

Abstract

This study provides an examination of self-esteem and social problem solving among adolescents with and without learning disabilities. Research (Zelege, 2004; Bear, Minke, & Manning, 2002; Grolnick & Ryan, 1990; Renick & Harter, 1989) has indicated that individuals with learning disabilities have a lower self-esteem with regards to academics when compared to individuals without learning disabilities. It has also been shown that there are difficulties identifying social problems, generating solutions, and reaching goals among individuals with learning disabilities. Hence, the purpose of this study was to examine whether junior high students with and without learning disabilities have differing levels of self-esteem and social problem solving strategies.

Fifty-nine junior high school students in grades seven to nine from the Tri-County Regional School Board participated in this study. Twenty-two of the students had learning disabilities and thirty-seven were classified as having no identified learning disability. Each student was presented with the Culture Free Self-Esteem Inventory-Third Edition (CFSEI-3) and three social problem solving scenarios that were school related.

Results revealed that all participants were in the average range in all areas on the CFSEI-3. There were no significance differences of self-esteem between individuals with and without learning disabilities. For academic, personal, and global self-esteem, grade seven students indicated significantly higher self-esteem scores than grade nine students. Males were found to have a higher self-esteem on the Personal domain of the CFSEI-3 than females.

When identifying the problem to the presented social situation, students with learning disabilities were more likely to look for answers on the content of the situation and had more appropriate responses. Students with learning disabilities also tended to note simplistic emotions for the characters in the scenarios, whereas female students without a learning disability indicated more complex emotions. When participants were asked to provide a solution to the social problem situation, participants without learning disabilities were more likely to state that they would seek help from an authority figure. Individuals with learning disabilities tended to provide solutions that were egocentric or avoided the problem situation such as asking for special conditions like extra time for the quiz. Females were more likely to choose a direct role of seeking others to help with the problem when developing solutions whereas males were more likely to choose an indirect solution of having themselves deal with the situation such as walking away from the situation. When asked to note what steps would be involved to obtain the solution they generated, students with learning disabilities had difficulty developing the steps involved in the process.

The results of this study imply that students with learning disabilities have difficulties understanding social problem solving situations when compared to their nondisabled peers. They had difficulty identifying social problems, understanding the emotions of the characters in the scenarios, generating effective solutions to the social situation. School staff need to be encouraged to take a direct role in helping students with learning disabilities employ more effective strategies to better deal with social problem solving situations and interventions are needed for these students to lead more productive lives in the classroom.

Acknowledgements

I would like to mention and thank several people who without their ongoing support this thesis would not have been possible. I would like to express my deepest gratitude to my thesis supervisor, Dr. Carmel French, for your support, time, and invaluable advise. I would also like to thank my thesis committee members, Dr. Fred French and Dr. Mike Foley. Thank you for your support and contribution throughout my thesis process.

I would also like to thank the Tri-County Regional School Board Staff for allowing me to conduct my research within the schools and for being so helpful, with a special thank you to Carol Arthurs. Thank you for sharing your time, knowledge, and proofreading skills on many occasions.

To my Mom, Dad and my whole family, I want to thank you for all your love and support throughout the years. Also, special thanks for all my family members for putting up with the constant phone calls and the constant encouragement of letting me know that I could accomplish this project. Lastly, a special thank you goes to Steven. Thank you for providing a quiet spot to work on my thesis, for all his smiles when I really needed it. Most of all thank you for believing in me and helping me realize that I can accomplish anything I put my mind to.

Table of Contents

| | <u>Page</u> |
|--|--------------------|
| Chapter One: Introduction | |
| A. Personal Statement | 6 |
| B. Background | 8 |
| C. Purpose and Aim..... | 10 |
| D. Rationale for Current Study..... | 10 |
| E. Definition of Terms | 12 |
| Chapter Two: Literature Review | |
| A. Introduction..... | 13 |
| B. Concept of Learning Disabilities..... | 13 |
| C. Types of Learning Disabilities..... | 19 |
| D. Impact of Learning Disabilities | 25 |
| E. Adolescent Development..... | 30 |
| F. Self Concept | 31 |
| G. Social Problem-Solving Strategies | 38 |
| H. Summary | 42 |
| Chapter Three: Method | |
| A. Participants | 45 |
| B. Measures | 45 |
| C. Procedure | 48 |
| D. Data Analysis | 49 |
| E. Ethical Considerations | 51 |
| F. Limitations | 52 |
| Chapter Four: Results | |
| A. Introduction | 55 |
| B. Participants | 55 |
| C. Research Question 1 | 56 |
| Research Question 2 | 62 |
| Research Question 3 | 65 |
| Research Question 4 | 68 |
| Research Question 5 | 70 |

Chapter Five: Summary, Discussion, and Recommendations

A. Summary74
 B. Discussion79
 C. Recommendations for School Professionals.....85
 D. Recommendations for Future Research87

References89

Appendix A- Culture Free Self-Esteem Inventory – Third Edition.....95
Appendix B- Social Problem Solving Scenarios.....98
Appendix C- Letter to Tri-County Regional School Board102
Appendix D- Letter to School Principal.....107
Appendix E- Letter to Parent.....108
Appendix F- Informed Consent.....111

TABLES

A. Participants Performance on the CFSEI-3 Overall and by57
 and by Ability Groups
 B. Participant’s Performance on the CFSEI-3 by gender and ability.....58
 B. Participant’s Performance on the CFSEI-3 by grade.....61

CHAPTER ONE

Introduction

A. Personal Statement

As I sit at my desk, listening to the teacher read the story of “Death on the Ice” by Cassie Brown, all I can say to myself is “listen to the story, Bonnie. Why can’t you just pay attention and listen to what the teacher is saying?” I continually say this to myself as the teacher keeps reading and I do not understand a word that she is reading. All I can comprehend is that there are men on the ice, in a snowstorm, and they are dying. I feel so frustrated that the class is discussing the book and understanding what is going on while I feel like the story just read to me was in another language. I don’t understand what is going on. My heart is beating faster and I am afraid of the teacher calling on me for answers to questions about the story. I am scared and feel pretty stupid. I must be the only one here that feels this way. This is just one example of the way I felt when sitting in a classroom.

For me, school was always a struggle. I felt frustrated, stupid, inferior to other students, and upset when sitting in a classroom full of students that I assumed were so much better than me. I hated waking up every morning to sit in another class where I felt that I did not understand what was going on. I was afraid that others would find out who I really was, that I was a girl that could not read.

When I was nineteen, I was diagnosed with a reading disability. My initial reaction was excitement, to know that what was going on was not my fault. Instead, my problem was with my reading comprehension. Then my second response was that I felt stupid and that things were not going to change, I was going to still have the same

problems in the classroom. And my friends, what were they going to think of me? And what does my future hold? Would I be able to have the career that I really wanted?

Receiving tutoring helped my reading; however, my self-esteem was still the same. Whenever anything in my life went wrong I blamed myself for being stupid. I felt I was different than everyone else. When in university lectures, I never spoke out to discuss my thoughts on a subject because I was afraid that maybe I misunderstood the question and I may give the wrong answer. I always doubted myself in anything I pursued. And I always felt that I was the least intelligent of all my classmates and that I could never let them know.

I realized that there were other people in the world with similar problems as myself. I began to have a desire to learn and help these children to have successful life experience despite having a learning disability. I also realized that I wanted to educate the public on what it meant to have a learning disability. Yes, a child may have a learning disability and therefore have problems with academics, however, it is not just about academics. Learning disabilities also impact how someone feels about oneself knowing they have a learning disability. When I was diagnosed with a learning disability I received tutoring with reading right away but what about my self esteem. Why did I not receive any help for my self-esteem?

B. Background

Much has and continues to be written regarding learning disabilities as educators, families, and researchers attempt to increase their knowledge and understanding of this multifaceted and complex construct. Individuals with learning disabilities tend to have average or above average intelligence and their learning difficulties affect academic as well as social situations. The individual with a learning disability may have marked difficulties in certain areas while excelling in other areas. Learning disabilities range in severity and can interfere with communication skills, social abilities and/or academic performance. Traditionally, the main focus of learning disability research has been on its impact on academics, specifically the identification, instruction, and evaluation of academic problems in children and youth..

The field of learning disabilities however is constantly evolving and new issues are arising. Academics are becoming less of a focus and researchers are seeing how individuals with learning disabilities are impacted in many other ways, resulting in a more global exploration of learning disabilities. One area that has gained more attention as a result of the shift in research focus is the impact of self-esteem on the lives of those with a learning disability. Results of research in the area of self-esteem and learning disabilities have been inconclusive therefore, indicating a need for increased research. The inconclusive research findings are due to inconsistency with the self-esteem inventories being used to measure self-esteem, inconsistency with the definition of what encompasses self-esteem, and with the heterogeneity among children with learning disabilities.

Self-esteem is viewed as a multidimensional construct rather than a unidimensional construct. Self-esteem changed from focusing on just global self-esteem to breaking self-esteem into different areas like personal, academic, parental/home, physical, and social self-esteem. Consistent findings have shown that students with learning disabilities have a lower academic self-esteem than students without learning disabilities (Zelege, 2004; Cooley & Ayres, 1988; Defrancesco & Taylor, 1985).

Another area impacted by learning disabilities is the social problem solving skills among these individuals with learning disabilities. During the 1970s, interest in the social-emotional side of learning disabilities emerged. The reality that students with learning disabilities also were characterized by deficits in social skills, how they view themselves and were viewed by others, as well as, how they behave in social situations (Kavale & Mostert, 2004). Many reviews have concluded that social problems have become an actuality for the significant number of learning disabled youths.

The increased attention needed for self-esteem and social problem solving skills among individuals with learning disabilities has become the focus for the present study. Even though academics are an important aspect of an individual's life with a learning disability, other areas need to have focus in order for the individual to have a successful life. Self-esteem and social problem solving skills are two areas that need more research and focus.

C. Purpose and Aim

The focus of academics and learning disabilities has begun to switch to other areas which can impact individuals with learning disabilities. Research in the area of self-esteem and social problem solving skills has increased. Researchers are realizing that learning disabilities go beyond struggles with academics. The purpose of the present study was to examine whether junior high students with and without learning disabilities had differing levels of self-esteem and social problem solving skills. An examination of the impact of grade and gender on self-esteem and social problem solving skills was also examined. The aim of this research was to lead discussions among teachers, parents, and administrators regarding interventions and programs to improve the self-esteem and problem solving skills of adolescents with low self-esteem and/or inappropriate social skills.

