff, and the greater school community permitting students to care for and feel cared for by others. Supports for relatedness observed as students and staff participated in the educational practices within the LDP can be aggregated into four broad categories: participating in enjoyable activities, learning about each other, caring for others and minimizing feelings of insecurity.
Participating in enjoyable activities.

A very notable aspect of this special education program was the inclusion of the students in this classroom within the broader fabric of the school community. Students were included in all grade appropriate school wide activities. This included activities such as Zumba lessons in which this class participated with other Grade 4 and Grade 5 students in daily Physical Education lessons for an entire school week culminating in a special performance assembly at the end of the week. The students also took part in activities such as bike riding lessons, the Terry Fox run, and the winter concert performance in which all classes in the school took part. The students also had the opportunity to participate in voluntary activities offered through the school such as competing in track and field events, playing intramural sports, and going to family events put on in the evening by the school Parent Advisory Council. Of course, as with any student, participation in some of these voluntary activities required parent support for students to stay late after school or come to the event in the evening with a parent. This was somewhat more difficult for these students and their families to arrange as they didn’t live within the school catchment area and most of them were driven to and from school by school bus. However, these opportunities were available to the students and some of them took part in these activities. Opportunities such as these to engage with students from the broader school population allowed students to become friendly with students outside their classroom and also provided opportunities for students enrolled in the LDP to participate together in fun, school wide activities.
Within the classroom students were also provided opportunities to connect through being allowed to sit together and work in pairs or small groups to complete independent work such as completing spelling word searches, playing hangman with their spelling words, completing math practice worksheets, and completing independent work or playing literacy games during the literacy centre times. In addition to collaborative work opportunities students also had the opportunity for casual social play such as the weekly *Fun Friday* free play time, and on special occasion days. Further social connection was supported through class-wide celebrations such as recognizing birthdays, writing letters to Santa and other Christmas celebration activities, and celebrating National Literacy Day. Inviting parents to join students in the celebration of National Literacy Day also supported the development of positive connections between students, staff and parents.

*Learning about each other.*

Teachers who develop high quality, supportive relationships with students will support students to access their inner motivational resources and deeply engage in learning opportunities (Reeve, 2006). Feeling understood and appreciated is part of forming positive relationships with teachers at school (Reis et al., 2000). Within the LDP the teacher and EA implemented a weekly routine in which the students would share their weekend experiences orally with the teacher or EA in small groups. The teacher or EA would then ask questions and support discussion of what happened in the students’ weekend experiences outside of school. This often included the teacher and EA sharing information about their own private lives, their families, and their personal likes and
dislikes. This oral sharing of weekend experiences was in part a supportive accommodation for students’ personal writing skill development as it prepared them for their weekly journal writing activity and may have been initiated for this reason. However, this sharing also supported students to feel connected to the staff. Additionally, this insight into students’ lives provided the teacher and EA with information about the students that they could then use to connect with them at other times.

*Caring for others.*

SDT posits that the psychological need for relatedness includes the need to care for others as well as the need to feel cared for (Deci & Ryan, 2014). Students enrolled in the LDP participated in classroom activities that permitted them to care for others. For example, they acted as big buddies to a class of Grade 1 students. In this role they helped the younger students in a variety of activities such as completing craft projects and participating in multicultural celebrations. The class also undertook a project making book marks for a class of students in Ghana, and made Christmas and Mother’s Day cards and gifts to take home for their families.

Students also had the opportunity to volunteer within the school as helpers. For example, students volunteered as lunchtime sports equipment monitors. This school job was open to students as a service to the school community and while not all students were required to do so at least two of the students in the LDP were observed to be involved.
Minimizing feelings of insecurity.

Students with learning disabilities are subject to feelings of insecurity regarding their academic competence compared to their peers without learning disabilities (Grolnick & Ryan, 1990; Zisimopoulos & Galanaki, 2009). Therefore, minimizing feelings of insecurity may be particularly supportive for students’ sense of relatedness for these students in school contexts. Within the LDP both students and staff adopted interactional styles that failed to highlight relative academic skill levels. There was evidence that students did to some degree compare abilities, but it was never observed to be articulated to each other or from staff to students. Comments made by students suggested that they were sensitive to the feelings of their classmates and that this interactional style was at least somewhat intentional and an act of caring for each other. The lack of teasing and negative comments or body language upon the revelation of limited academic skill provided a classroom atmosphere that supported students to feel accepted by and related to their classmates and teachers.

Supporting relatedness within the LDP.

As described, the majority of these supports for relatedness are common educational practices within regular education classrooms and were observed throughout the school year in this special education context. Participating in enjoyable activities, learning about each other, and caring for others have all been found to support relatedness in previous research (Reis et al., 2000). The notable exception for students with learning disabilities evidenced within the LDP was the minimizing of feelings of insecurity. Students with learning disabilities are particularly vulnerable to feelings of
insecurity in situations in which their lagging academic skills are evident (Grolnick & Ryan, 1990; Zisimopoulos & Galanaki, 2009). Minimizing feelings of insecurity was supported through the adoption of an interactional style that failed to compare academic competence among students and therefore, failed to highlight the very limited literacy skills of some students in comparison to the relatively more advanced literacy skills of other students enrolled in the program. Therefore, the LDP as an educational context could be described as a context that provided active supports for relatedness. This context allowed students to care for and feel cared for by each other and the staff and these attachments may have supported their sense of relatedness at school.

**Competence.**

SDT posits that instructional environments that either support or thwart students’ psychological need for competence will impact motivation to engage in learning opportunities at school. Enrolment in self-contained special education classroom programs may present both challenges and supports for students’ sense of competence. Being separated from their peers in regular education and singled out as requiring instruction in a special education program identifies students with learning disabilities to themselves and their peers as less academically competent than other students their age – effectively identifying them as “other” than the norm. “Othering” within educational contexts has been used to describe the ways that educational contexts marginalize students considered outside the norm including students with disabilities (Kumashiro, 2000). For students with learning disabilities being enrolled in a special education classroom is a process of “othering”.
Previous research suggests that educational contexts support students’ sense of competence through providing structure (Jang et al., 2010), positive feedback (Rakoczy et al., 2008) and optimal levels of challenge (Malmberg & Little, 2007). Data from this research suggest that supports for competence within the LDP included the provision of structure, positive feedback and optimal level of challenge as identified in previous research. Findings from this research identify one additional category of support for students’ sense of competence specific to students with special learning needs – minimizing otherness.

*Providing structure.*

The provision of structure within the LDP supported students to effectively participate as learners. The LDP as implemented during the school year of this research provided students with highly predictable daily and weekly routines. This included routines for disruptions to the daily or weekly routine caused by special classroom or school wide activities or non-instructional days. The daily routines were so well known by the students that from the time of the first observation near the end of the first month of school students were not overheard asking what was happening during the day unless there was a change in the usual daily routine posted at the front of the classroom. Students were also able to make use of the consistent weekly routine for planning ahead. For example, a student made use of the library one day to check out a library book on the science topic they were studying in class. He asked me if I would be there the next day, because he was excited about the science project the class would be working on.
Knowing the consistent weekly routine for science instruction allowed him to prepare for this lesson and invite me to observe.

Another form of structure that supported competent student engagement in learning provided in the LDP was the explicit teaching and continued reinforcement of clear procedures for participation in instructional activities. This included management of classroom supplies and materials, the behavioural expectations for participation in each activity, what to do when a problem arose, and what to do when finished one activity before the next activity would begin. The provision of such clear procedural routines removed ambiguity for students regarding how to participate in the learning activities of the classroom and supported them to independently and effectively engage in learning opportunities.

*Providing positive feedback.*

The provision of positive feedback allowed students to identify their academic growth and supported them to view themselves as capable learners who were extending their academic capabilities. Within the LDP positive feedback from the teacher and EA included praise for improved performance immediately following continued skill practice. For example, when students were asked to re-read their spelling words to improve their reading fluency the teacher would go back to students, listen to them read the words again and then give them a “high-five” and a positive comment about their improved reading.
Further positive feedback that supported students’ sense of competence included the provision of information regarding progress toward specific learning objectives. For example, one-to-one review and support for paragraph writing, reading fluency, reading aloud, and spelling all included information provided to students that drew attention to their progress in targeted skill development such as writing a paragraph with interesting details describing their weekend or improvement in number of words read correctly in a minute on a selected reading passage.

*Providing optimal levels of challenge.*

For students with learning disabilities perceived competence has been found to be positively correlated with preference for challenge as a measure of intrinsic motivation (Zisimopoulos & Galanaki, 2009). Therefore, it may be particularly important for students with learning disabilities to provide an optimal level of challenge as related to their current skill levels. The LDP provided optimal levels of academic challenge through both the design and implementation of the program. The program design included two adults, the teacher and the EA, for an enrolment of fourteen students. This ratio of two adults to fourteen students provided increased academic support for whole class, small group and individualized instruction. This design feature then made the implementation of differentiated, small group and individual literacy intervention (spelling and reading) possible. In turn, this small group and individual instruction allowed for the provision of optimal level of challenge for all students based on the teacher’s curriculum-based assessment measures.
Minimizing otherness.

Provision of structure (Jang et al., 2010), positive feedback (Rakoczy et al., 2008) and optimal level of challenge (Malmberg & Little, 2007) have all been identified previously as supportive of students’ sense of competence within educational settings. The findings from this study align with the extant literature in these areas. The theme of minimizing otherness arising from this research adds a contribution to the literature regarding support for students’ sense of competence in special education learning contexts. Many ways in which the LDP was designed and implemented contributed to a classroom culture in which students with learning disabilities were included in learning rather than singled out as special or other. There were numerous structures and practices in place that contributed to supporting students’ sense of competence by minimizing otherness.

Although enrolment in special classes constitutes othering, learning in a class consisting entirely of students with similar learning difficulties may also support students’ sense of competence. The big-fish-little-pond effect (Marsh, 1984, 1987; Marsh & Parker, 1984) suggests that students compare their own academic achievement with that of their classmates. Research findings suggest that social comparison with higher achieving peers negatively impacts academic self-concept especially for lower achieving students (Trautwein et al. 2009). In line with social comparison theories such as the big-fish-little-pond effect, students with learning disabilities have been found to have higher academic self-concepts when enrolled in special classes than regular
education classes (Humphrey, 2002; Nagengast & Marsh, 2011; Rawson & Cassady, 1995).

Individual conversations with students across the school year led to the finding that students were comparing relative skills and achievement at least to some extent even though they were never observed articulating them to each other. Therefore, enrolment in a special education classroom of students with learning disabilities which provided students with a reference group of classmates all with limited literacy skills, may have provided considerable support for their sense of competence regarding learning at school.