D. Rationale for Current Study

As noted, existing literature on self-esteem among individuals has been inconsistent. Research has grown in the area of self-esteem, going from unidimensional to a multidimensional focus. Beginning studies examined overall global self-esteem which found inconsistencies. Some research has shown that individuals with learning disabilities generally do not differ from those of normally achieving peers regarding their feelings of overall self-worth (Gans, Kenny, & Ghany, 2003; Grolnick & Ryan, 1990). One the other hand, other researchers have indicated that when defining self-worth as an aggregation of self-perceptions across various areas, children with learning disabilities were shown to have poor overall self-concepts when compared to normally achieving

children (Chapman, 1988; Cooley & Ayres, 1988; Defrancesco & Taylor, 1985).

Changing to a multidimensional focus contributed more information to the factors that impacted self-esteem. Research showed that children with LD primarily experience inadequacy in scholastic competence when compared to normal achieving children (Gans, Kenny, & Ghany, 2003; Grolnick & Ryan, 1990; Kistner & Osborne, 1987, Renick & Harter, 1989; Cooley & Ayres, 1988).

To address the inconsistencies in previous research and the need for more multidimensional focus, the present study examined a multidimensional view of self-esteem to compare junior high school students with and without learning disabilities. The present study will add to the current literature and provide information that will either confirm previous findings or provide new information.

Also, by gaining more information on the self-esteem of individuals with and without learning disabilities, one would assume productive intervention strategies could be implemented to reduce the amount of students with learning disabilities having a low self-esteem. Increasing the current knowledge base surrounding self-esteem and learning disabilities would be highly beneficial for not only school psychologists, but students, teachers and parents as well. If it were known the areas of self-esteem that have a highly likelihood of being impacted, then perhaps it would be better known when to intervene.

School psychologists could benefit from additional research on self-esteem and social problem-solving skills among students with learning disabilities. The knowledge can aid in psychological assessments. The school psychologist can explore self-esteem and social problem solving skills areas in addition to the traditional cognitive and academic assessments. School psychologists could provide additional knowledge about

self-esteem and social problem solving skills to teachers, so that they have more of an understanding of the students in their classrooms with learning disabilities, and not just addressing the academic difficulties of these students. Teachers having an understanding of the difficulties for students with learning disabilities may help students be better equipped to work effectively in the classroom through teacher interventions.

Therefore, self-esteem and social problem solving skills are important aspects to explore among students with learning disabilities. Beginning the discussions among school professionals can help to provide effective interventions and programs to improve the self-esteem and problem solving skills of students with low self-esteem and/or inappropriate social skills

E. Definition of Terms

Learning disability – This definition has been chosen due to its Canadian origin and is because the school board where the data was collected has adopted this definition for diagnosing a learning disability. The definition of a learning disability chosen for this study is stated as follows:

a number of disorders which 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 deficiency.
(The Learning Disability Association of Canada, Adopted Jan. 30, 2002)

Self-concept - Self-concept is “concerned with one’s global sense of well-being as a person and general satisfaction with oneself” (Zelege, 2004, p.146).

CHAPTER TWO

Literature Review

A. Introduction

In the literature review that follows, the concept of learning disabilities and the various types and characteristics will be explored. The next topics to be discussed are the impact of learning disabilities, self-concept and social problem solving skills among individuals with learning disabilities.

B. Concept of Learning Disabilities

“Over the years, professionals from several disciplines involved with the field of specific learning disabilities have debated and struggled to agree on an appropriate conceptual definition and subsequent operational diagnostic criteria for these conditions” (Mather & Gregg, 2006, p. 99). Each year more research is being conducted providing support for theories related to learning disabilities which in turn requires the constant adjustments in definitions and eligibility criteria of learning disabilities.

There is no single universal definition of a learning disability. In fact, the term learning disability has taken on a life of its own, spawning numerous definitions and conceptualizations. For example, each province of Canada has their own definition, as well, many organizations have different definitions for learning disabilities. Current definitions have failed to provide substantial information about the nature of learning disabilities. Reasons for this may be due to the nature of the learning disability and difficulties in providing an operational definition of a learning disability that encompassed this multifaceted condition (Kavale & Forness, 2000). The lack of a

cohesive, singular definition of a learning disability has resulted in a lack of a clear understanding of the sense of a learning disability and a rational explanation as to why particular individuals have a learning disability (Kavale & Forness, 2000).

Learning disabilities have roots as far back as the 1800s. According to Lyon, Fletcher, and Barnes (2003), characteristics of one patient with brain damage was reported by Gall. Descriptions of characteristics by Gall noted that some of his patients were able to produce thoughts in writing but could not speak, thus there was a pattern of relative strengths and weaknesses in oral and written language. This began a trend of other medical professionals that noted similar observations.

It was the work of Strass and colleagues after World War II that lead to the emergence of learning disabilities as a recognized field (Lyon et al., 2003). Learning disabilities became defined as “minimal brain dysfunction” in the 1960s. In 1947, Strauss and Lehtinen defined minimal brain dysfunction as:

To children of near average, average, or above average general intelligence with certain learning or behavioral disabilities ranging from mild to severe, which are associated with deviations of function of the central nervous system. These deviations may manifest themselves by various combinations of impairment in perception, conceptualization, language, memory, and control of attention, impulse, or motor function. (p.9)

The Straussian movement significantly impacted the development of the learning disability field (Kavale & Forness, 2000). There are three concepts that emerged from his work to provide a rationale for the development of the field of learning disabilities separate from other fields. The first concept states that individual differences in learning needs to be recognized by examining the diverse ways the individual approaches learning tasks (Lyon et al., 2003). Secondly, education needs to be tailored to the patterns of strengths and weaknesses of the individual student. Lastly, students with ‘deficient

learning processes' may learn normally if their weaknesses are strengthened or if teaching methods do not focus on the areas of weaknesses.

Our understanding of learning disabilities continues to evolve as we gain a greater understanding of learning processes. Today you would not see the term, "mental retardation", used in a definition of a learning disability such as in Kirk's definition in 1962. Current thinking indicates that important features of learning disabilities are marked by heterogeneity, involve psychological process disorders, are associated with underachievement, and can occur across the life span (Kavale & Foreness, 2000).

According to Mather and Gregg (2006), the recent reauthorization of the Individuals with Disabilities Education Improvement Act of 2004 has begun major discussions among the components of the definition of learning disabilities, as well as the eligibility criteria used to operationalize these disorders. Discussions have focused on the role of general intelligence measures, cognitive processing measures, and oral language measures of learning disabilities (Kavale, Kaufman, Naglieri, and Hale (2005).

A discrepancy between full-scale intelligence scores and achievement has become the hallmark of learning disability identification, even with the research written about the limitations of using an ability-achievement discrepancy for identification of learning disabilities. In the past few decades, experts have stated concerns with the over-reliance on the ability-achievement model (Mather & Gregg, 2006); how it results in over-identification of students with learning disabilities (Kavale, Holdnack, & Mostert, 2005); and that the ability-achievement discrepancy is not a truly reliable or valid indicator of learning disabilities.

According to Mather & Gregg (2006) the use of intracognitive, intra-achievement, and intraindividual discrepancies have been proposed as an alternative to the traditional ability-achievement discrepancy. These types of discrepancies help capture the student's stronger and weaker abilities. Determining the student's strengths and weaknesses helps to determine the specific difficulties influencing functioning and academic performance. Also, strongly advised is the use of multiple sources of information to guide in the identification of learning disabilities (Mather & Gregg, 2006).

In addition to the norm-referenced tests, additional information such as, classroom observations; student, teacher, and parent reports; feedback from multidisciplinary teams; developmental, medical, and psychological history; and family and environmental factors should also be included in the assessment to determine a learning disability. Test results can be part of the information used to determine the presence of a learning disability, but should not be a substitute for additional information.

The use of a cutoff score with the ability-achievement discrepancy for eligibility provides difficulties as it assumes that learning disabilities are an "academic performance deficit" and it does not attend to the underlying cognitive or linguistic problems. Valid learning disability identification cannot be identified through strict interpretation and application of test scores. "Clinical judgment is an essential component of all types of evaluations" (Mather & Gregg, 2006, p. 101). For example, there may be a test with scores indicating mental retardation however, observations of the individual in real life situations produce contradictory conclusions. Proposing a specific cutoff score on an achievement test has the likelihood to increase the number of children identified with learning disabilities while not increasing the validity of the diagnosis.

Within most definitions of learning disabilities, learning disabilities are characterized with cognitive and linguistic processing difficulties. Due to the definitions including cognitive and linguistic processing difficulties as part of the essence of the disorder, excluding it from the eligibility criteria produces great concern (Mather & Gregg, 2006). According to Kavale, Kaufman, Naglieri, and Hale (2005) to have “true” a specific learning disability, students must have cognitive deficits and straightforwardness in psychological process leading to academic difficulties.

As we see, the diagnosis of a learning disability is a complex situation. What can make this situation even more complex is presence of another disorder. There is a high risk of psychological co-morbidity in students with learning disabilities. Co-morbidity is “a situation where two or more conditions that are diagnostically distinguishable from one another tend to occur together” (Learning Disability Association of Ontario, 2006). According to Johnson (2004), approximately 30% of children with learning disabilities possess behavioral and emotional problems. Children with learning disabilities exhibit higher rates of internalizing and externalizing disorders than peers without learning disabilities (Willcutt & Pennington, 2000).

One of the most common externalizing co-morbid conditions in childhood for learning disabilities is attention deficit hyperactivity disorder (ADHD) (Johnson, 2004). What distinguishes students with ADHD from those with learning disabilities is the higher levels of hyperactivity, impulsiveness and inattentiveness. Approximately 30% of students with learning disabilities also have ADHD (Learning Disability Association of Ontario, 2006). Another group of disorders found among students with learning disabilities is social and behavioral difficulties. Male students with learning disabilities

were approximately three times more likely to exhibit an externalizing disorder such as ADHD, Conduct Disorder, or Oppositional Defiant Disorder (Johnson, 2004).

Internalizing disorders that may be co-morbid with learning disabilities are depression and anxiety. According to Johnson (2004), adolescents with learning disabilities have higher rates of depression, as well as, higher rates of suicide. Adolescents with learning disabilities experience less positive self-esteem, higher levels of anxiety and somatic complaints. Depression may exacerbate or cause learning difficulties; however, learning disabilities may exacerbate or cause depression.

The high prevalence of co-morbid disorders among students with learning disabilities is alarming. The need for the proper intervention such as cognitive and behavioral approaches in the remediation for students with learning disabilities is important.

The concept of learning disabilities has evolved over the past several years. However, researchers still have no clear singular definition of a learning disability. The ability-achievement discrepancy of learning disabilities brings a whole new concept to the definition of a learning disability. The discrepancy fails to coincide with the definition of a learning disability producing concerns. Having co-morbid disorders along with learning disabilities complicates the process of identification of a learning disability. Continuing research provides an evolving understanding of learning processes.

Significant advances have been found in the understanding of and interventions for learning disabilities, especially in the area of reading. According to Lyon et al. (2003) assessment practices, neurobiological, genetics, and intervention are areas where advances have been made in the areas of reading learning disabilities. Given these

advance for learning disabilities in reading, similar advances for other learning disabilities are not far behind. The next section will discuss the different types of learning disabilities and some of the characteristics that may coincide.

C. Types of Learning Disabilities

As stated earlier, there are many different types of learning disabilities each of which is manifested in a different way. Some learning disabilities are mild, while others are quite severe. A learning disability may be a specific problem or a whole collection of problems. While individuals with learning disabilities typically have average to above average intelligence, their intelligence may not match their academic achievement resulting in a significant gap between what is expected and what is actually accomplished. A learning disability is usually identified and associated with one of the following areas of reading, written language, and mathematics.

Reading Disabilities

According to Bakken & Wojcik (2004), about 80 percent of children diagnosed with learning disabilities have their main struggles with reading. An individual may be diagnosed with a reading disability but this can encompass many different types. Neurological, genetics, neurological or sensory factors or some combination can be involved in why reading disabilities develop. Neurological factors may include brain injury, errors in fetal brain development, environmental toxins on the brain, and prenatal substance abuse affecting the development of the fetal brain. Sensory factors may include speech, hearing, and visual impairments.

Reading can be difficult when the brain cannot understand that words are made of segmented sounds that can be associated to letters (Sousa, 2001). Reading becomes hesitant and portrayed by frequent breaks and multiple mispronunciations.

Comprehension may be weak due to the length of time it takes the individual to read and their memory is unable to retain the words long enough to understand what they read.

This condition is referred to as *phonological alexia*. Phonological alexia is characterized by a difficulty in linking speech sound to letters, decoding that is labored and weak, and a lack of comprehension (Sousa, 2001).

According to Lyon, Fletcher, and Barnes (2003), a word recognition disability (*dyslexia*), suggests “persistent deficits rather than a developmental lag in linguistic and reading skills” (p, 524). Approximately 2 to 5 percent of elementary children have some form of dyslexia (Sousa, 2001). Areas of difficulties for individuals with dyslexia include having marked struggles with decoding and an inability to read words in isolation (Lyon et al., 2003). There is also a difficulty with rhyming or sequencing syllables, determining the meaning or main idea of a sentence, and expressing thoughts verbally. Difficulty with spoken language, poor sequencing of letters or numbers, and confusion with right and left handedness are more indicators of dyslexia. Dyslexia is not due to eye problems or to low intelligence but to the inability of the brain to process what it hears, not what it sees (Sousa, 2001). The problem appears in the angular gyrus where the decoding process occurs. In the left angular gyrus region of children with dyslexia, there appears to be a reduced blood flow.

Individuals can have poor decoding skills and can be unable to comprehend what they read. This may be due to an inability to decode unknown words. If individuals are

unable to decode words then they miss information which interferes with their understanding of the passage. Alternatively, an individual can have good decoding skills but struggle with understanding what they read. A reading comprehension disability is when an individual struggles to comprehend what is being read although they can adequately decode the words (Lyon et al., 2003). Individuals with a reading comprehension disability who have developed decoding skills and may also have deficits in vocabulary and understanding syntax. A deficit in deriving meaning from what an individual reads is referred to as *surface alexia*. This deficit may relate to: “inadequate understanding of the words used in the text; inadequate knowledge about the domains represented in the text; a lack of familiarity with semantic and syntactic structures that help predict relationships between words; a lack of knowledge about different writing conventions that are used to achieve different purposes; a deficit in verbal reasoning ability that would enable the reader to read between the lines, and; a lack of the ability to remember verbal information” (Sousa, 2001, p. 94).

Writing Disabilities

A term for disorders of written expression is *agraphia*, occurring when an individual has difficulties in one or more areas of handwriting, spelling or written discourse (Lyon et al., 2003). Difficulties with written expression include an inability to develop writing strategies or generate ideas for the text, poorly organized sentence structure, poor grammar, spelling, and punctuation. “The persistent condition of not being able to put thoughts into writing or accomplish other parts of the writing process (such as letter formation) is known as *dysgraphia*” (Sousa, 2001, p.122).

This is a spectrum disorder that describes struggles in mastering the technique of movements that are needed to write letters and numbers. There are varying degrees with many symptoms. Symptoms may include: inconsistencies in letter formation with a mixture of upper and lower cases of print and cursive letters; unfinished words or letters; illegible writing; inconsistent positions on the page with respect to margins and lines; copying or writing becomes slow; omitting words in writing tasks; spaces between letters and words are inconsistent; unusual grip of pencil; and struggles with writing as a communication tool (Sousa, 2001). This is not a disorder that results in laziness, not caring or not trying, it produces an inefficiency in handwriting and this inefficiency produces a barrier to learning.

Math Disabilities

In the last thirty years, the percentage of children who experience difficulties in learning mathematics has been steadily increasing (Sousa, 2001). According to Sousa (2001), approximately 6 percent of children experience some form of difficulty with processing mathematics. Various symptoms of mathematical disorders can include inconsistencies with addition, subtraction, multiplication, and division; an inability to remember mathematical formulas, rules or concepts; struggles with abstract concepts of time and direction; and constant errors with recalling numbers (Sousa, 2001).

Lyon et al. (2003), identifies six types of mathematical disabilities: 1. an inability in naming numerical amounts, numbers, terms, symbols and relationships; 2. difficulty enumerating, comparing, and using mathematical manipulatives; 3. difficulty reading mathematical symbols; 4. lack in ability in writing mathematical symbols; 5. a lack of

understanding concepts in math and in performing mental math calculations; and 6. difficulty performing computational operations. While disabilities with math calculation can occur in isolation, procedural and problem solving may be associated with reading and language problems (Lyon et al., 2003). The question then becomes one of whether the academic problem arises from a math disability and/or a reading disability.

A condition that causes constant struggles with processing numerical operations and various aspects of mathematics is referred to as *dyscalculia* (Lyon et al., 2003). As with any learning disability, deficits can range from mild to severe. Number concept difficulties are the first of many deficits that children may experience. The understanding of small numbers and quantity appears to be present at birth, however, during the preschool and early elementary years the understanding of larger numbers and place seem to develop (Sousa, 2001). According to Geary (2000), most children with mathematical disorders have basic number competencies. However, they could also have deficits in counting knowledge, counting accuracy, or keeping numerical information in working memory while counting, resulting in counting errors.

Children with mathematical disabilities may have difficulties solving simple and complex arithmetic problems. Problems may originate from deficits in numerical procedures and working memory. Deficits in visual-spatial skills can lead to problems with arithmetic because the individual is likely to misalign the numerals in a multicolumn addition calculation. Although procedural, memory, and visual-spatial deficits can occur separately, they are often linked (Sousa, 2001).

Children may also have difficulties with procedural mathematical knowledge. For example, they may use procedures that are developmentally immature, not use multi-step

solutions, struggle with understanding the concepts associated with procedures, and make frequent mistakes when choosing and/or using procedures (Sousa, 2001). Traits of children with memory disorders include: struggles with retrieving arithmetic facts; highly likely to make errors when retrieving arithmetic facts; and retrieve incorrect facts.

Visual-spatial deficits may include experiencing difficulties in spatial arrangement of work, misreading numerical signs and/or rotating and transposing numbers, and struggle with problems involving in areas, such as algebra and geometry (Sousa, 2001). Children with procedural disorders can rely on sequence diagrams and other tools to remember the mathematical steps and procedures. Benefits of graph paper and learning to solve algebra and geometry problems with logic can improve the visual-spatial disorders.

Nonverbal Learning Disability

The term of non-verbal learning disability is a relatively new concept in the research area when compared to the other types of learning disabilities that have been discussed. According to Burkhardt (2004) a non-verbal learning disability is associated with a mathematical disability although the symptoms extend far beyond academic difficulties. Characteristics of non-verbal learning disabilities may include excellent auditory memory, gifted reading ability, advanced verbal expression with outstanding vocabulary and superior verbal reasoning (Burkhardt, 2004). Stronger verbal than nonverbal cognitive abilities with a significant discrepancy between the Verbal Scale IQ and Performance Scale IQ on the Wechsler measures of intelligence are seen in children with non-verbal learning disabilities. Deficits may include poor visual memory, coordination difficulties, poor visual-spatial organization, arithmetic difficulties,

struggles with written expression, poor eye contact, inattention, hyperactivity, social isolation, and confusion with directions (Burkhardt, 2004). Within the past ten years non-verbal learning disabilities has received much more attention and researchers are now realizing the need to identify children with non-verbal learning disabilities and to provide intervention to these students. Students with non-verbal learning disabilities have their own specific learning characteristics and social-emotional programming needs which differ a great deal from those with verbal learning disabilities.

As seen in the present section, learning disabilities can manifest themselves in many different ways. Academic achievement is the predominant area identified as impacting a student's life. However, learning disabilities do not impact academic achievement in isolation. Learning disabilities also impact the student's family, social relationships, and self-esteem. The areas that are impacted will be discussed in the next section.