Another way in which the LDP supported students’ sense of competence within the classroom was through the delivery of grade level instruction in all subject areas rather than only remedial instruction in literacy and numeracy. It is true that the students in Grade 5 did not receive core French instruction which they would have done in a regular education classroom, however they received instruction in all other subject areas to meet learning outcomes from the BC Ministry of Education provincial curricula. The inclusion of supported instruction in subject areas such as Science and Social Studies provided students with experiences in which they successfully participated in learning in spite of their limited literacy skills. Consequently, these students were permitted to view themselves as capable learners rather than “special” learners.

A particularly salient way that students with learning disabilities in regular education classrooms are often singled out and identified as special or other is through the provision of special accommodations that are provided only for students who have
difficulty completing assigned instructional activities without adaptations. Within the LDP differentiation, adaptation, small group and one-to-one instruction and support was the norm not the exception for students who could not access instruction as presented for the class. No students were selected to receive special help or excused from academic participation due to limited skills. The teacher and EA had high expectations that all students participate in all learning opportunities and that all work meet high teacher standards. Further, no students had to leave the classroom to receive specialized literacy intervention. In regular education classrooms students with learning disabilities are often provided remedial instruction outside the classroom by a specialist teacher. Within the LDP no students were identified to themselves and their classmates as special in this manner as all instruction was delivered by the classroom teacher and EA including remedial literacy instruction not typical for their grade levels.

And finally, the development of a culture of acceptance among students and staff that failed to highlight relative skill differences between students provided significant support for students’ sense of competence. The teasing regarding academic competence that has been reported in previous research (Singer, 2005; Sullivan et al., 2015) was not evident in the LDP. No students were observed pointing out errors made by others or laughing or rolling their eyes at another student’s display of limited academic skill. And no students were overheard commenting on which instructional groups worked on more or less advanced reading or spelling skills, or who was working in higher or lower phonics workbooks.
Enrolment in a special classroom program for students with learning disabilities that required students to be transported by their families or by school bus to a school outside of their neighbourhood can be considered a process of othering. However, it was apparent that the school district, the school community and the staff of the LDP worked to minimize identification of students as students with special needs and subsequent marginalization within the learning community. This was accomplished through several aspects of the design and implementation of the program particularly within the classroom. Minimizing otherness for these students with learning disabilities supported their sense of competence allowing them to view themselves as capable learners.

**Supporting competence within the LDP.**

In comparison to supports for relatedness which were generally common educational practices in regular education classrooms, many of the supports for competence provided for students enrolled in the LDP are either not possible in the public school regular education classrooms of these students’ neighbourhood schools or are difficult to implement and therefore rarely observed in regular education classrooms. This applies particularly to providing optimal level of challenge and minimizing otherness. For example, the staff to student ratio (2:14) within the LDP offered more support than the school district average staff to student ratio (1:30) in regular education classrooms. Also, in theory differentiated literacy instruction could be implemented in regular education classrooms to provide students with learning disabilities with the explicit literacy interventions they require to make gains in literacy acquisition. However, research suggests that this is rarely the case (Vaughn et al., 2002) and the ability of fully
inclusive regular education classrooms to meet the instructional needs of students with learning disabilities has been called into question (Magiera & Zigmond, 2005). Consequently, many students with learning disabilities enrolled in regular education classrooms are identified to themselves and their peers as students with special needs through the provision of accommodations in the classroom not provided for other students such as lowered expectations for quantity of work completed, and through leaving the classroom for a portion of the day to receive specialized literacy instruction from a specialist teacher.

The interactional style that became evident amongst the students and staff was particularly interesting. Research demonstrates that many students with learning disabilities are subjected to considerable incidences of teasing or other bullying at school (Sullivan et al., 2015) and are particularly vulnerable in situations that highlight their low achievement (Singer, 2005) including being singled out for academic support. However, not once across the school year did I overhear a single incident of a student laughing at a mistake made by another student, or derision expressed either verbally or non-verbally at another student’s demonstration of limited academic skill. Further, Michael was the only student seen pretending to read books far beyond his skill level at independent reading time, and notably no students or staff ever commented on this posturing. This interactional style constituted a significant support for students’ sense of competence but may have been specific to this group of students and staff.

Previous research has identified classroom supports for competence including providing structure (Jang et al., 2010; Starkweather and Shriver, 2005), positive feedback
(Rakoczy et al., 2008) and optimal levels of challenge (Malmberg & Little, 2007). This research adds minimizing otherness as support for competence within special education contexts. Findings suggest that the LDP as a special education classroom context for learning minimized otherness through delivering adapted grade level instruction in all subject areas rather than only remedial instruction in literacy and numeracy, exclusively enrolling students with learning disabilities with similar academic learning needs thereby providing a lower achieving reference group, differentiating instruction as the norm rather than the exception, delivering instructional interventions as part of the regular instruction within the classroom provided by the classroom teacher rather than singling out certain students for exceptional support and instruction, and students and staff adopting interactional styles that failed to highlight relative differences in academic skill. Findings suggest that these supports minimized otherness within the classroom, and allowed students to feel related, competent and included in a community of learners.

**Autonomy.**

Within SDT students’ sense of autonomy is viewed as necessary for optimal engagement and learning (Deci & Ryan, 2000). Many teacher behaviours have been identified that support students’ sense of autonomy in the classroom (Reeve, 2006). These include teacher behaviours that are responsive and flexible, provide choice and nurture student motivation through aligning instruction with students’ interests, competencies and sense of challenge. Autonomy supportive teacher behaviours also include utilizing informational, non-controlling language that provides information regarding learning progress and a rationale for the expenditure of effort. Acknowledging
student expression of negative affect in regard to academic and behavioural demands of the classroom has also been found to support autonomous motivation for learning.

Within the LDP findings suggested that there were considerably greater supports for the psychological needs of relatedness and competence than for autonomy. In large part the teacher behaviours of the staff could be considered to provide a learning environment that was teacher controlled rather than autonomy supportive. For the most part students were expected to participate in the instructional activities of the classroom and were supported to do this through the provision of structure in the form of clear procedures and consistent routines. Positive learning behaviours and engagement were encouraged through rewards and negative consequences. However, although the educational practices observed were largely teacher-controlled, two supports for autonomy were observed.

*Providing positive feedback.*

Within the LDP praise for improved performance immediately following continued skill practice was frequently observed. For example, when students were asked to re-do an activity such as reading spelling words aloud or re-reading a word or nonsense word during phonics instruction, the staff would praise students for improvement in the targeted skill. Also, many instances were observed in which the teacher and/or EA provided students with specific information regarding progress toward specific learning objectives such as spelling, paragraph writing, or word decoding.
Providing a rationale.

Also evidenced within the LDP was support for autonomy through providing a rationale for the expenditure of effort in completing academic tasks and following procedures. The teacher, in particular, explained to students the utility of their efforts and how this would help them to complete learning tasks successfully.

Supporting autonomy within the LDP.

Many teacher behaviours that support autonomy may be implemented in either special education or regular education programs. However, findings from previous research (Deci et al., 1992) regarding support for autonomy and students with learning disabilities and emotional handicaps suggest that for children in elementary school supports for autonomy at home may be more influential regarding motivation at school than teacher supports for autonomy. Furthermore, for children with learning disabilities supports for competence may be more strongly related to perceptions of motivation than supports for autonomy. Therefore, for students with learning disabilities an emphasis on supports for relatedness and competence in the classroom may be warranted. Also, the fact that the particular supports for autonomy observed within the LDP were also supports for competence in that they made academic progress visible to students and provided a rationale that specifically targeted how to be successful at completing school tasks may have been particularly motivating for these students with learning disabilities.
6.1.3. How did the relative supports for relatedness, competence and autonomy implemented within the LDP impact student engagement in instructional activities within the classroom?

SDT posits that social environments influence human behaviour through contextual supports for basic human psychological needs including the needs for relatedness, competence and autonomy. When these needs are met individuals will be autonomously motivated to engage in positive behaviours including the regulation of learning behaviours at school. Deci and Ryan (2000) suggest that much of human behaviour is externally motivated including many learning activities prompted by students’ teachers. Organismic integration theory, a sub-theory of SDT, suggests that motivation can be extrinsically motivated (activity undertaken for reasons other than the pure pleasure of participating in that activity) and at the same time be considered autonomous. The key to autonomy is the sense that one has chosen to engage in behaviour for either the pleasure derived in so doing (intrinsic motivation) or to obtain another goal or avoid an unappealing outcome (extrinsic motivation). According to the principles of organismic integration theory behaviours that are externally motivated can also be autonomous through the internalization of the value or regulation of the behaviour, or through integration of that regulation into one’s sense of self. In relation to learning at school, organismic integration theory posits that classroom-based contextual supports for relatedness, competence and autonomy are necessary for students to internalize the regulation of learning behaviours prompted by teachers and to show optimal motivation and engagement in learning. When students feel they have a positive relationship with their teachers and peers, are capable of successfully participating in the
activity, *and* feel volitional in that participation they will be optimally motivated to meaningfully engage in learning activities.

Educational practices within the LDP across the school year of this case study provided students enrolled in the program with considerable supports for relatedness and competence, but minimal supports for student autonomy. According to organismic integration theory educational contexts will result in external regulation and engagement in learning behaviours if students feel competent to complete the task but teachers enact controlling teacher behaviours such as managing student behaviour through the use of rewards or consequences (Deci & Ryan, 2008b). Learning contexts may result in introjected regulation and engagement if they have developed a positive relationship with the teacher and feel competent to successfully participate in the instructional activity. Autonomous regulation of positive learning behaviours however, will only be evident when students’ basic psychological needs for relatedness, competence *and* autonomy are met.

Although largely teacher controlled there was some support for student autonomy observed within the LDP. The teacher and EA often provided a rationale to students regarding the utility of certain learning behaviours. They also provided positive informational feedback to students regarding their progress toward learning goals. However, as suggested by organismic integration theory, one might predict that the students would demonstrate introjected regulation of behaviours for participation in activities in which they had little interest and for which they did not see any personal value that would justify expending the effort to engage, and more autonomous identified
or integrated regulation for behaviours relating to activities of personal interest and perceived value.

As described in detail in chapter five, three distinct patterns of engagement were evident amongst the three students selected for in-depth study. Zack and Emma behaviourally engaged in all learning activities that the teacher directly oversaw and controlled as their needs for both competence and relatedness were supported within this context. However, aligning with organismic integration theory without support for autonomy in the classroom when not directly overseen and interacting with the teacher or EA they demonstrated self-regulation of learning behaviours and cognitive engagement only for activities and educational topics that were of personal interest, which for Emma were those that were social in nature, and for Zack largely involved topics related to science and nature.