D. Impact of Learning Disabilities

Being diagnosed with a learning disability can affect many aspects of an individual's life. Most people associate learning disabilities with academics disabilities; however, academics are not the only aspect of an individual's life that are affected by having a learning disability. It also impacts other areas such as personality and social relationships. For example, Le Greca (1987) noted that individuals with learning disabilities have fewer friends and difficulties relating to others. They have difficulties developing friendships leading to social isolation and delayed personal development (Johnson, 1995). Not having peers to do things with can cause an individual with a

learning disability to lose out on gaining the necessary experiences to develop social competence. These concerns can widen the gap between the populations of individuals with learning disabilities and those without.

This is not the case for all individuals with learning disabilities. Many are able to develop friendships however they experience difficulty in maintaining the friendship. For these individuals long term friendships may be non-existent and people would most likely just pass through their lives. Some of these difficulties stem from their inability to assume other people's perspective, their impulsive outbursts, and their speaking without thinking (Johnson, 1995).

Social competence difficulties among individuals with learning disabilities are not restricted to individual friendships. They may also impact the ability to function within a group, such as being a member of a team sport (Johnson, 1995). Being involved in team sports requires athletic ability and an ability to be a team member before and after the game. Individuals with a learning disability, however, often fail to accurately interpret social cues which can result in inappropriate behavior.

Being diagnosed with a learning disability can greatly affect the dynamics of the family (Lavoie, 1996). The mother, father, and siblings can produce their own unique problems as a result of the learning disability diagnosis. It can be stressful for parents to have a child that does not meet the expectations that they have built for their child. Parents may be stressed because of the difficult behavior of the child, disagreements over parenting a child with a learning disability, increased financial burden, desire to protect the child, and the lack of competent services (Latson, 1996). Parents may feel the need to spend a lot of time helping the child with the learning disability therefore neglecting other

siblings, causing sibling resentment. This can make the individual with a learning disability feel guilt for needing the help of his/her parents because his/her siblings are not getting as much attention as they may need. The siblings may feel frustrated that they have to always explain the invisibly disabled sister/brother to other children (Sherry, 1996). The sibling may also feel resentful of being labeled as “Stupid’s sister” or having others say “Hey, do you know what your brother did?” or “Is your sister stupid cause she can’t read?”.

Self-esteem is also affected when children have learning disabilities. It has been reported that children with reading disabilities have social emotional difficulties (Lyon et al., 2003). In a study conducted by Johnson & Blalock (1987), “93 adults in a clinic population with learning disabilities, the majority of whom displayed reading problems, 36% had received counseling or psychotherapy for low self-esteem, social isolation, anxiety, depression, and frustration (p. 540).” Self-esteem can be a significant factor in the development of an adolescent’s successful transition into adulthood (Connor, Poyrazli, Ferrer-Wreder, and Grahame, 2004). According to Connor et al. (2004), self-esteem can be defined as a person’s feelings of self worth and how an individual views his/her competency and worthiness. Chubb, Fertman and Ross (1997) saw self-esteem as how much a person likes, accepts and respects themselves as an individual

Given that an individual’s self esteem is based on how they look at themselves, their self perception would impact how others perceive them. An individual’s self esteem is especially shaped by how other significant people perceive them (Wilburn & Smith, 2005). Therefore, the reactions received from people in the environment can affect an individual’s functioning and a negative reaction about the individual can be detrimental

to their self-esteem. Self-esteem is significant in how one thinks, feels and responds to life's stress. An individual can be affected by having high or low self-esteem. High self esteem can be related to an adolescent's an overall feeling of well-being, whereas low self esteem may be connected to at-risk behaviors and negative developmental outcomes. For example, an adolescent with a low self-esteem may be at a higher risk for attempting suicide (Connor et al., 2004). It has been demonstrated that low self-esteem is related to low life satisfaction, loneliness, anxiety, resentment, irritability and depression (Rosenberg, 1985).

School culture can refer to the guiding beliefs and expectations that a school undertakes for its operation: it is how the administration, teachers, and students relate to each other within the school (Fullan & Hargreaves, 1991). School culture can greatly impact students with learning disabilities. It can impact how teachers interact with the student, as well as, the interventions that they may or may not receive. A school may see learning disabilities as a priority and as a whole school, the teachers and administration may have a belief that students with learning disabilities need to receive appropriate interventions therefore, receiving the support they need. They work together and collaborate to reach their goals. However, schools may take the opposite approach and becoming "stuck" school with limited communication among school staff, limited resources to help individuals with learning disabilities and attitudes and beliefs that do not see interventions for learning disabilities as important, therefore, finding it hard to help these students (Rosenholtz, 1989). Teachers in 'stuck' schools are more likely to work alone, rarely ask for help or collaborate with their colleagues (Sarason, 1982). Every school is unique and has its own culture. What happens in on school can be quite

different than the school next to it and this is due to the culture of the school. Attitudes, beliefs, assumptions that members of a school carry, will impact on any innovation that is introduced in a school environment. School culture is strong and has impact. The principal has a major role in the beliefs and operations of the school. The principal needs to establish close cooperation among teachers and their colleagues and build relationships that are reciprocal and not running in just one direction. Building a moving school where teachers work together and constantly work to improve their skills with teaching and having communication flow among the school creates a school that recognizes the needs of the school such as appropriate intervention for the students with learning disabilities. “The role of administrators in introducing, guiding, selecting, and supporting the use of evidence-based interventions is important to the success of students with learning disabilities” (Boscardin, 2004).

It is known that learning disabilities have an academic impact; however, research is showing how all areas of an individual’s life may be influenced by having a learning disability. Students with learning disabilities often have struggles in family and social relationships. In the next section, adolescent development is discussed. This section will introduce the struggles of adolescence with more emphasis on the increased difficulties females experience compared to males.

E. Adolescent Development

There are times in an individual's life that are more stressful than others even without a diagnosis of a learning disability. Early adolescence is one such stressful time period. Adolescence is commonly portrayed by unique developmental changes and challenges, including an exploration of identity and autonomy, biological changes associated with puberty, developing sexuality and intimacy, concern with peer relationships, and emphasis upon educational achievement, as students move toward adult independence (Garrod, Smulyan, Powers & Kilkenny, 1999). The transition from elementary school to junior high school marks the beginning of an adolescent culture impacting how individuals look at each other as well as themselves. In middle grade, the development of a positive self-image becomes significant. However, the transition into adolescence seems to affect females more than males (Baer, 1999). In fact, studies have reported that adolescent females have lower self-esteem than males (Chubb et al., 1997; Quatman & Watson, 2001) and more depressive moods (Marcotte, Fortin, Potvin, & Papillon, 2002).

Challenges of development are difficult for males and females, however, the onset of puberty brings heightened difficulties for females. Females are undergoing both a school transition into junior high, as well as, pubertal change simultaneously. In addition, males and females experience physical changes related to puberty in different ways (Marcotte et al., 2002). Males see puberty as a time of increased satisfaction, characterizing masculinity whereas, females see these body changes as a loss of the pre-pubertal skinnier body image that is valued in society and the stress associated with the realization of the beginning of an active sexual life (Marcotte et al., 2002).

Another area that impacts females in adolescence are feelings about their body and appearance (Rothenberg, 1995). According to Rothenberg (1995), female adolescent depression has been found to be linked to negative views about their bodies and appearance. Adolescence is a period where body image becomes more important. Gender stereotypes in television, movies, books, and fashion industries pose obvious challenges for healthy psychological development. Females are internalizing the messages and have expectations from society to be the “perfect girl” who is pretty, kind, obedient, and physically thin. Trying to keep up with the demands of becoming the “perfect girl” causes females to begin judging themselves through other’s eyes and question their own self-worth (Rothenberg, 1995).

Adolescents who have a learning disability are even further stressed by having a diagnosis of a learning disability to go along with the everyday stresses of adolescence. Females experience more pressure and stress than males in middle school. Self-esteem is an evolving construct that impacts all individuals whether they are male or female or struggling with a learning disability. The next section will discuss the research that has been conducted and how students with learning disabilities are influenced by his/her self-esteem

F. Self Concept

Self-concept is “concerned with one’s global sense of well-being as a person and general satisfaction with oneself” (Zelege, 2004, p.146). Perceptions that children have about themselves may affect motivation and therefore consequent behavior. However, differences have been found among the conceptualization and measurement of children’s

self perceptions (Renick, 1989). Results of research in the area of self-concept and children with learning disabilities has shown to be inconclusive. In 1988, Chapman conducted a meta analysis finding that even though self-esteem scores were in the average range, students with learning disabilities scored lower on global self-worth than their peers. Chapman (1988) concentrated his review to examining the academic and general self-concept domains. However, the studies that were included in this analysis were based on the Piers-Harris Children's Self-Concept Scale (Piers, 1969). According to Bear, Minke, & Manning (2002), this measure has been inconsistent with modern-day theories of self-concept and was based on an outdated unidimensional model of self-concept. The Piers-Harris was based on a general score derived from 80 items that represented a combination of self-perceptions across various areas that were neither theoretical nor empirically derived (Bear et al., 2002). It was not until later that the Piers-Harris was revised to cover separate domains such as Anxiety, Physical Appearance and Attributes, Popularity, Happiness and Satisfaction, Intellectual and School Status.

In 2002, Bear, Minke, and Manning conducted a meta-analysis of sixty-one studies of self-concept among children with learning disabilities. Results indicated that differences found among children with and without learning disabilities were small in the areas of social, behavioral, and global self worth. Children with learning disabilities perceived their academic skills less favorably than children without learning disabilities. General self-esteem was lower among students with learning disabilities when compared to peers without learning disabilities. When grade and gender were used as moderating variables, few differences were found.

In 2004, Zeleke did a review of recent studies that investigated the self-concept of students with learning disabilities and their normal achieving peers. Zeleke (2004) examined recent studies in the areas of academic, social and general self-concepts and compared the findings to the meta-analysis of older studies by Chapman. Consistent with earlier findings, Zeleke (2004) found the results indicated that the academic self-concept of individuals with learning disabilities is more negative than that of their normal achieving peers. Zeleke (2004) found in twenty-five out of the twenty-eight studies that children with learning disabilities had a more negative academic self-concept than peers without learning disabilities. There were only two of the twenty-eight studies that found no significant differences between children with and without learning disabilities. In the area of social self-concept, thirty studies were examined by Zeleke. Results from six of the studies indicated that individuals with learning disabilities had lower social self-concepts than individuals without learning disabilities, twenty-one studies found no significant differences between the two groups, while results from two studies indicated children with learning disabilities had a better social self-concept than their peers with no learning disability. The last domain that Zeleke examined was the general self-concept area. Eight of the twenty-eight studies indicated normal achieving children had a significantly higher general self-concept than children with learning disabilities, whereas, nineteen showed no significant difference between the groups.

With advances in research, self-concept has been shown to be a multidimensional rather than a unidimensional construct. The unidimensional construct of self-esteem focuses on scores that represent an overall global view of self-esteem, whereas, multidimensional construct of self-esteem breaks self-esteem into many different

domains. Some research has focused on global feelings of self-worth as compared to others, while others have focused on specific domains such as academic, behavioral, and physical appearance.

Some researchers suggest that children with learning disabilities generally do not differ from those of normally achieving peers regarding their feelings of overall self-worth (Gans, Kenny, & Ghany, 2003; Grolnick & Ryan, 1990). Gans et al. (2003) examined self-concept among mainly Hispanic middle school children with and without learning disabilities. The results indicated that there was no significant difference among individuals with and without learning disabilities in the area of global self-concept. According to Gans et al. (2003), there are studies that indicate children have a positive self-concept about their academic skills even though they have been diagnosed with a learning disability. For example, Meltzer, Roditi, Houser, and Perlman (1998) conducted a study on fourth to ninth grade students and found that students with learning disabilities stated that they felt competent and used appropriate strategies in the areas of reading, writing, spelling, math, and organization. Likewise, Bear and Minke (1996) conducted a study on grade four children and found that children with learning disabilities did not perceive themselves less competent in their academic skills or less intelligent than other students.

What began research to begin looking at a multidimensional focus of self-esteem were the instruments being used to measure self-esteem. Measures were looking at global self-concept versus self-esteem being separated to focus on various domains such as, physical, personal, academic, home and parent, and social. Cooley & Ayres (1988) conducted a study in global self-concept but examined it more deeply. They found that

the differences were due largely to the questions that focused on the academic component of a self-esteem inventory. When the academic section was removed from the data, there were no differences in self-concept between individuals with and without learning disabilities. These results suggest that one of the reasons for the inconsistent findings in the literature regarding global self-concept among individuals with and without learning disabilities is due to the global scales being used within the studies (Cooley & Ayres, 1988). Measures with a small number of questions on academic issues can produce a significant difference between the groups. On the other hand, the small number of academic questions may not produce a strong enough effect to impact the total self-concept between the groups.

When focusing on a multidimensional view of self-concept, children with learning disabilities primarily experience inadequacy in scholastic competence when compared to normal achieving children (Gans, Kenny, & Ghany, 2003; Grolnick & Ryan, 1990; Kistner & Osborne, 1987, Renick & Harter, 1989; Cooley & Ayres, 1988). Gans et al. (2003) found that children with learning disabilities scored lower on Intellectual and School Status and Behavior domains than other children without learning disabilities. In the areas of athletics, social acceptance, and physical appearance, children with learning disabilities do not tend to show lower self-perceptions (Grolnick & Ryan, 1990; Kistner & Osborne, 1987).

A basic belief of the domain-specific approach to self-concept is that the self-perceptions of capability in specific domains have an influence of global self-worth (Clever & Bear, 1992). This relationship is not simple nor is it direct. Instead there are many factors that may influence this relationship. There is an expectation that having a

lower self-perception of scholastic competence among children with learning disabilities should lead to lower self-worth however this has not consistently been found. Studies have shown a significant amount of inconsistency in the concept of self-worth among children with learning disabilities.

According to the social comparison theory (Festinger, 1954) people tend to look to others in their environment when evaluating themselves. Members of “stigmatized” groups are more like to use self-protective social comparisons. Members of “stigmatized” groups such as ethnic minorities, women, persons with physical disabilities, and individuals with intellectual disabilities typically do not express a lower self esteem than the nonstigmatized groups (Smith & Nagle, 1995). In order to maintain self-esteem, the oppressed group members compare themselves to other people from the same stigmatized group. In addition, a person may lessen activities that he/she has difficulty with. For example, if an individual that has difficulty swimming then he/she would probably avoid situation that would involve swimming. This is the same for individuals with learning disabilities. They may have difficulty reading so he/she would probably want to avoid situations where he/she would have to read. Although individuals may diminish these activities that he/she finds difficult, it is hard to minimize the importance of academic and intellectual functioning. Students with learning disabilities are unable to avoid all situations where their difficulties are present.

Between middle childhood and adolescence, social comparison increasingly becomes of greater importance. Social comparisons play a central role in a child’s self-evaluation (Bear et al., 2002). Even though children as young as preschool engage in social comparisons, it is not until the age of 7 or 8 years that children use information

from these comparisons to evaluate themselves. Bear et al, (2002) suggested that a child's self perception was based on a comparison of their abilities with other children in their immediate social environment. When children with learning disabilities compare themselves to others with learning disabilities, they see themselves as more academically competent than when they compare themselves to others whose normal achievement is typical for their age and grade (Bear et al., 2002; Renick, 1989).

Renick (1989) concluded that 84% of the LD students spontaneously compared themselves with their regular classroom peers instead of other peers with similar academic achievement backgrounds. These results were proven to be interesting due to a previous theory by Festinger (1954) that individuals compare themselves with similar peers than with dissimilar peers. Renick's (1989) study concluded that the extent to which children with learning disabilities liked themselves as people may have been linked with their perceptions of their scholastic competence. Given that this study showed how children with learning disabilities attending resource rooms spontaneously compare themselves to normally achieving peers, many children with learning disabilities may feel poorly about themselves as individuals because of the discrepancy between their academic performance and that of their peers.

In comparing individuals with LDs with other stigmatized groups, students with LD are less likely to use self-protective social comparisons (Bear et al., 2002; Smith & Nagle, 1995). It has been found by Renick & Harter (1988) that over 80% of children within a resource LD setting compare themselves to normally achieving peers when looking at their self-perception instead of comparing to their own group for reference. This can lead to more negative self-perceptions for these children. Due to the difficulties

with peer relationships it is likely that individual's with learning disabilities will have struggles with social problem-solving strategies.

According to Silverman and Zigmond (1983), the contradictory research findings regarding self-concept and learning disabilities can be attributed to the inconsistency with the definition of a learning disability and the construct of self-concept among studies.

According to Bear et al. (2002), more reasons for the inconsistency among children with learning disabilities could be the heterogeneity among children with learning disabilities and the instruments used to measure self-concept.

Self-esteem has proven to be an area of concern among students with learning disabilities. Self-esteem can impact how much motivation the student encompasses, as well as, how he/she may feel about interacting with other peers. Therefore, social problem solving skills are another area of concern that needs more concentration in the research field. The next section will discuss the research that has been conducted on social problem solving skills among students with learning disabilities.

G. Social Problem-Solving Strategies

The social-emotional side of learning disabilities has also been explored. Students with learning disabilities are often characterized by “social skills deficits surrounding the ways individuals (a) view themselves, (b) are viewed by others as socially competent, (c) are viewed as effective in social interactions, and (d) behave in social situations” (Kavale & Mostert, 2004, p. 31). Social functioning of students with severe learning disabilities has been reviewed. The overall findings demonstrate that a significant number of learning disabled youths. Kavale & Forness (1995) found social

skills deficits to be a predominant characteristic among individuals with learning disabilities, accounting for 75% of students with learning disabilities having deficits in their social skills.

Hypothetical social problem solving situations have been used to examine the social cognitive development of children with learning disabilities. Children with learning disabilities have been found to struggle in social problem-solving compared to other children without learning disabilities (Kavale & Mostert, 2004; Silver & Young, 1985). In hypothetical situations, children with learning disabilities experience difficulty identifying social problems, generating alternative solutions, and describing the steps to reach a goal (Schneider & Yoshida, 1988). Children identified with learning disabilities have been found to misread social interactions (Gerber & Zinkgraf, 1982; Pearl & Cosden, 1982), display poorer role-taking skills (Dickstein & Warren, 1980), perceive social situations as more unfriendly (Weiss, 1984), be more prone to assign positive social outcomes to luck (Sobol, Earn, Bennett, & Humphries, 1983) and show less empathy towards their peers (Bachara, 1976).

Using an interview format to extract strategies and goals to hypothetical social situations, Carlson (1987) compared the social problem-solving abilities of males with and without learning disabilities. The results showed that the males with learning disabilities used more inappropriate strategies to resolve conflict, experienced more difficulty coming up with alternative strategies to a situation that involved conflict with friends, and one-sided resolutions were used more than shared resolutions in a conflict situation. However, prosocial strategies were used with almost half of the children with learning disabilities when dealing with a conflict situation. Also, no differences were

found with these two groups when looking at the choice of strategies and goals in social initiating situations, the choice of strategies when provided with prosocial goals, and with the number of alternative solutions to hypothetical social problem-solving situations.

In a similar study conducted by Oliva and LaGreca (1988), results indicated that males identified with learning disabilities were inadequate when developing “sophisticated” goals in hypothetical social situations, however, the strategies that they generated were not less friendly when compared to the group without a learning disability.

Toro, Weissberg, Guare, and Liebenstein (1990) conducted a study examining the comparison of social problem-solving skills, school behavior and family background among children with and without learning disabilities. Results indicated that children with learning disabilities generated fewer alternative solutions for social problem solving situations, showed less tolerance for frustration and less adaptive assertiveness, had more classroom behavioral problems, and showed less personal and social competence when compared to students without learning disabilities. The children with learning disabilities exhibited deficit in developing alternative solutions to social problems.

The social-emotional capabilities should also be explored among social problem-solving skills of children with learning disabilities. Among the domains included in the social competence of children, social cognition closely links cognitive and social-emotional capabilities (Bauminger, Edelsztein, & Morash, 2005). According to Bauminger et al. (2005), social cognition includes “the child’s ability to spontaneously read and correctly interpret verbal and nonverbal social and emotional cues; the ability to recognize central and peripheral social and emotional information; the knowledge of

different social behaviors and their consequences in diverse social tasks; and the ability to make an adequate attribution about another person's mental state" (p.45). Social cognition can be one of the most challenging areas for individuals with learning disabilities (Bauminger et al., 2005).