With the exception of two situations, Michael appeared to be autonomously motivated to engage in all activities across all subject areas. During independent reading times lack of reading materials that provided an appropriate level of challenge with respect to his extremely limited reading skills may have thwarted Michael’s sense of competence. Although there were photocopied “readers” that students read for home reading practice that Michael could read, no other students read these readers in class. The threat to his sense of competence appeared to be so great that Michael pretended to read novels that would be age appropriate, but much too difficult for him to read. Most students in the class would not have been able to read the novels Michael pretended to read. Rarely did Michael actively engage with reading material to garner meaning from
the text during independent reading times. While this disengagement during independent reading time was consistently observed across the school year, one situation arose in which a falling out with his friends on the school bus appeared to thwart Michael’s sense of relatedness and impact his engagement in learning across the school day. During this brief time, Michael was behaviourally and cognitively disengaged in the learning activities of the classroom as he demonstrably struck up a new friendship with a student not in his immediate close circle of friends that he rode the school bus with every day. Once his relationship with his friends was repaired Michael returned to his previous level of almost constant behavioural and cognitive engagement.

Three different patterns of self-regulation of learning behaviours and engagement in instructional activities were identified. According to organismic integration theory, the considerable contextual supports for relatedness and competence within the LDP and minimal contextual support for autonomy students would be expected to demonstrate optimal motivation and engagement for those learning activities that were of interest or personal value. Emma and Zack demonstrated this behavioural pattern within the classroom. On the other hand although there was minimal support for autonomy from the teacher and EA, Michael consistently demonstrated behavioural and cognitive engagement in all instructional activities with two exceptions. Michael was observed to disengage both behaviourally and cognitively throughout the school year during independent reading activities that constituted a thwarting of his sense of competence. He was also observed during one observation to disengage both behaviourally and
cognitively in the learning activities of the classroom when there was a threat to his sense of relatedness with his classmates.

The extant literature regarding the impact of parent and teacher support for autonomy on students’ academic motivation suggests that both teachers and parents influence students’ motivation to engage in academic learning (Deci et al., 1992; Guay et al., 2008) and that parental support for autonomy may be more influential than teacher support for autonomy in regard to students’ motivation and engagement (Guay et al., 2008). Although not directly observed, interview data from Michael’s mother suggested that she may have provided Michael with autonomy support at home. Therefore, Michael’s consistent academic engagement within the LDP aligns with previous research findings that parental support for autonomy influences student engagement and suggests that this finding may extend to students with learning disabilities in special education contexts.

6.1.4. Summary of the lived experience of students within the LDP.

This research aimed to examine the lived experience of students within the LDP over the course of a school year. Through the process of inductive and deductive analysis and through the lens of SDT it became evident that within this learning context students experienced supportive participation in a community of learners.

Within the LDP students experienced a learning context that was considerably supportive of the need for relatedness. By the end of the school year all student research participants reported experiencing positive relationships with both their classmates and
the staff. However, with only one exception, all students were looking forward to returning to their neighbourhood schools for social reasons. Students articulated missing their friends at their former schools and wishing to return there in spite of enjoying the new friendships they had established with their classmates in the LDP. The sole exception to this generalized finding was Emma. Emma had difficulty developing friendships with her peers at her former school and reported particularly negative feelings toward her teacher the previous year. For Emma, her experience in the LDP was considerably more supportive of her sense of relatedness than former experiences. However, the finding that all but one of the students wished to return to their former schools and regular education classrooms aligns with previous research findings (Casserly, 2013; Klingner et al., 1998; Vaughn & Klingner, 1998) that suggest that students with learning disabilities prefer the social opportunities of regular education classrooms over those available in special education contexts.

Students also experienced considerable supports for their sense of competence including a highly structured program, positive feedback regarding their progress toward learning goals, optimal levels of challenge, and minimizing otherness that reduced feelings of insecurity and self-consciousness and allowed students to view themselves as capable and contributing members of a learning community. Students and staff participated in the educational practices of the classroom in ways that contributed to a culture in which students were included in learning rather than singled out as special or other. Although separating students with learning disabilities from their peers in regular education classrooms constitutes othering and poses a challenge to students in terms of
viewing themselves as capable learners, the educational practices within the LDP also minimized otherness and included students in a community of learners. This “inclusion” in learning through supports for competence in a non-inclusive setting adds to the extant literature in terms of ways that special education contexts may minimize otherness for students with learning disabilities.

Finally, students enrolled in the LDP during the school year of this study experienced a classroom program that was largely teacher controlled rather than autonomy supportive. Participating within this educational context that was considerably supportive of students’ needs for relatedness and competence and minimally supportive of the need for autonomy was reflected in students’ engagement in learning. The finding that two of the three students selected for in-depth study regulated their engagement based on their personal interests and values supports SDT and the organismic integration sub-theory. Michael’s almost constant generalized academic engagement may have been the result of parental support for autonomy which has been found to impact student engagement for students with learning disabilities in special education contexts (Deci et al., 1992) and within the broader extant literature regarding autonomy support and students in general education classrooms (Guay et al., 2008).

However, it should also be noted that despite the finding that students were most cognitively engaged during activities that were either directly overseen by the teacher or EA or were of personal interest, students were observed to actively participate in most instructional activities throughout the school day. Supporting this observation, students articulated that they felt that this was a program in which they completed more academic
work than they had experienced in previous regular education classrooms. This suggests that for students with learning disabilities supports for relatedness and competence, even with minimal support for autonomy, facilitate students’ participation in classroom instructional activities. This finding aligns with previous research suggesting that structure as a support for competence may support student on-task behavioural engagement, whereas teaching that is autonomy supportive is related to both observed behavioural engagement and student self-ratings of cognitive engagement (Jang et al., 2010).

6.2. Implications for Educational Practice

We are in an era of educational inclusion of students with special needs as a means of tackling othering of many diverse and historically marginalized learners in our school systems including students with special needs (Kumashiro, 2000). However, there has been debate over the ability of general education classrooms to provide adequate intensive intervention for students with learning disabilities (Fuchs & Fuchs, 1995; Zigmond, 2003). Reviews of extant research have failed to uncover convincing efficacy results for a variety of outcome measures favouring either inclusion in regular education classrooms or a continuum of special education supports and placements for students with learning disabilities (Carlberg & Kavale, 1980; Lindsay, 2007) including self-contained special education programs. It is not within the scope of this research to evaluate the efficacy of the LDP in promoting student gains in literacy skill across the
school year. The aim of this research was to explore the nuances and variations of the lived experience of enrolment in such a placement option.

In this LDP classroom during this school year, students enrolled in the LDP experienced supported access to grade appropriate general education curricular learning outcomes, access to typical classroom and school activities that promote a positive class and school culture allowing students to feel related to each other and the staff, and access to students enrolled in the broader general education community within the school. However, in contrast to most general education classrooms, this program dedicated considerable portions of each day to remedial literacy instruction and provided access to specialized instructional resources.

Several aspects of the design and implementation of the program supported the psychological needs of students with learning disabilities and allowed them to capably participate in a community of learners. The findings of this research as presented in this thesis are not intended to promote or dispute the value of special education classroom programs for students with learning disabilities, but rather to examine ways in which students’ psychological needs may be met in a special education setting. Additionally, findings may suggest ways to meet students’ needs across settings in order to promote healthy psychological development and support student engagement and autonomous motivation for learning.

The first theme arising from this research highlights the fact that relationships matter for students with learning disabilities at this age range. The finding that these
students with learning disabilities preferred the social opportunities of their former regular education classrooms in their neighbourhood schools despite the myriad supports for relatedness and the positive relationships formed between students and between students and staff suggests that schools should endeavour to meet students’ psychological and instructional needs within their neighbourhood schools and classrooms whenever possible. The supports for relatedness observed within the LDP were those that are also typically observed in general education classrooms with one exception minimizing feelings of insecurity. Students with learning disabilities have been found to demonstrate lower perceived academic competence than their peers without learning disabilities (Grolnick & Ryan, 1990; Zissimopoulos & Galanaki, 2009) and are particularly subject to teasing from their peers in situations that highlight their limited academic skills (Sullivan et al., 2015). Therefore, in light of students’ preference to be enrolled in regular education classrooms for social reasons, it is pertinent to examine supports within these settings that may support students’ sense of competence and academic engagement through minimizing feelings of insecurity.

Many of the supports for relatedness, competence and autonomy observed within the LDP have been identified previously as supports in regular and special education contexts for students with and without learning disabilities. However, a particularly notable theme arising from this research is that of minimizing otherness. This describes educational practices observed within the LDP that minimized the identification of students to themselves and their classmates as students with exceptional learning needs.
The design and implementation of the LDP allowed students to view variability in skills and abilities as typical rather than atypical.

Many of the psychological supports for competence observed in the LDP were enabled through the provision of staffing four times greater than typically in place within general education classrooms in the school district. This included one teacher and one EA for fourteen students. Although this may be an unrealistic staffing level for all general education classrooms, increased staffing may be an important factor in supporting students with learning disabilities.

The findings of this research highlight several educational practices that may be enacted across educational settings to support students with learning disabilities to view themselves as capable learners and promote active engagement in learning. These include providing structure through consistent daily and weekly routines as well as clearly defined procedures for materials management and participating in instructional activities. This structure both supports students to feel competent through enabling them to participate independently in instructional activities and frees teachers to provide small group and individual instruction. Teaching to small groups or individuals enables the provision of differentiated instruction. Differentiation as the norm, rather than the exception for students who cannot access whole class instruction, supports students to access both regular education curriculum and instructional interventions at an appropriate level of challenge within the classroom and to view themselves and their peers as capable learners. In concert with differentiated instruction high teacher expectations for academic engagement at an appropriate level of challenge further minimizes the identification of
students with learning disabilities as less capable than their peers through the provision of special adaptations such as reduced quantity of work provided only for students not capable of accessing whole class instruction.

Students with learning disabilities are often subjected to teasing regarding their academic abilities (Singer, 2005; Sullivan et al., 2015). No teasing and no overt comparison of academic skills were observed in the LDP. This may have been an anomaly and specific only to this group of students and staff. However, it is possible that through the implementation of supports for competence including the provision of instructional structure, universal differentiation of learning, appropriate levels of challenge, and high teacher expectations minimizing otherness will become the norm in regular education classrooms for all students including those with learning disabilities.

The variability in patterns of academic engagement within the LDP provides several insights into ways in which classrooms may support meaningful engagement of students with learning disabilities in learning opportunities. Supports for relatedness and competence may be most salient in supporting students with learning disabilities to engage in instructional activities overseen by their teachers. However, supports for autonomy either at home or at school may be necessary for students to meaningfully engage in learning across all subject areas. Previous research suggests that providing a rationale for the expenditure of effort and providing positive informational feedback on progress toward learning goals, both supports for autonomy observed in the LDP, support students to feel autonomous within the classroom and volitional regarding their engagement in learning activities. Implementing these autonomy supports as well as
other research evidence-based supports such as coordinating instructional activities with students’ interests and enjoyment, allowing for choice, utilizing informational, non-controlling language, and acknowledging students’ expressions of negative affect as possibly a reasonable response to the requirements of the classroom (Reeve 2002, 2006) may support optimal motivation and engagement for students with learning disabilities.

In conclusion, designing supportive learning environments for students with learning disabilities has less to do with place and more to do with supports for students’ basic psychological needs that in turn support optimal motivation to learn and self-regulation of learning behaviours. Although many of the supports for relatedness, competence and autonomy observed in the LDP can be implemented in a variety of learning contexts, students prefer to be enrolled in regular education classrooms in their neighbourhood schools. It would seem reasonable that educators endeavour to provide as many of these supports within regular education classrooms as possible so that classrooms become truly inclusive of all students beyond mere enrolment in that they include students with a wide range of learning needs, including students with learning disabilities, in a community of learners in which variation in academic interests and abilities are seen as the norm rather than the exception.

6.3. Study Limitations

This research aimed to investigate the lived experience of students with learning disabilities enrolled in a single year self-contained special education program. Several limitations became evident during the process of data analysis.
First, only eleven of the fourteen students enrolled in the program received parental permission to participate in the study. This impacted data collection and subsequent analysis in several ways. Interactions that were observed in the classroom between study participants and non-participants could not be recorded and collected as data. For example, one of the students with extremely limited literacy skills was not a research participant, and therefore limited collection of data and subsequent analysis of data regarding the experience of the students with the greatest reading difficulties. This limitation also impacted analysis of reciprocal friendships when analyzing data through the completion of a sociogram as data from three students were not collected.

Second, the design of this research as a single case study investigating a single location of the LDP across a single school year allowed for in-depth analysis through the collection of observational and interview data over many hours and the identification of patterns of behaviour across the school year. Doing such in-depth data collection would not have been possible for the purposes of this thesis over more locations or over more than one school year. However, collecting data over multiple years would have provided maintenance data over time and generalizing data regarding different students with the same teacher and EA. The study as undertaken in one location over one school year failed to rule out the possibility that findings were unique to this specific teacher, EA, and student group during this school year.

And finally, as the sub-questions evolved through the lens of SDT it became apparent that inclusion of self-reports that provide quantitative data regarding measures of relatedness, academic competence and academic engagement at the beginning of the
year and again at the end of the year in conjunction with perceived parental and teacher supports for relatedness, competence and autonomy would have provided useful data for quantitative analysis which then could be analyzed and interpreted in light of previous research using such methods.

These limitations in the present study suggest directions for future research.

6.4. Directions for Future Research

Findings from this research suggest several avenues of fruitful research. First, addressing limitations in data collection, a valuable addition to the extant literature would include an examination of self-contained special education programs for students with learning disabilities collecting data including both observational and self-reports that provide quantitative data of relatedness, academic competence, and academic engagement. The current study has extended the extant research through the collection of data including large amounts of observation and interview data across a school year. However, the addition of quantitative data through self-reports of students’ sense of relatedness, competence, and autonomy in the classroom would allow direct comparison to previous research as well as permit direct interpretation of the relationship between observed psychological supports in the classroom, need satisfaction, and academic engagement.

Second, research implementing a multiple case study design would be beneficial. This would rule out the possibility that the findings reported here were unique to one
particular group of staff and student research participants specifically. Further, a multiple case study design may potentially capture nuances of supports for relatedness, competence and autonomy as implemented by different teachers with different groups of students and the patterns of engagement within the educational practices of the classrooms.

Finally, findings from this research suggest that supports for competence potentially impact the development of positive relationships among students and teachers as well as potentially having the greatest impact on the academic engagement of students with learning disabilities. The identification of the theme of minimizing otherness through psychological support for competence suggests possibilities for future research. The literature would benefit from research investigating ways in which general education classrooms can implement educational practices, including those observed in the LDP, in order to minimize otherness while providing students with learning disabilities with instructional interventions to address their lagging academic skills. Many of the supports for competence were enabled by the high staff to student ratio that was four times that found in regular education classrooms within the school district or by the enrolment of only students with reading disabilities. Therefore, further research is necessary to ascertain how these supports can be effectively implemented in regular education classrooms, or whether there are other supports that are more suited to such contexts.
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Appendix A.

Definition of Learning Disability


E.3 Learning Disabilities Definition

Learning disabilities refers to a number of disorders that may affect the acquisition, organization, retention, understanding or use of verbal or nonverbal information. These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking and/or reasoning. As such, learning disabilities are distinct from global intellectual disabilities.

Learning disabilities result from impairments in one or more processes related to perceiving, thinking, remembering or learning. These include, but are not limited to: language processing, phonological processing, visual spatial processing, processing speed, memory and attention, and executive functions (e.g. planning and decision-making).

Learning disabilities range in severity and may interfere with the acquisition and use of one or more of the following:

- Oral language (e.g., listening, speaking, understanding)
- Reading (e.g., decoding, phonetic knowledge, word recognition, comprehension)
• Written language (e.g., spelling and written expression)

• Mathematics (e.g., computation, problem solving) Learning disabilities may also involve difficulties with organizational skills, social perception, social interaction and perspective taking. Learning disabilities are life-long. The way in which they are expressed may vary over an individual's lifetime, depending on the interaction between the demands of the environment and the individual's strengths and needs. Learning disabilities are suggested by unexpected academic under-achievement or achievement that is maintained only by unusually high levels of effort and support. Learning disabilities are due to genetic and/or neurological factors or injury that alters brain function in a manner that affects one or more processes related to learning. These disorders are not due primarily to hearing and/or vision problems, social-economic factors, cultural or linguistic differences, lack of motivation, inadequate or insufficient instruction, although these factors may further complicate the challenges faced by individuals with learning disabilities. Learning disabilities may co-exist with other disorders such as attentional, behavioural or emotional disorders, sensory impairments, or other medical conditions.
Appendix B

Consent / Assent Forms

Informed Consent to Participate in a Research Study (Parent for Child) 2013s0383

By signing this consent you, as the parent of a child participant, agree that you have read the research information regarding this study, that was sent home along with this consent form, and agree to the following information being collected from your child at school:

If you agree for your child to participate as a class member the following data will be collected from your child:

Measures of reading achievement. I will conduct individual assessments with your child. This will be conducted in two 30-minute sessions in September and May.

Collection of preferences in students your child likes to work with, and play with. This will take approximately ten minutes to complete and will be conducted in December and May.

Completion of an activity in which your child will describe differences and similarities between the Intensive Literacy Program class and the class he/she was enrolled in last year. One activity will be completed in November, the other in March. The activities will take approximately 30 min. to complete.
Observation of your child as part of the class during class work, and at play during recess and lunch. I will visit the classroom several times per month to observe your child’s class at work and at play for a portion of the day.

Informal conversations with your child during class and school activities.

If you agree to have your child participate as a case study subject, and he/she is selected to be a case study subject, the following additional data will be collected in September and May:

Individual interviews. These will take approximately 20-40 minutes. Your child will be asked to describe his/her experiences in the Intensive Literacy Program, including likes and dislikes, and how that compares to last year’s class, and other types of learning support previously experienced such as working with a Learning Support Team (LST) teacher.

Completing two brief questionnaires regarding academic self-concept and your child’s perceptions of the causes of his/her difficulties in reading and writing. These questionnaires will be completed on separate days. They will take approximately 10 minutes each.

Review of your child’s permanent record files including: previous schools attended, report cards and any school inclusions, previous school district assessments including psychoeducational assessments, and Ministry of Education educational designations.
*You will be advised as to whether your child is selected to be a case study subject before any case study information is collected. Your child will also be asked to give assent for participation as a case study subject if he/she is selected to do so.

Digital audio-, photo- and video-recordings.

All interviews with participating children will be audio-recorded, and within two months, the audio-recording will be transcribed with all identifiers removed, and the audio-recording will be destroyed.

Your child’s participation in activities will be photo- and video-recorded on observation days. Video recordings are very useful in analyzing complex events such as classroom instructional activities. Brief video clips and/or photos may be used be used in the documentation in my final dissertation, and I may use them when presenting my work at conferences and workshops. Although it is not possible to offer anonymity if video footage or photographs including your child’s face are used in presenting this research your child will not be named or identified in any way. If having your child’s face being shown on video for presentation of this research is a problem, then I will endeavor not to use such clips, or if necessary, expunge your child’s face from the clip to be shown. All digital photos and digital videos will be stored on a separate hard-drive in a locked filing cabinet. Your child’s name will not be used to identify the photos or the videos.

Participation in this research will not affect your child’s enrolment in the Literacy Development Program. All information will be kept strictly anonymous. The school
district, and specific program will not be disclosed in my dissertation or any research reports. If your child is chosen as a case study subject, he/she will be identified only by gender, grade, and as Child A, B or C. If you agree to allow your child to participate, your child will be asked to provide verbal assent to participate also. You, or your child, are free to withdraw the child from this research at any time for any reason. A report of research findings may be obtained from me following the data collection at the end of the school year and subsequent data analysis by emailing me at ……@sfu.ca.

This research has several potential benefits for both research and practice. I will be writing my doctoral dissertation, and presenting my findings to both the academic community at Simon Fraser University and to the Surrey School District. This intimate look at the lived experiences of children in these programs and their reading development over the year will promote discussion regarding best practices in providing reading intervention support to students who struggle to acquire literacy skills. The school district will then have a starting point to make adjustments and design future research into providing the most positive experiences for students in need of intensive literacy intervention. The students will be informed regarding my research and their participation in this opportunity. Small incentives will be given to all students in the class as a result of the on-going research collaboration. Parents of the three children involved in the research as case study subjects will receive a $25 VISA gift card in June as a thank you for in-depth participation.

Risks: No potential risks to your child are foreseen. However, your child is always able to withdraw from the research at any time.
Informed Consent for Research (Parent for Child)

I certify that I understand the procedures to be used in this study, that I have been able to receive clarification of any aspects of this study about which I have had questions, and that I have the right to withdraw my child from the study at any time.

In signing this form I agree to the following: (Please check one box only.)

☐ My child has permission to participate in this research as a class member and for the collection of data as outlined for all class students.

☐ My child has permission to participate as one of three case study subjects and for the collection of data for all class students and the additional data collection for case study subjects. I agree for my child’s responses to interviews to be audiotaped and transcribed.

☐ I do not wish my child to participate in this research.

Student Name: ________________________________

Parent name: ________________________________

Parent Signature: ________________________________

Date: ________________________________

*Please return this form to your child’s teacher as soon as possible.*
Informed Consent for Photographs and Video Recording (Parent for Child)

As part of this research, I would like to take pictures and make digital videotapes of children as they are working with each other or with the teacher in their classroom. If you consent, your child’s image may be included in these pictures and digital videos. The pictures and digital videos will be stored on a separate hard-drive in a locked cabinet in my research office at SFU. I would like to leave your child’s image intact, because I will be analyzing the communication between children and their teacher, and this is only possible when children’s expressions are clear on the image. The pictures and digital videos may be used to illustrate particular findings in public presentations of my research findings (e.g., research conferences, school district workshops). I will store these presentations on a hard-drive that is accessible only to me through use of a secure password. The pictures and videos will not be used in any future research projects.