Bauminger et al. (2005) conducted a study to explore the social emotional capabilities of children with learning disabilities. More specifically they explored the link between social information processing (SIP) and emotional understanding capabilities among children with learning disabilities. Inconsistent findings were found with the social information processing among children with learning disabilities. On one hand, children with learning disabilities had difficulty encoding social cues, recalling less information and adding in more irrelevant information when compared to their peers without learning disabilities. On the other hand, children with learning disabilities had similar profile as their peers without learning disabilities when asked to identify the problem and to interpret the situation as positive or negative. However, children with learning disabilities suggested fewer social solutions to problems and the majority of the solutions were competent and resembled the non-learning disability group. The study revealed that children with learning disabilities had a considerable amount of difficulty in the social information processing processes and consistent struggle with understanding the complex emotions (Bauminger et al., 2005).

Children with learning disabilities showed consistent struggles in understanding and recognizing complex social emotions, such as embarrassment, pride, guilt, or loneliness, which would require the consideration of the social context and of the perspectives of individuals in the specific situation (Bauminger et al., 2005). Higher

emotional understanding such as understanding that a person can experience two conflicting emotions, such as love and hate, at the same time within the same situation, was a difficult concept for children with learning disabilities.

According to Elksnin & Elksnin (2004) social-emotional skills can affect a child's academic skills. Having adequate social-emotional skills influences academic life, acceptance by others, emotional adjusted, and self-confidence (Elksnin & Elksnin, 2004). They also noted that children who do not possess adequate social-emotional skills are more likely to be rejected, experience difficulties with school, and suffer mental health problems.

Elksnin & Elksnin (2004) stated that deficits with social-emotional skills among children with learning disabilities could be due to poor language and communication skills, struggles with recognizing and understanding other's emotions, cognitive and social-emotional problem-solving difficulties, comorbid psychiatric disorders, or a history of low self-esteem (Elksnin & Elksnin, 2004).

H. Summary

There are many types and severities of learning disabilities. Much of the research and people's perceptions of learning disabilities has focused on the academic difficulties experienced by people with learning disabilities; however, it has been noted that learning disabilities can affect much more than just academics. Learning disabilities may affect an individual's interactions with other peers and developing and maintaining relationships. There is also an impact on family dynamics with the learning disability impacting each individual family member in addition to the individual child diagnosed with a learning

disability. An area that is becoming of more interest in the learning disability research is that of self-esteem and social problem solving. Research has indicated that individuals with learning disabilities have a lower self-esteem with regards to academics when compared to individuals without learning disabilities. It has also been shown that there are difficulties when identifying social problems, generating solutions, and reaching goals among individuals with learning disabilities. Also, children with learning disabilities have been shown to have consistent struggles in understanding and recognizing complex social emotions. Knowing these areas of difficulties with learning disabilities, it is hoped that the current research will lead to discussions among teachers, parents, and administrators regarding interventions and programs to improve the problem solving skills of adolescents with low self-esteem and inappropriate social skills.

This research was designed to assess whether junior high students with and without learning disabilities had differing levels of self-esteem as measured by the CFSEI-3. It was expected based on previous research (Zelege, 2004; Bear et al., 2002; Grolnick & Ryan, 1990; Kistner & Osborne, 1987; Renick & Harter, 1989, Cooley & Ayres, 1988), that there would be differing levels of academic self esteem with junior high students with learning disabilities having lower scores on the students without learning disabilities. In addition, the research examined the relationship of social problem- solving strategies among junior high students with and without learning disabilities. Based on past research (Kavale & Mostert, 2004; Schneider & Yoshida, 1988; Gerber & Zinkgraf, 1982; Pearl & Cosden, 1982; Bachara, 1976) individuals with learning disabilities have been shown to have difficulty identifying social problems, generating alternative solutions, misread social interactions and show less empathy

towards others. Therefore, it was hypothesized that students with learning disabilities would have more problems identifying effective strategies and solutions to academic social problem solving situations.

CHAPTER THREE

Method

Chapter three contains a description of the sample population, the instruments used, and the procedure followed. As well, the data analysis techniques and limitations of the study are presented.

A. Participants

Fifty-nine junior high school students in grades seven ($n = 15$), eight ($n = 28$), and nine ($n = 16$) from the Tri-County Regional School Board participated in this study. The students with learning disabilities, were identified as having a learning disability by a school psychologist with the Tri-County Regional School Board. The participants consisted of twenty-two students diagnosed with a learning disability. Students classified as having no identified learning disability were randomly selected by the school principal. There were thirty-seven students with no identified learning disability.

B. Measures

i) Self-esteem inventory:

The self-esteem inventory that was used for the current study is the Culture Free Self-Esteem Inventory – Third Edition (CFSEI-3) (Battle, 2002) (Appendix A). The CFSEI-3 assesses self-esteem in a culturally fair manner (Battle, 2002). It is a set of published self-report inventories used to reveal personal traits and characteristics of self-esteem in individuals from the ages of six to eighteen. The CFSEI-3 model of self-esteem is based on “the premise that self esteem is an attitude toward oneself based on

one's recognition of abilities and limitations. This attitude is thought to begin as a global, largely positive or negative feeling in early to middle childhood. As one matures, self esteem becomes increasingly differentiated to include academic, general, parental/home, social, and personal self-esteem" (Battle, 2002, p.3). There are three age-appropriate forms developed: Primary, Intermediate, and Adolescent. The Adolescent Form of the CFSEI-3 was used as it is designed for students between the ages of thirteen and eighteen. This form provides sixty-seven items that are grouped into five subscales: Academic, General, Parental/Home, Social, and Personal, which can be summed to produce a Global Self-Esteem Quotient. There is also a defensive measure used to provide the extent to which an individual's answers are guarded. The responses are simple yes and no answers that can be either written or spoken. The CFSEI-3 takes approximately fifteen to twenty minutes to complete.

The CFSEI-3 was standardized on a diverse sample of 1,727 individuals age six to eighteen from 17 states. Internal consistency for the CFSEI-3 indicates alpha levels with an average of .80, a level that is indicative of good internal consistency. Test-retest reliability has been found to be stable over a two-week period with reliability coefficients ranging from .72 to .98. The resulting coefficients demonstrated that there is good test-retest reliability.

Criterion-Prediction validity has been documented with moderate to high correlations between the CFSEI-3 Primary and Intermediate Forms and the Self-Esteem Index and the Piers-Harris Children's Self-Concept Scale. The CFSEI-3 Adolescent Form was showed with moderate to high correlations with Self-Esteem, the Piers-Harris Children's Self-Concept Scale and the Multidimensional Self Concept Scale. It has been

shown that there has been a considerable amount of work to show that the CFSEI-3 is a valid measure of self-esteem and can be used with confidence. However, the work on this measure is only preliminary and the study of validity is something that requires more continuous work.

ii) Social Problem-solving Scenarios:

The social problem solving scenarios (Appendix B) consisted of three hypothetical social and academic situations. These scenarios were developed by the researcher. They were based on personal experience, literature and conversations with professional with expertise in the area. The scenarios dealt with issues such as group project work in language arts class, math stress, and social confrontation. Each scenario was presented followed by four short answer questions such as “What problem might this situation present?”.

For each of the social situations a series of open-ended questions were used to elicit the student’s social problem-solving strategies. The participants were presented with written scenarios and space was provided after the passage to respond in writing to questions. Participants were asked questions such as “What problem might this present for Mary?” which extracted a response that identified the problem. “How do you think John feels?” which obtained how the participant expressed empathy. To identify problem solving strategies where solutions to social situations were required questions such as “Take the time to think of this situation and discuss the best possible solution to the situation” were asked. This took no more than 25 minutes to complete.

C. Procedure

This study was submitted to the ethics board of Mount Saint Vincent University for approval. After approval was gained from the Mount Saint Vincent University Ethics Committee, the study and a letter (Appendix C) was submitted to the Tri County School Board Committee for approval. When approval was gained from the Board, contact was made with the school principals by phone to explain the study and seek permission to carry out the study at their school. Each phone calls were followed up with a letter (Appendix D) which explained the purpose of the study and the duties required of the principal. If a principal agreed to the study then he/she was asked have the homeroom teachers pass out the packages to the students to bring home to their parents. The packages contained: 1.) a letter explaining the purpose of the study, responsibilities of participants and researchers, and outlining participants' rights (Appendix E); 2.) an informed consent form (Appendix F); and 3.) a return envelope. The home room teachers were asked to gather the signed consent forms to pass in to the researcher. After the consent forms were collected and the researcher contacted the principals and teachers at each school to make arrangements to have the students taken out of class to complete the self-esteem and problem solving measures.

During the next stage the researcher met with groups of approximately ten to fifteen students at a time. First the researcher verbally discussed the participant's rights and explained the purpose and benefits of the research. The researcher explained that while they were required to write their names on the measures, that when the results were recorded and being analyzed only a number code would be used. This ensured their confidentiality as no participants could be identified. They were also told that their

questionnaires would be kept in a locked file cabinet and would only be seen by the researcher and her supervisor. After the thesis defense, the questionnaires would be shredded. Participants were given an opportunity to ask any questions and told that if they have any questions during the study they were welcome to ask. Participants were given instructions on how to complete the task and informed that there were no right or wrong responses. They were also told that no one was judging their writing, spelling or grammar.

The researcher passed out the self esteem inventory and scenarios to be completed. Following completion of the measures, participants were thanked for their participation and informed that if any issues came up, they could speak with the researcher.

With parent permission, school personnel were presented with the list of participants and asked to indicate which of the adolescents who completed the measures were receiving resource room help and were diagnosed with a learning disability by the school psychologist.

D. Data Analysis

Data collected for the study was analyzed using quantitative and qualitative methods. The quantitative data consisted of the results from the CFSEI-3. The Qualitative data included the data comprised from the social problem-solving scenarios.

Quantitative

The quantitative data analysis consisted of calculating means, standard deviations and two way ANOVAs to look for significant differences between the two groups – learning disabilities by gender and grade.

Qualitative

Given one of the purposes of the present study, to provide a greater understanding of the use of strategies and solutions in social problem solving situations among junior high school student with and without learning disabilities, qualitative research was selected as the most appropriate to acquire the desired data. Qualitative research provides an opportunity to gather a more comprehensive understanding of the participants understanding of the topic, as well as, provide more of an in depth description of the participant's daily experiences. Qualitative research allows a deeper meaning of the human experience and provides the interpretations of the participant's experiences (Guba & Lincoln, 1994). Having an understanding of the meaning can guide an understanding of human behavior.

In this study, the written answers given by participants to the hypothetical academic social situation scenarios will be using a qualitative design. The strategies and solutions that were generated by the students to the academic scenarios were examined. The areas of concentration are looking at differences by gender, grade, and ability group (learning disabilities students and students without an identified learning disability). The process involved breaking down each answer to the questions on the scenarios and

identifying which answers involved the ability to identify the problem, develop strategies and solutions, and ability to identify emotional responses.

E. Ethical Considerations

1. Confidentiality

Confidentiality of participants will be protected through several means. A package will be distributed to the parents. The package will include 1. a letter describing the study and outlining participant's right 2. a consent form and 3. a self addressed envelope in which the signed consent form will be placed in and sealed to be returned to the researcher ensuring no confidential information is being released. The principal and/or researcher will pass these packages to the students to give their parents. Participants can return signed consent forms to the principal or the homeroom teacher to pass them on to the researcher or passed in to the researcher herself. The consent form agreeing to participate in the study will be separated from the measures.

No identifying information will appear on measures instead it will be numerically coded. If quotes from measures are used in papers and presentations on the study, no identifying characteristics will be used in order to safeguard participant's identities. All students with learning disabilities will have codes starting with 100 and the students without a diagnosis of learning disabilities will have a code starting with 200.

2. Voluntary Participation

Participation in this study will be voluntary. Parents can withdraw their children and the adolescent participant may also withdraw at any time in the process without

penalty. Participants can choose to complete the measures or not. Approximately 100 consent forms will be randomly selected from those that are signed and returned. Others who signed consent will be contacted and thanked for their willingness to participate. There are no costs incurred for their participation.

3. Issues of Harm

All participants will be junior high students with permission from their parents who have volunteered to be a part of this study. There will be no pressure to participate. The inventory and questionnaire can be completed by participant to a degree that they consider comfortable. The possibility of harm is deemed to be low. The researcher however, will be attentive to participants, observing for any indication of discomfort or distress, and have a telephone number and location of support services available for participants.

F. Limitations of the Study

- (1) The results from this study cannot be generalized to all junior high students with learning disabilities as the sample population may not be indicative of all students with learning disabilities.
- (2) The grade seven students without a learning disability had a population of fifteen females without any males. This is not a good representation of a grade seven population without any male participants.
- (3) The majority of the students that were in the learning disability group came from the Severe Learning Disability Program that is offered at the Junior High School

- level. This may have impacted the outcome for the CFSEI-3 because this program also helps students with learning disabilities to increase their self-esteem, especially in the area of academic self-esteem. Therefore, it is likely that these students would not have as many issues with a low self-esteem.
- (4) Having the scenarios written eliminated the opportunity to ask the student to elaborate on their answers. When looking over the answers to the scenarios, there were many times that it would have been convenient to ask the participant to elaborate on their answer in order to gain more information on their knowledge of the situation. Some participants may have felt tired and did not want to write very much information to the questions. If participants had been interviewed, the researcher could have gained more information by asking participants to elaborate on some responses.
- (5) Having the participants write their answers could have hindered the learning disability students who have trouble writing. Even though some asked for help, there could have been participants who may have felt self-conscious asking for help. The answers that they might have given orally may have been much more elaborate than the ones that they wrote due to having difficulty with writing. So, the answers the participants wanted to write would have become that much more difficult to communicate. Therefore, the answers that are given by people with writing disabilities may not be a true indication of what their answers would have been if they had the option of stating their answers verbally.
- (6) Having the students read the self-esteem inventory and the scenarios on their own could have impeded the results due to having a student with a learning disability

- read the information wrong therefore not comprehending the text and providing the wrong answers when compared to if the information was read to them orally.
- (7) The method of data collection could have affected the results as some students may have felt uncomfortable knowing that their names were written on their responses. As well, some participants may not have felt at ease responding to hypothetical situations. Moreover, the responses given may have been more indicative of what the participants thought the researcher wanted rather than what they would have actually done or thought in each situation.

CHAPTER FOUR

Results

A. Introduction

The results of the quantitative analysis comparing the results of the CFSEI-3 to students with and without learning disabilities, grade and gender will be reviewed in this chapter. Qualitative results will also be discussed and employed to discuss the results to the social problem-solving scenarios. An understanding of the use of strategies, solutions and emotional responses in social problem solving situations among junior high school student with and without learning disabilities will be examined. Gender, grade, and ability are the areas of concentration to examine if there were any differences among the participants.

B. Participants

Fifty-nine out of a possible two hundred parents and students signed the consent form to allow the student to participate in this study. The students attended one of six junior high schools in the Tri-County Regional School Board. The participants consisted of twenty-two students diagnosed with a learning disability. Within this group there were seven females and fifteen males. Within the grades of students with learning disabilities there were six grade seven, nine grade eight and seven grade nine. There were thirty-seven students with no identified learning disability. Within this group there were twenty-six females and eleven males. Within the grades of students with no identifying learning disability there were nine grade seven, nineteen grade eight, and nine grade nine.

C. Responses to Research Questions

Research Question #1: How did participants perform on the CFSEI-3 overall, and by ability groups, gender and grade?

First, means and standard deviations on the Culture Free Self-Esteem Inventory – Third Edition were examined by ability group, gender, and grade. All scores of the CFSEI-3 fell within the average range regardless of whether ability, gender or grade were examined. The means were further examined and although there were no statistical significant differences found, a pattern of discrepancies were noted. While discrepancies were found among the variables, they should be interpreted with caution due to the low number of participants in this study. In addition, results calculated by grade must be reviewed with caution, as they capture a one time glimpse of participants on the CFSEI-3 not their evolving perspectives over time.

Table 1 shows the overall means and standard deviations on the CFSEI-3 for participants with and without learning disabilities. Whether the students had a learning disability or not, the scores on the CFSEI-3 were all within the average range. However, when looking more closely at the scores participants with learning disabilities had lower scores in all domains of the CFSEI-3 when compared to participants without learning disabilities. While not statistically significant, participants with learning disabilities were more likely to have a higher score on the defensiveness score. What this indicates is that students with learning disabilities were more likely to be defensive when answering questions on the CFSEI-3, indicating that there is a higher likelihood that these students were not as truthful completing the self-esteem inventory.

Table 1: Participants Performance on the CFSEI-3 Overall and by Ability Groups

| CFSEI-3 Subscales | | ABILITY | | |
|----------------------|-------------------------|-------------------|------------------------|---------------------------|
| | | Overall | Learning Disability | No Learning Disability |
| Academic | M (SD) | 10.27 (2.7) | 9.95 (2.66) | 10.46 (2.74) |
| General | M (SD) | 9.46 (3.05) | 8.91 (2.99) | 9.78 (3.07) |
| Parental/home | M (SD) | 10.88 (3.17) | 11.09 (2.84) | 10.76 (3.39) |
| Social | M (SD) | 10.31 (2.96) | 9.77 (3.15) | 10.62 (2.83) |
| Personal | M (SD) | 10.14 (3.18) | 10.14 (3.0) | 10.14 (3.32) |
| Global | M (SD) | 101.51 (16.54) | 99.64 (15.54) | 102.62 (17.21) |
| Defensiveness | M (SD) | 2.22 (1.45) | 2.73 (1.39) | 1.92 (1.42) |

Table 2: Participant's Performance on the CFSEI-3 by gender & ability

| CFSEI-3 Subscales | | GENDER | | | |
|----------------------|-------------------------|------------------|-----------------|-------------------|-------------------|
| | | Female (LD) | Male (LD) | Female (No LD) | Male (No LD) |
| Academic | M (SD) | 10.57 (3.15) | 9.67 (2.47) | 11.12 (1.93) | 8.91 (3.75) |
| General | M (SD) | 9.29 (2.87) | 8.73 (3.13) | 9.62 (2.89) | 10.18 (3.6) |
| Parental/home | M (SD) | 11.29 (1.89) | 11.0 (3.25) | 10.54 (3.3) | 11.27 (3.69) |
| Social | M (SD) | 8.86 (4.1) | 10.2 (2.65) | 10.69 (2.65) | 10.45 (3.36) |
| Personal | M (SD) | 9.86 (2.91) | 10.27 (3.13) | 9.54 (3.3) | 11.55 (3.05) |
| Global | M (SD) | 99.71 (16.52) | 99.6 (15.66) | 101.81 (15.77) | 104.55 (20.96) |
| Defensiveness | M (SD) | 2.89 (0.76) | 2.93 (1.58) | 1.88 (1.58) | 2.0 (1.0) |

Table 2 contains the means and standard deviations on the CFSEI-3 by gender and ability grouping. These results indicate that males and females with learning disabilities score within the average range on the global and specific measures of self-esteem on the CFSEI-3. Females were shown to have a higher academic self-esteem than males. However, there was more of a discrepancy between females without learning

disabilities ($\bar{x} = 11.12$) and males without learning disabilities ($\bar{x} = 8.91$). Another discrepancy showed that females with learning disabilities indicated a lower social self-esteem than males with learning disabilities as well as the students without learning disabilities. Additionally it was found that male students without learning disabilities ($\bar{x} = 11.55$) had a higher personal and global self-esteem than the females ($\bar{x} = 9.54$) within the same group.

Table 3 shows the means and standard deviations on the CFSEI-3 by grade level. When looking at grades seven, eight and nine, all students were again within the average ranges on the self-esteem inventory. However, a decline in scores were noted in all domains of the CFSEI-3 from grades 7 to 9, whether there was a learning disability present or not. It was especially noticeable in the academic and personal domains, from 11.6 to 8.6 and from 12.07 to 9.19 respectively.