Having read the information provided to you in the Information for Parents document, and in addition to signing the Informed Consent for Research (Parent for Child), please indicate whether or not you agree to the following questions.

1. Do you consent to your child being photographed and video recorded for use in data analysis? ___________
2. Do you permit the use of your child’s photograph and video image in public dissemination (thesis, papers, conference presentations etc.) directly related to this research project? ______

Student Name: _______________________________________

Parent name: _________________________________________

Parent Signature: ______________________________________

Date: _____________________________

*Please return this form to your child’s teacher as soon as possible.
Informed Assent for Research (Child)

If you agree to participate as a class member we’ll do these things:

I’ll listen to you read to see how your reading gets better over the year.

We’ll talk about who your friends are in your class and who you like to work with.

We’ll do two activities where you tell me how this class is different from your class last year.

I’ll observe you and the other students in the class during class and at recess and lunch a few times each month. I’ll do some video taping when I’m in your class, so I’ll record you some times.

When I come in to observe in the class, I’ll sometimes talk to you about what you’re doing.

You don’t have to take part in the research. It won’t make any difference to your marks or affect your program in any way. If you agree to take part now, and decide later that you don’t want to, you can just tell me or your teacher, or your parents that you don’t want to be involved any more and you can stop.

The good thing about doing this research is that we’ll learn about this program, and what kids like and don’t like about it. We’ll also learn how to make this program
better for kids, and learning support in regular classes better for kids. I don’t think there
is any risk for you in taking part in this research.

Can you answer these questions for me:

Do you understand that there will be a research study taking place in your
classroom? ______

Do you agree to take part in the research? ______

Do you know that you can stop taking part in the research at any time - you just
have to say so to me, or your teacher, or your parents. _____________

Student name: ______________________________

Date: ______________________________

Assent Collected by: ______________________________
Informed Assent for Research (Child)

If you agree to participate as a case study subject we’ll do these things:

I’ll ask you about your class and what you like and don’t like about the program. We’ll also talk about how being in this class compares to being in your class last year. I’ll tape record our talk so that I can listen to it again afterwards.

I’ll also ask you about your feelings about school and how you are doing and about learning to read.

I'll also look at your file in the office that has copies of your report cards and what schools you’ve been to, and any assessments you’ve had.

You don’t have to be a case study subject or take part in the research at all. It won’t make any difference to your marks or affect your program in any way. If you agree to be a case study subject now, and decide later that you don’t want to, you can just tell me or your teacher, or your parents that you don’t want to be involved any more and you can stop.

The good thing about doing this research is that we’ll learn about this program, and what kids like and don’t like about it. We’ll also learn how to make this program better for kids, and learning support in regular classes better for kids. I don’t think there is any risk for you in taking part in this research.

Can you answer these questions for me:
Do you agree to take part in the research as a case study subject? ________

Do you know that you can stop taking part as a case study subject or in the research all together at any time - you just have to say so to me, or your teacher, or your parents. ______________

Student name: ____________________________________________

Date: ____________________________

Assent Collected by: ________________________________
Adult Consent Form for Parents Who Are Research Participants

Dear Parent or Guardian:

Thank you for allowing your child to participate as a case study subject in this research study. By signing this consent you, as the parent of a child participant, agree that you have read the research information regarding this study, that was sent home along with this consent form, and agree to participate in the following way:

Data to be collected in September and May from you as a parent of a case study subject:

Interviews. These will take approximately 30 minutes, and can be conducted either at the school, or at your home. You will be asked to describe your child’s experiences in the Intensive Literacy Program and compare this program to previous learning support your child has received.

Digital audio-recordings: The interviews with you will be audio-recorded, and within two months, the audio-recording will be transcribed with all identifiers removed, and the audio-recording will be destroyed.

Participation in this research will not affect your child’s enrolment in the Intensive Literacy Program. All information will be kept strictly anonymous. The school district, and specific program will not be disclosed in my dissertation or any research reports. You are free to withdraw from this research at any time for any reason.
A report of research findings may be obtained from me following the data collection at the end of the school year and subsequent data analysis by emailing me at [...]@sfu.ca.

This research has several potential benefits for both research and practice. I will be writing my doctoral dissertation, and presenting my findings to both the academic community at Simon Fraser University and to the … School District. This intimate look at the lived experiences of children in these programs and their reading development over the year will promote discussion regarding best practices in providing reading intervention support to students who struggle to acquire literacy skills. The school district will then have a starting point to make adjustments and design future research into providing the most positive experiences for students in need of intensive literacy intervention. Parents of the three children involved in the research as case study subjects will receive a $25 VISA gift card in June as a thank you for in-depth participation.

Risks: No potential risks are foreseen from your participation. However, you may withdraw from the research at any time.
Adult Consent Form for Parents Who are Research Participants

I certify that I understand the procedures to be used in this study, that I have been able to receive clarification of any aspects of this study about which I have had questions, and that I have the right to withdraw my participation from the study at any time.

In signing this form I agree to participate in this research. Specifically, I will take part in interviews regarding my child’s enrolment in the Literacy Development Program and previous learning support provided by the school district. I agree to allow these interviews to be audiotaped.

Student Name: ____________________________________________

Parent Name: ____________________________________________

Parent Signature: _________________________________________

Date: __________________________

Best phone number to contact you at to arrange date/time/location of interviews:

________________________________

*Please return this form to your child’s teacher as soon as possible.
Informed Consent to Participate in a Research Study Teacher/EA

Summary of Proposed Research and Potential Benefits

The purpose of this research is to examine the experience of children participating in the … School District’s Literacy Development Program. The study will involve gathering some information from all of your students with parental consent, as well as more extensive information gathering from three individual students in your class whose parents have agreed that their children can be case study subjects. The children in your class will be told that Mrs. Jenkins is going to be doing research and coming in to see what the program is like, what the children do in the program, and how things change as the year goes on.

Data to be collected from the teacher/EA:

Individual interviews. These will take approximately 30-45 minutes and will be conducted in September and May. You will be asked to describe your experiences teaching the program, and your perception of the experiences of your students.

Observations of your teaching. I will visit the classroom several times per month to observe instruction and students at work and at play for a portion of the day.

Informal conversations on observation days.

Collection of teaching overviews, samples of month/week/day plans, and any other teaching/planning related information.
Additional data will be collected from your students during class time. This will involve the researcher observing in the classroom, and pulling students during class time to conduct assessments and interviews as outlined in the research information for teacher document.

Parents of the three case study subjects will be interviewed regarding their perceptions of their children’s experiences in the program and previous learning support their children have received as outlined in the research information for teacher document.

Digital audio-, photo- and video-recordings.

All interviews with you will be audio-recorded, and within two months, the audio-recording will be transcribed with all identifiers removed, and the audio-recording will be destroyed.

You and your students’ participation in activities will be photo- and video-recorded on observation days. Video recordings are very useful in analyzing complex events such as classroom instructional activities. Brief video clips and/or photos may be used in the documentation in my final dissertation, and I may use them when presenting my work at conferences and workshops. Although it is not possible to offer anonymity if video footage or photographs including participants’ faces are used in presenting this research, participants will not be named or identified in any way. If having your face being shown on video for presentation of this research is a problem, then I will endeavour
not to use such clips, or if necessary, expunge your face from the clip to be shown. All
digital photos and digital videos will be stored on a separate hard-drive in a locked filing
cabinet. Participants’ names will not be used to identify the photos or the videos.

Participation in this research will not affect your employment in the program or
with the … School District. All information will be kept strictly anonymous. The
school district, and specific program will not be disclosed in my dissertation or any
research reports. Case study subjects will be identified only by gender, grade, and as
Child A, B or C and you will be identified as The Teacher. You are free to withdraw
from this research at any time for any reason. A report of research findings may be
obtained from me following the data collection at the end of the school year and
subsequent data analysis by emailing me at ...@sfu.ca.

This research has several potential benefits for both research and practice. I will
be writing my doctoral dissertation, and presenting my findings to both the academic
community at Simon Fraser University and to the … School District. This intimate look
at the lived experiences of children in these programs and their reading development over
the year will promote discussion regarding best practices in providing reading
intervention support to students who struggle to acquire literacy skills. The school
district will then have a starting point to support these programs and design future
research into providing the most positive experiences for students in need of intensive
literacy intervention. Your students will be informed regarding my research and their
participation in this opportunity. Small incentives will be given to all students in your class as a result of the on-going research collaboration. *Parents of the three children involved in the research as case study subjects* will receive a $25 VISA gift card in June as a thank you for in-depth participation.

Risks: No potential risks to you or your students are foreseen. However, you or your students are always able to withdraw from the research at any time.
Informed Consent for Research (Teacher / EA)

I certify that I have read the research information for teacher document, understand the procedures to be used in this study, have been able to receive clarification of any aspects of this study about which I have had questions, and that I have the right to withdraw my participation from the study at any time.

In signing this form I agree to participate in this research. Specifically, I agree to be interviewed, to have my teaching observed, to support the involvement of my students as subjects, and to provide teaching overviews and plans. I agree to allow interviews to be audiotaped.

Name: ________________________________________

Signature:_____________________________________

Date: _______________________________
Appendix C

Semi-structured Interviews

Parent Interview Fall:

Opening: Perhaps you could tell me about your child’s school history and how he/she came to be enrolled in this program?

If not answered then ask the following:

Why did you apply for your child to attend the literacy development program?

What specifically do you hope your child will get out of attending this program?

How was your child doing overall academically in his/her previous school?

How was your child doing socially in his/her previous school?

Could you tell me about the type of learning support your child received prior to coming to this program?

If not answered then ask the following:

How effective do you feel the previous learning support your child was receiving was?

How easy or difficult was it to make the decision to have your child leave your neighbourhood school and come to this program for the year?
Did you involve your child in the decision to enrol in the program? How did he/she feel about the move? How did you feel once you’d made the decision?

At this point in the year how do you feel about the decision?

How does your child seem to be settling in to the new school/class?

Do you see any differences in your child at this early point in the year?

Is there anything about the program so far that you particularly like, dislike or wonder about?

Is there anything that we haven’t discussed that you think might affect your child’s experience in this program?
Parent Interview Spring:

Opening: ____________ has almost finished his/her year in the Literacy Development Program. Can you tell me about what this year has been like for ______?

If not answered then ask the following:

How have ____________’s reading skills developed this year?

How do you feel about his/her overall academic achievement this year?

How was this year for __________ socially?

How do you feel now about your decision to have __________ attend the Program?

How do you think __________ has felt about his/her year? How do you know?

Do you see any differences in your child since the beginning of the year?

Overall, would you say this year has been a negative, neutral, or positive experience for ________.

Is there anything about the program this year that you particularly liked, disliked or wonder about?

If another parent asked you to briefly describe what the Literacy Development Program is like, what would you say?
Would you recommend this program to other parents? (Why, why not?)

If you were asked to state the best thing and the worst thing about enrolling in this program for ______, what would they be? Why?

Zack has been in the Literacy Development Program (at two different schools) for the last two school years. Do you feel he is ready to return to a regular classroom program? (What makes you think so OR Why not?)

What school will Emma be enrolled in next year for Grade 5? At the beginning of the year you mentioned to me that you thought she would need two years in the program. After this one year in the program, do you feel Emma is ready to return to a regular classroom program? (What makes you think so OR Why not?)

Michael has been accepted for a second year in the Grade 6/7 Literacy Development Program. Can you tell me about the process of applying for a second year. How does Michael feel about a second year? How do you know/what makes you think that?

If you had a chance to speak to the school board regarding this program, what would you say?
**Student Interview Spring:**

Tell me what it’s been like to be in this class this year.

Has your reading changed since September? Why do you think that is?

How has it been riding the bus to school every day?

What school are you going to next year? Are you looking forward to that?

How do you think your class next year will be different from this class?

If a student was thinking of applying to come to this class, what would you tell him or her about it?

Has it been harder or easier for you to learn in this class?

What has been the worst thing about being in this class?

What has been the best thing about being in this class?

If you could finish this sentence what would you say: This year in this class has been…
Teacher Interview:

Tell me a bit about how you came to teach this program. What did you teach previously and how did you end up here.

You have mentioned to me that “literacy is your thing”. How did you come to be so interested and experienced in literacy teaching?

You’ve taught this program for four years now. During that time, do you feel you’ve learned anything that you didn’t already know about:

- teaching literacy
- teaching students with learning disabilities

You clearly teach a very organized, multifaceted literacy program in your classroom. How did you go about learning to teach this way?

You’ve also mentioned that if something interesting comes up in Round 1, that you will consider taking a different teaching position. Why?

Are there any areas of literacy instruction that you feel you’d like to learn more about? Or do you have any questions that you “gnaw on” so to speak?

-----------------------------

Let’s talk about this program.
If you were asked to briefly describe this program, what would you say?

In what ways is this program different from other programs in which you have taught?

What impact do you feel being enrolled in this program has on students?

Do you think this program offers something different to students when compared to differentiated instruction in the regular classroom, targeted in-class support, or pull-out support?

Does enrolment in this program impact students’ achievement in areas other than reading?

Do you believe that students are either negatively or positively impacted socially from enrolment in this program?

What are your thoughts around the busing of students to your program?

What is your impression of what the transition back to a regular classroom program is for students that leave your program?

Do you think other school districts should offer this model of program – a full year, adapted integrated curriculum placement option?
If you were asked to briefly describe students’ experience in this program, what would you say?

-------------------------------------------------------

Let’s talk about your class this year.

How would you describe your group this year?

Tell me about your students’ progress in their literacy development. Do any students stand out as having made tremendous progress? Limited progress?

Tell me about them socially. Does anyone stand out to you as having difficulty within the group socially? Are there any leaders socially?

Tell me about Emma. How has her year been?

How about Zack?

How has Michael’s year been?

How many students did you re-refer for a second year? Who are they? What made you decide to refer those students for more time in the program?

How do you feel the students returning to regular classroom programs will do? Academically? Socially?
Can you foresee any challenges for them when they return to a regular classroom?

If you could sum up what this year has been like for the students’ in your class, what would you say?
Education Assistant Interview:

Tell me a bit about how you came to be the EA in this program.

What is your role in this program? Tell me about what you do.

You’ve been the EA in this program for eight years now. You’ve worked with two different teachers. Has the program changed at all during that time? Has your role changed?

If you were asked to briefly describe this program, what would you say?

What impact do you feel being enrolled in this program has on students?

Does enrolment in this program impact students’ achievement in areas other than reading?

Do you believe that students are either negatively or positively impacted socially from enrolment in this program?

If you could talk to someone at the school board, what would you want them to know about this program?

Let’s talk about the class this year.

How would you describe the group this year?

Tell me about Emma. How has her year been?
How about Zack?

How has Michael’s year been?

If you could sum up what this year has been like for the students in the class, what would you say?

-----------------------------------

Earlier this year you arranged a reunion for past and current students. Can you tell me about that?

What made you decide to host a reunion?

What were you envisioning when you planned the reunion?

Tell me about the event.

Did it turn out as you expected?

Will you host another one in the future? Why, why not?
## Appendix D

### Example of Open Coding of Observation Field Notes

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:41</td>
<td>Katrina tells me “On Friday, the 9th I’m going to the movies with Emma. We’re going to see Frozen at school. And we’re going to wear our pajamas. Well, I’m going to wear my pajamas.”</td>
<td>Positive Peer Interactions, Access to non-LD Directive Language</td>
</tr>
<tr>
<td></td>
<td>Students came in, teacher asked students to hand in to her their spelling tests from last week signed by their parents, and then set up their journals.</td>
<td>Directive Language</td>
</tr>
<tr>
<td></td>
<td>Teacher: “Listen to the announcements please.” as bing comes over PA</td>
<td>Directive Language</td>
</tr>
<tr>
<td></td>
<td>After announcements students rise to sing O Canada as it is broadcast over the PA (done in elementary schools in Surrey every Monday)</td>
<td>Directive Language</td>
</tr>
<tr>
<td>8:47</td>
<td>Teacher: “Set up your journals please.”</td>
<td>High Expectations for adoption of learning routines</td>
</tr>
<tr>
<td></td>
<td>Zack gets told to erase and redo his line with a ruler.</td>
<td>Emma engagement, Michael engagement, Adapted Instruction</td>
</tr>
<tr>
<td></td>
<td>Emma has filled in “The greatest mom in the world” No one else has anything filled in.</td>
<td>Emma / Michael engagement</td>
</tr>
<tr>
<td></td>
<td>Michael puts hand up to answer: Why do we celebrate mother’s day?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teacher records ideas on a web on front white board.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Michael, “To thank them for everything they’ve done.”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emma, “To thank them for helping us live.” The teacher elicits from Emma, “feeds us, gives us clothes, helps us with homework”</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix E

**Structured Analysis Matrices**

<table>
<thead>
<tr>
<th>Relatedness</th>
<th>Initial Codes</th>
<th>Axial Codes</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relatedness: Support</strong></td>
<td>Positive Staff/Student Interactions</td>
<td>Positive Classroom Climate</td>
<td>Feeling Connected</td>
</tr>
<tr>
<td></td>
<td>Positive Peer Interactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Educational Practices That Build Relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access to Peers without LD</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family Involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positive Opinions About Program and Classmates</td>
<td>Positive Place to Learn</td>
<td>Valuing Relationships</td>
</tr>
<tr>
<td><strong>Relatedness: Threats</strong></td>
<td>Conflicted Staff/Student Interactions</td>
<td>Relationships Impact Behaviour/Affect</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peer Conflicts</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wanting to Return to Regular Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Negative Opinions About Program and Classmates</td>
<td>Preference for Regular Education</td>
<td></td>
</tr>
<tr>
<td>Competence</td>
<td>Initial Codes</td>
<td>Axial Codes</td>
<td>Theme</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------</td>
<td>------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>Competence: Support</strong></td>
<td>Clear Learning Routines</td>
<td>Supporting Independence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consistent Instructional Schedule</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Embedded Literacy Intervention</td>
<td>Inclusion in Community of Learners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Differentiated Literacy Instruction</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High Teacher Expectations</td>
<td>Self as Capable Learner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adapted Regular Education Curriculum – all Subjects</td>
<td></td>
<td>Minimizing Otherness</td>
</tr>
<tr>
<td><strong>Competence: Threats</strong></td>
<td>Special Education Program</td>
<td>Obvious Difference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access to age appropriate reading materials</td>
<td>Living with LD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frustration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>Initial Codes</td>
<td>Axial Codes</td>
<td>Theme</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------------</td>
<td>------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Autonomy: Support</td>
<td>Rationale – Teacher Provided</td>
<td>Reason to Engage</td>
<td>Engaging in Educational Practices</td>
</tr>
<tr>
<td></td>
<td>Rationale – Student Articulated</td>
<td>Making Learning Visible</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positive Feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy: Threats</td>
<td>Directive Language (without rationale)</td>
<td>Agentic Patterns of Engagement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limited Choice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Breaking the Rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use of Incentives &amp; Negative Consequences</td>
<td>Behavioural Engagement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conforming to Expectations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix F

Pattern Matching

Example of Pattern Matching Data Analysis: Context during independent reading time – supports for/threats to Competence and Autonomy and coded examples of Michael’s reading engagement during independent reading times

<table>
<thead>
<tr>
<th>Coded Data of Context During Independent Reading</th>
<th>Coded Data of Michael’s Reading Engagement</th>
</tr>
</thead>
</table>

Teacher and EA listen to students read home reading books while students complete Big Four. When finished routine is that students participate in independent silent reading, until everyone has read to the teacher or EA.

**Support for Competence: Routine/Structure**

Photographs, videos and observations of classroom:
- Students can choose from library books or many books on bookshelf and organized in tubs on shelves under window. Magazine box of Chickadee magazines on shelf.
- Reading A to Z photocopied leveled books (home reading books) in fabric organizer by level on window ledge. No students are observed reading these books during independent reading time.
- Decodable text books are stored in tubs on shelves and used only for reading.

8:56 Michael is “reading” a graphic novel, BONE, (much too difficult text) and chatting to Cameron sitting beside him.

8:58 Michael reads a Reading A to Z Level D book to EA. After reading he goes and gets a new “reader” and puts it in his homework book. He’s doing a bit of a silly dance on the way. No one seems to notice or comment. He’s quiet while doing it and keeps moving toward his desk.

9:03 Michael is looking at pictures in the graphic novel (BONE)

**Not engaged – off task and pretending to read**

Michael pulls out a Magic Treehouse book. He has a bookmark in it. Teacher calls him to read his reader. See video of Michael reading a level C book. I watched him “read” the Magic Treehouse book. On pages with pictures he spent time looking at the pictures. On pages without pictures, he just gazed about the pages without following the print from left to right, top to bottom.

**Not engaged – pretending to read**
**instruction during Guided Reading time twice per week.**

**Autonomy support: Choice of reading material for those students who can read non-decodable/controlled vocabulary text**

**Threat to Competence for Michael: no choice of books that are of age appropriate interest level.**

---

Reading is the only educational practice during independent reading times:

Zack – His Big 4 book is closed. He puts his hand up (with his elbow on the desk, so not very obviously- almost half heartedly) When the EA responds he asks her what he can do. She says that just like always after planners they read. He wants to know if there’s something else he can do. She says no. That reading is always the only option at this time

**Threat to Autonomy – lack of choice**

---

EA tells Zack: *when you read a magazine, find an article to read don’t do I spy pictures.*

EA to Michael: *You should be reading not constructing things.*

**Threat to Autonomy – direction without rationale**

---

Michael sits at his desk and pulls out a large chapter book. He sits looking at the pages. There are no pictures. Michael gets up and goes and chats quietly to Tyla, then comes back to desk and pulls out a *Magic Treehouse* book. He has a book mark in it. Turns a page. Then puts it away, goes to his backpack and pulls out a book borrowed from the school library on optical illusions. He stops to chat with Tyla en route back to his desk. He then started looking at the book and then engaged both me and the EA in guessing the illusions before pulling out the decoder page to show us the actual answer. The EA acknowledged the interesting illusion, but then as he folded a decoder paper she reminded him, *You should be reading not constructing things.* He continued to look at the book, but no longer pulled out the decoder sheets to view the illusions.

**Not engaged – off task chatting & viewing pictures in book**

Michael came back in room after reading *Frog and Toad* to me and started chatting. Teacher told him to stop talking. He sits at his desk and pulls out a large chapter book. No pictures. He sits looking at the pages. Turns a page too quickly to have read it and looks about the room.

**Not engaged – pretending to read**

---

Michael is looking at the book *Storm Runners* that the Librarian dropped off for him after school yesterday. (Upper level novel – no pictures.) He turns around and sees that Ben has pulled out his copy. He asks him, “Have you started that book yet?” Ben says, “No.”

**Not engaged – talking with classmate**
Appendix G

Program Description

Email Text – Introductory Paragraph:

Good morning,

Attached is the XX Program Referral package for the 2013/14 school year. The package contains:

1. Memo / checklist,
2. Selection criteria and process,
3. NEW Parent Information Sheet re: XX Programs
4. Parent Consent for Referral to XX Program, and
5. Education Services Referral Form.

Attachment:

MEMO
To: Elementary Principals and Vice-Principals LST Teachers
Classroom Teachers
School Psychologists
Speech Language Pathologists
From: xxx
Subject: Referrals - 2013/14 XX Program for LD Students

We are beginning the process of student selection for the Primary and Intermediate XX (LD) Classes. There are four levels of the Program as follows:

- The Primary/Intermediate Class, designed for students in Grades 3-4, is located at ....
- The Primary/Intermediate Class, designed for students in Grades 3-4, is located at ....
- The Intermediate Class, designed for students in Grades 4-5, is located at ....
- The Intermediate Class, designed for students in Grades 5-7, is located at ....

These are full time student placements for one year, with consideration given by the committee for a second year, should circumstances warrant it. The student receives intensive remediation support in reading, in addition to instruction in curricular outcomes for the appropriate grade. Classroom supports include a specialist teacher and a full time teaching assistant. Each class is capped at 14 students.

Please note: Transportation services are not automatically provided by the district for this program.
REFERRAL REQUIREMENTS / CHECKLIST
Note: Incomplete and/or late referrals will not be considered.
1) A completed Education Services Referral form (attached). Please ensure that any current
designation(s) are recorded on the top of the referral form and that the following documents ARE
attached to the referral:
a) A psycho-educational assessment identifying a learning disability in the area of reading.
b) A copy of the current IEP indicating reading interventions.
c) A copy of reading assessments (e.g., DRA, PM Benchmarks, Fast ForWord RPI etc).
d) Copies of the 2 most recent report cards.
e) A recent behavioural assessment (e.g., Conners’ Profile, teacher comments etc).
f) Recent SBT notes (if available).
2) A signed parent consent form for referral to the Program (attached).
Please send all original signed referral packages Attn: XX prior to Thursday, April 18, 2013 to
ensure they are included in the selection process.
We appreciate your efforts in making this opportunity available for some of your students.

SELECTION CRITERIA AND PROCESS
· Psycho-educational assessment has been completed and indicates a learning disability on the
severe end of the spectrum (e.g., a significant gap between expected achievement and school
performance).
· Primary presenting issue will be a reading disability.
· Secondary issues may include:
a) mild Speech/Language difficulties: articulation, language delays (e.g., background
knowledge/vocabulary, expressive language);
b) mild behavioural difficulties which do not require Child Care Worker support - a current
Conners’ Profile or current teacher comments are required.

APPLICATION PROCESS
· Parent(s)/guardian(s) attend an information meeting at the respective program school prior to an
application/referral package being completed (see attached program handout for date(s)).
LST/Classroom Teachers are encouraged to attend this meeting as well.
· The school will send a newly completed ‘Education Services Referral’ District form, with ALL
supporting documents (indicated on the attached memo) to: XXX - indicate on that form that your
school wishes the student to be considered for placement in the class for September of the next
year.
· Education Services will process the referral and set aside a copy for the appropriate program
(e.g., Primary/Intermediate Intensive Literacy Program Grades 3-4 at XX, the
Primary/Intermediate Intensive Literacy Program Grades 3-4 at XX, the Intermediate Intensive
Literacy Program Grades 4-5 at XX, or the Intermediate Intensive Literacy Program Grades 5-7
at XX).

PRE-SELECTION MEETING
· In late spring, the selection committee (teacher, principal, and district staff from Education
Services) will meet to consider referrals for the following September.
· If accepted into the program, the parents/school will be sent a letter immediately after the
meeting, regarding this placement option. All other applicants (whether waitlisted or declined)
and their home schools will be sent a notification letter as well.
POST-SELECTION MEETING
Parents will attend a mandatory orientation meeting after the selection committee has selected the students for the program to:
- complete the registration forms necessary for the student to attend the program,
- sign a program support agreement indicating that they are willing to help the program meet its mandate. This agreement will cover homework expectations, behavioural expectations, attendance in the program, parent attendance at meetings (e.g., IEP, Report Cards) etc., and
- provide transportation request letter (if applicable). Transportation is not automatically provided by the district; also, transportation will not be offered for a student who resides or moves outside of district boundaries (refer to School District Regulation xxx).
If at any time, teachers or administrators would like to see the program in action, please contact the respective program’s teacher.

ELEMENTARY PROGRAM
1. What is the program’s purpose?
The XX School Board has expressed an ongoing interest in intensive intervention for students who have difficulty acquiring literacy skills. The purpose of this program is to provide intensive literacy skills development for students in elementary school who have a severe learning disability in reading and written language. This will be the most intensive level of service we offer for these students.
It is a time limited, immersion approach to addressing LD needs therefore, mandatory attendance is required for the full school year. (Please note: Extended personal holidays (more than 2 weeks) will result in an automatic withdrawal from the program.)
2. Who qualifies for placement?
Students, whose scores fall within the learning disabled range in reading as identified by XX School Board criteria, can be considered for this class. Placement is for one school year if accepted into the program. (Note: It is expected that families will make their own transportation arrangements for their child, however if transportation is a significant barrier for the child to attend this program, a formal written request for bussing will be required.)
3. How will the class be staffed?
The class holds a maximum enrolment of 14 students. It is staffed by a Special Education Teacher and one Education Assistant.
4. What strategies will be employed?
Students will be enrolled in a self-contained classroom and receive all of their instruction from their classroom teacher. This is an adapted program that delivers core curricular learning outcomes in each subject area. The program will emphasize Language Arts and Math development by employing a number of methodologies including explicit instruction in phonemic awareness, phonemic decoding, fluency, vocabulary and reading comprehension.
5. How will the program be delivered?
Each child’s Individual Education Plan (I.E.P.) will be reviewed and revised to reflect his or her instructional needs. Individual and group instruction will reinforce taught skills. Parents are expected to support this program with nightly homework.
AN INFORMATION MEETING FOR INTERESTED PARENTS AND STUDENTS WILL BE HELD AS FOLLOWS:
Grades 3/4 - April 8/13, 3:30 p.m. Location:
Grades 4/5 - April 10/13, 3:30 p.m. Location:
Grades 3/4 - April 13 3:00 p.m. Location:
Grades 5/6/7 - April 3/13, 3:30 p.m. Location:
### Appendix H.

**Student Characteristics (Fall 2013)**

<table>
<thead>
<tr>
<th>Student</th>
<th>Age September 2013</th>
<th>Grade</th>
<th>Gender</th>
<th>Education History</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael</td>
<td>9 yrs 11 mos</td>
<td>5</td>
<td>M</td>
<td>First Year in Program</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Previously in French Immersion</td>
</tr>
<tr>
<td>Zack</td>
<td>10 yrs 4 mos</td>
<td>5</td>
<td>M</td>
<td>Second Year in the Program (Two locations)</td>
</tr>
<tr>
<td>Emma</td>
<td>9 yrs 9 mos</td>
<td>4 (Grade 5 Age)</td>
<td>F</td>
<td>Repeated Kindergarten</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>First Year in Program</td>
</tr>
<tr>
<td>Ben</td>
<td>10 yrs 1 mo</td>
<td>5</td>
<td>M</td>
<td>First Year in Program</td>
</tr>
<tr>
<td>Gina</td>
<td>10 yrs 2 mos</td>
<td>5</td>
<td>F</td>
<td>Third Year in the Program (Two Locations)</td>
</tr>
<tr>
<td>Hayden</td>
<td>10 yrs 5 mos</td>
<td>5</td>
<td>M</td>
<td>First Year in Program</td>
</tr>
<tr>
<td>Kristen</td>
<td>10 yrs 5 mos</td>
<td>5</td>
<td>F</td>
<td>First Year in Program</td>
</tr>
<tr>
<td>Kylie</td>
<td>9 yrs 11 mos</td>
<td>5</td>
<td>F</td>
<td>First Year in Program</td>
</tr>
<tr>
<td>Philip</td>
<td>9 yrs 6 mos</td>
<td>4</td>
<td>M</td>
<td>First Year in Program</td>
</tr>
<tr>
<td>Stephen</td>
<td>10 yrs 4 mos</td>
<td>5</td>
<td>M</td>
<td>Second Year in the Program (1 location)</td>
</tr>
<tr>
<td>Tyler</td>
<td>9 yrs 11 mos</td>
<td>5</td>
<td>M</td>
<td>First Year in Program</td>
</tr>
</tbody>
</table>
## Appendix I.

### Teacher’s Literacy Assessment Data Sheet (Fall 2013)

<table>
<thead>
<tr>
<th>Student</th>
<th>Grade</th>
<th>Reading Level</th>
<th>Decoding</th>
<th>Spelling</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>*PM Benchmark Instructional Level</td>
<td>*Houghton/Mifflin Phonics/Decoding Screening Test</td>
<td>*Words Their Way Primary Spelling Inventory</td>
<td>*Quick Scale Writing from Experience Rubrics</td>
</tr>
<tr>
<td>Michael</td>
<td>5</td>
<td>No level non-reader</td>
<td>Review consonants Teach short vowels</td>
<td>Begin short vowels Group 1</td>
<td>Grade 1 Not meeting</td>
</tr>
<tr>
<td>Zack</td>
<td>5</td>
<td>12 Late Grade 1</td>
<td>Review short/long vowels Begin digraphs</td>
<td>Begin with long vowel patterns Group 3</td>
<td>Grade 1 Meeting</td>
</tr>
<tr>
<td>Emma</td>
<td>4</td>
<td>19 Early Grade 2</td>
<td>Review short vowels Begin long vowels</td>
<td>Begin with digraphs Group 2</td>
<td>Grade 1 Meeting</td>
</tr>
<tr>
<td>Ben</td>
<td>5</td>
<td>20 Mid-Grade 2</td>
<td>Review short vowels Begin long vowels</td>
<td>Begin with long vowel patterns Group 3</td>
<td>Grade 3 Meeting</td>
</tr>
<tr>
<td>Gina</td>
<td>5</td>
<td>10 Mid-Grade 1</td>
<td>Review short vowels Begin long vowels</td>
<td>Begin with other vowel patterns Group 4</td>
<td>Grade 3 Minimally meeting</td>
</tr>
<tr>
<td>Hayden</td>
<td>5</td>
<td>3 Early Grade 1</td>
<td>Review short vowels Teach long vowels</td>
<td>Begin with long vowel patterns Group 3</td>
<td>Grade 1 Minimally meeting</td>
</tr>
<tr>
<td>Kristen</td>
<td>5</td>
<td>13 Late Grade 1</td>
<td>Review short/long vowels Begin digraphs</td>
<td>Begin with long vowel patterns Group 3</td>
<td>Grade 2 Minimally meeting</td>
</tr>
<tr>
<td>Kylie</td>
<td>5</td>
<td>9 Mid-Grade 1</td>
<td>Review short vowels Begin long vowels</td>
<td>Begin with short vowels Group 1</td>
<td>Grade 2 Minimally meeting</td>
</tr>
<tr>
<td>Name</td>
<td>Grade</td>
<td>Age</td>
<td>Phase</td>
<td>Instruction</td>
<td>Enrollment Status</td>
</tr>
<tr>
<td>--------</td>
<td>-------</td>
<td>-----</td>
<td>------------------------</td>
<td>-------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Philip</td>
<td>Mid</td>
<td>9</td>
<td>Beginning decoding</td>
<td>Group 2</td>
<td>Enrolled late</td>
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<td></td>
<td>Grade 1</td>
<td></td>
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<tr>
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<td>Early</td>
<td>8</td>
<td>Review short/long</td>
<td>Group 3</td>
<td>Grade 2</td>
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<td>Grade 1</td>
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<td>vowels Begin long</td>
<td></td>
<td>Meeting</td>
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<td>vowel patterns</td>
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<td>Tyler</td>
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<td>5</td>
<td>Review short vowels</td>
<td>Group 2</td>
<td>Grade 1</td>
</tr>
<tr>
<td></td>
<td>Grade 1</td>
<td></td>
<td>Begin long vowels</td>
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<td>Minimally</td>
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<td>meeting</td>
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Appendix J.

Test of Word Reading Efficiency Results

<table>
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<th>June</th>
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<td>Age Norms</td>
<td>Standard Score</td>
<td>Age Norms</td>
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<td></td>
<td>Sight Word</td>
<td>Phonemic Decoding</td>
<td>Sight Word</td>
<td>Phonemic Decoding</td>
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<tr>
<td>Michael</td>
<td>&lt;55</td>
<td>67</td>
<td>67</td>
<td>80</td>
</tr>
<tr>
<td>Zack</td>
<td>70</td>
<td>81</td>
<td>81</td>
<td>86</td>
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<td>Emma</td>
<td>86</td>
<td>74</td>
<td>94</td>
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<td>Ben</td>
<td>80</td>
<td>83</td>
<td>85</td>
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<td>Gina</td>
<td>69</td>
<td>77</td>
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<td>Hayden</td>
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<td>Kristen</td>
<td>74</td>
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<tr>
<td>Kylie</td>
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<td>72</td>
<td>78</td>
<td>73</td>
</tr>
<tr>
<td>Philip</td>
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<td>79</td>
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<td>85</td>
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<tr>
<td>Stephen</td>
<td>58</td>
<td>74</td>
<td>66</td>
<td>86</td>
</tr>
<tr>
<td>Tyler</td>
<td>87</td>
<td>72</td>
<td>93</td>
<td>82</td>
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</table>
Appendix K.

Prescribed Learning Outcomes – Terms One and Two

Term 1 – page 1

<table>
<thead>
<tr>
<th>Language Arts Reading: First Report</th>
<th>Second Report</th>
<th>Third Report</th>
<th>Final</th>
</tr>
</thead>
</table>
- reads fluently and demonstrates comprehension at grade-appropriate expectations and to increase fluency and comprehension
- generates and responds to questions after reading to confirm and extend meaning
- reflects and responds after reading to confirm and extend meaning

**Writing:**
- writes a variety of clear, focussed personal writing using sentence variety and lengths, with increasing rhythm and flow
- writes a variety of clear, focussed personal writing using a meaningful, logical and effective organization that showcases a central idea or theme
- uses ongoing revising and editing during writing to express and refine thoughts

**Oral Language (Listening and Speaking):**
- interacts with others for the purposes of sharing and explaining ideas
- recounts experiences in a logical order
- stays on topic in a focussed discussion
- ignores distractions to understand ideas and information

<table>
<thead>
<tr>
<th>Math</th>
<th>First Report</th>
<th>Second Report</th>
<th>Third Report</th>
<th>Final</th>
</tr>
</thead>
</table>
- represents and describes whole numbers to 1 000 000
- compare and orders numbers to 10 000
- identifies and describes patterns found in tables and charts
- quick recall of addition, subtraction, multiplication and division facts
- uses strategies to solve word problems
Term 1 – page 2

<table>
<thead>
<tr>
<th>Subject</th>
<th>First Report</th>
<th>Second Report</th>
<th>Third Report</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Science</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• identifies variables that can be changed in an experiment</td>
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<tr>
<td>• evaluates the fairness of a given experiment</td>
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</tr>
<tr>
<td>• describes the steps in designing an experiment</td>
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</tr>
<tr>
<td><strong>Social Studies</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>• describes the major physical regions of Canada</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• describes the location of natural resources within BC and Canada</td>
<td></td>
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</tr>
<tr>
<td><strong>Physical Education</strong></td>
<td></td>
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</tr>
<tr>
<td>• participates daily in a variety of moderate to vigorous physical activities that develop muscular strength and endurance, cardiovascular endurance, and/or flexibility</td>
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</tr>
<tr>
<td>• demonstrates fair play in physical activity</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>• demonstrates proper technique to volley and bump in predictable settings</td>
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<td></td>
</tr>
<tr>
<td><strong>Health &amp; Career Education</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>• demonstrates an understanding of the importance of developing effective work habits</td>
<td></td>
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<tr>
<td>• demonstrates an understanding of the benefits of personal support networks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• assesses own interpersonal skills as they apply to building and maintaining positive relationships with friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Core French</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fine Arts</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>• apply rhythm, melody and elements of expression through singing and playing of classroom repertoire</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• demonstrates appropriate use of classroom instruments</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>• drafts ideas for images using feelings, observation, memory and imagination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• interprets reasons for preferences in artworks</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
### Language Arts
**Reading:**
- reads fluently and demonstrates comprehension at grade-appropriate expectations
- reads and rereads just-right texts independently for 30 minutes daily for enjoyment
  and to increase fluency and comprehension
- develops meaning from the literary elements (plot, setting, characters)
- summarizes and synthesizes after reading to construct, monitor and confirm meaning

**Writing:**
- writes a variety of clear, focussed personal writing using sentence variety
  and lengths, with increasing rhythm and flow
- uses ongoing revising and editing during writing to express and refine thoughts
- reads aloud and listens for fluency after writing to improve their work
- edits work for conventions (e.g., grammar, capitalization, punctuation, spelling)

**Oral Language (Listening and Speaking):**
- interacts with others for the purposes of sharing and explaining ideas
- stays on topic in a focussed discussion
- recounts experiences in a logical order
- uses details or examples to enhance meaning
- ignores distractions to understand ideas and information

### Math
**First Report** B | **Second Report** B | **Third Report** | **Final**
---|---|---|---
- represents and describes whole numbers to 1,000,000
- uses personal strategies to add numbers with answers 10,000 and their corresponding
  (up to 5 digits) subtractions
- solves problems that involve addition of numbers with answers to 10,000
  and their corresponding (up to 5 digits) subtractions
- quick recall of basic math facts
- solves 2-digit by 2-digit multiplication problems
- describes and applies mental mathematics strategies to determine basic multiplication
  facts to 9 x 9 and related division facts
- demonstrates an understanding of and solves 2- or 3-digit by 1-digit multiplication
### Science

<table>
<thead>
<tr>
<th>Report</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Report</td>
<td>C+</td>
</tr>
<tr>
<td>Second Report</td>
<td>C</td>
</tr>
<tr>
<td>Third Report</td>
<td></td>
</tr>
</tbody>
</table>

- describes the basic structure and functions of the human respiratory and digestive systems
- explains how the different body systems are interconnected

### Social Studies

<table>
<thead>
<tr>
<th>Report</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Report</td>
<td>C+</td>
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<tr>
<td>Second Report</td>
<td>C</td>
</tr>
<tr>
<td>Third Report</td>
<td></td>
</tr>
</tbody>
</table>

- uses maps to locate, interpret and represent major physical and economic features of BC and Canada
- creates a presentation on a selected topic

### Physical Education

<table>
<thead>
<tr>
<th>Report</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Report</td>
<td>C</td>
</tr>
<tr>
<td>Second Report</td>
<td>C</td>
</tr>
<tr>
<td>Third Report</td>
<td></td>
</tr>
</tbody>
</table>

- participates daily in a variety of moderate to vigorous physical activities
- adjusts speed, force, level, pathway, and direction in relation to people or moving objects
- demonstrates an ability to participate safely in specific physical activities

### Health & Career Education

<table>
<thead>
<tr>
<th>Report</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Report</td>
<td>C</td>
</tr>
<tr>
<td>Second Report</td>
<td>C</td>
</tr>
<tr>
<td>Third Report</td>
<td></td>
</tr>
</tbody>
</table>

- demonstrates an understanding of the importance of developing effective work habits
- describes the choices an individual can make to attain and maintain physical and emotional health
- demonstrates appropriate strategies for responding to bullying behaviour

### Core French

<table>
<thead>
<tr>
<th>Report</th>
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</tr>
</thead>
<tbody>
<tr>
<td>First Report</td>
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### Fine Arts

<table>
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<tr>
<td>First Report</td>
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</tr>
<tr>
<td>Second Report</td>
<td>C+</td>
</tr>
<tr>
<td>Third Report</td>
<td></td>
</tr>
</tbody>
</table>

- sing or play rhythmic patterns from standard notation (beginning music reading)
- demonstrates appropriate use of instruments
- drafts ideas for images using feelings, observation, memory and imagination
- interprets reasons for preferences in artworks