Further analysis revealed that as grade increased from grades 7 to 9, females demonstrated a marked decline in personal self-esteem as measured on the CFSEI-3. The standard score in grade seven among females decreased from a higher end average score of 11.67 to a below average score of 6 in grade nine. When examining the Academic domain, females with learning disabilities went from having an above average self-esteem score in grade 7 (standard score – 13) to a below average self-esteem score in grade nine (standard score – 6). Males also had an above average self-esteem score on the academic domain in grade 7 (standard score – 13) decreasing to a score in the lower region of the average range in grade 9 (standard score - 8.67). These high scores in grade seven may be due to the fact that students with learning disabilities enter the Severe Learning Disability program in junior high school. In grade 6, elementary school

students with learning disabilities would not have this amount of academic intervention put in place for them. Having the extra support of the program and more concentration on their academics may initially increase the student's academic self-esteem. This program may help the students improve their grades and thus increase their academic self-esteem.

On the Social domain of the CFSEI-3, scores for both males and females with learning disabilities declined as the grade increased. Females with learning disabilities in grade seven had a standard score of 9 which decreased to a score of 7 in grade nine. Males with learning disabilities also had a decrease in standard scores of 11.67 in grade seven to a decrease in a standard score of 8.5 in grade nine. This indicates that as students with learning disabilities increase in grade level in junior high school their social self-esteem will decrease.

Table 3: Participant's Performance on the CFSEI-3 by grade

| CFSEI-3 Subscales | | GRADE | | |
|----------------------|-------------------------|-------------------|-------------------|-----------------|
| | | Grade7 | Grade 8 | Grade 9 |
| Academic | M (SD) | 11.6 (2.06) | 10.5 (2.4) | 8.63 (3.03) |
| General | M (SD) | 10.67 (2.06) | 9.0 (3.23) | 9.13 (3.34) |
| Parental/home | M (SD) | 11.87 (2.23) | 10.61 (3.67) | 10.44 (2.97) |
| Social | M (SD) | 11.4 (2.47) | 10.0 (3.31) | 9.81 (2.59) |
| Personal | M (SD) | 12.07 (1.39) | 9.64 (3.51) | 9.19 (3.15) |
| Global | M (SD) | 110.07 (10.24) | 100.07 (18.73) | 96.0 (14.79) |
| Defensiveness | M (SD) | 2.47 (1.51) | 2.14 (1.21) | 2.13 (1.82) |

In order to examine whether there were any differences between students with and without learning disabilities on the CFSEI-3 by gender, ability grouping, and grade, a analysis of variance was conducted. Results indicated that there were no statistically significant differences found due to ability grouping. When looking at ability level, the performance of students with and without learning disabilities on the CFSEI-3 were similar.

However, a significant difference was found between ability and grade on the Academic domain of the CFSEI-3 [$f(1,57) = 3.697, p < 0.05$]. Grade seven students with a learning disability had higher self-esteem on the Academic domain than grade seven students without a learning disability. However, grade eight and nine students with learning disabilities had lower scores on the Academic domain when compared to students without learning disabilities. Overall, grade seven students had a higher self-esteem than students in grades eight and nine on the self-esteem domain of academics.

There were significant differences found among the grade on the Academic [$f(2, 56) = 6.47, p < 0.05$], Personal [$f(2, 56) = 6.337, p < 0.05$], and Global [$f(2, 56) = 4.056, p < 0.05$] domains of the CFSEI-3. In these three domains, grade seven students showed a significantly higher score than grade nine students. All scores were within the average range however, grade seven students appeared to have a higher self-esteem on the domains of Academics, Personal, and Global than grade nine students.

Gender differences were found on the Personal domain of the CFSEI-3 [$f(1, 57) = 6.753, p < 0.05$]. Males scored higher on the Personal self-esteem domain than females. All other areas of self-esteem were not found to be significant.

Research Question #2: How did the participants respond when identifying the problem in the given hypothetical social problem solving situations overall and by ability group, gender and grade?

The question that was used within each scenario to help identify problems was “What problem(s) might this present for ____?”. Overall, participants provided similar responses when identifying what the problems were and what problems the situation may

present for the individual. For scenarios one and two the most popular answers when identifying the problem(s) presented were given by students within each ability group, grade, and gender. For example, scenario one presents a situation where a female student who is uncomfortable reading and speaking in class is involved in a project that has to be presented. The most popular answer to the question asking for the problem(s) that this presented for Mary was “feeling uncomfortable reading in front of the class”. All groups, whether looked at by ability group, gender or grade, had participants identify this as the problem. Also, in scenario two, “time pressure” was seen as the most popular answer and all groups were able to identify this problem. Each group based on ability, gender and grade were examined more extensively to see if there were any differences among them in identifying the problem(s) to each scenario. There were no differences found among gender in all three scenarios.

Even though there were similarities among the groups, there were also some differences. On average, only 36% of students with learning disabilities were able to identify the problem whereas 70% of students without learning disabilities were able to state the problem. Individuals with learning disabilities were also more likely to give answers that were taken directly from the text. These responses tended to be brief and simplistic. For example, one student with a learning disability identified the problem using words directly from the scenario text:

“she is a slow reader and stumbles over her words”.

However, students without learning disabilities were able to identify the problem in the first scenario, write it in their own words, and draw conclusions from the text.

These students were able to go beyond the text of the scenario to identify the problem(s). For example, 32% of the participants without learning disabilities were able to conclude from the text that one of Mary's problems could be that she is embarrassed and may even get picked on by other students. Some examples of these answers are:

- *“People may get the wrong impression of Mary.”*
- *“ She might not be able to present as well as the other students and her group might get mad at her.”*
- *“Mary may get nominated by the group to do the speaking and be made fun of.”*

The second scenario focuses on a boy's dislike of math and working under pressure. This boy is in a class where the teacher gives timed pop math quizzes. The group with learning disabilities saw the time pressure (41%) issue stated in the scenario as being the popular. However, students without learning disabilities went beyond the text and drew the conclusion that having a bad mark or failing math (57%) was problem presented for the boy. As well, several students without a learning disability (32%) concluded that this situation would result in a poor grade in math for the boy.

The final scenario dealt with a student accidentally stumbling into another at a school dance and the resulting anger. The students with learning disabilities stated that a fight (50%) would probably result in this situation. Again the answers among individuals with learning disabilities were more likely to be very simplistic and brief such as, “a fight” or “fight, trouble, embarrassment”. Students without a learning disability again went above the information in the text and the conclusion was that the boy who accidentally bumped another might be embarrassed, made fun of or picked on (54%).

When responses were examined by gender and grade differences in student's ability to identify the actual problem were mainly noted for the third scenario. Grade eight students without a learning disability were the participants to most likely state the problem as:

“being embarrassed by having the student yell at Jacob and having the other students staring at him”.

Out of the grade eight students without a learning disability, 63% noted embarrassment as the problem. Whereas, none of the grade seven students and 33% of the grade nine students without a learning disability identifying this as the problem.

In conclusion, gender did not impact student's ability to identify the problem for each scenario. However, there were differences noted between the ability groups. With all three scenarios the group of students with and without learning disabilities were likely to state similar problems that they saw in the scenarios. However, the students without learning disabilities were more likely to state a problem that was more socially appropriate and their responses indicated an ability to be draw conclusions from the information provided. Conversely, the students with learning disabilities were more likely to find their answers to the question in the scenario text.

Research Question #3: How did the participants respond when identifying the emotions in the given hypothetical social problem solving situations overall and by ability group, gender and grade?

The question that was used with each scenario to help identify feelings and emotions was “How do you think ____ feels?”. Overall participants were able to identify

common emotions such as upset/sad, mad, nervous, scared, and embarrassed to describe how the individuals may have felt in specific scenarios. Each group based on ability, gender and grade were examined more extensively to see if there were any differences in their ability to identify the emotion(s) for each scenario. There were no differences found among grade in all three scenarios.

When looking at individuals with and without learning disabilities, differences were noted. When participants were asked to identify what emotions they felt the individual in the scenario was feeling, the participants without a learning disability were more likely to identify many feelings such as two or more emotions, whereas, the participants with learning disabilities were more likely to state one or two emotions. With regards to the types of answers that were given, the participants with learning disabilities were more likely to identify simplistic emotions such as “bad”, “mad”, and “sad/upset”. One thing to note here is that “bad” is really not an emotion, however, individuals with learning disabilities see it as an emotion on a regular basis. Also, some individuals with learning disabilities did not identify emotions in their answers, instead they gave statements such as:

- *“she may feel she can’t read because other kids are better”*
- *“I really don’t know”*
- *“like getting out of there”*.

Individuals without learning disabilities were more likely to be more descriptive, citing emotions such as “uncomfortable”, “nervous”, and “scared”. Also, female participants without learning disabilities were more descriptive indicating a more

extensive vocabulary to describe the emotions evoked in the hypothetical situations. For example, they used words such as: “humiliated”, “speechless”, “threatened”, and “offended” to describe the feelings that could be exhibited within the scenario.

Individuals with learning disabilities had difficulty identifying effective emotions and a broad range of emotions. Some had difficulty stating even a simplistic emotion that the individual could be feeling. Individuals without learning disabilities realized that individuals within the situations could feel a variety of emotions within the same situation. They were also able to identify more descriptive emotions, especially females without learning disabilities. It is evident, individuals with learning disabilities had more difficulty identifying broad and descriptive feelings to the social situations when compared to individuals without learning disabilities.

With regards to differences due to gender, grade and ability group, there were very few differences. The only differences that were noted were in scenario two. It was seen that all grades and gender within the group of students with learning disabilities stated the words worry, pressure or stress to identify the emotions the individual may feel; however, within the students with learning disabilities, a high amount of females identified worry, pressure, and stress as emotions that one would feel in this situation.

In conclusion, it was noted that when students were asked to identify emotions that characters in the scenarios may be exhibiting that there were no differences in students responses by grade but that differences were seen by ability and gender. Individuals with learning disabilities used simplistic words when describing the emotion felt by the individual in the scenario. Also, these students typically only used one or two words to describe how the individuals felt, whereas, students without a learning disability

were able to describe and identify more emotions that the individuals within each scenario may be feeling. Female students with learning disabilities were also more likely to use the words pressure, stress, and/or worry to identify the emotions for the second scenario than students in the other groups.

Research Question #4: How did the participants perform when identifying the best possible solution to the given hypothetical social problem solving situations overall and by ability group, gender, and grade?

The question that was used within each scenario to help identify the best possible solutions was “Take the time to think about this situation and note the best possible solution(s) to the situation for ____.” Participants stated similar solutions to the scenarios, with some appearing to be effective while others did not seem to be based on the specific social situation. For the first scenario where a student has to present in front of the class with her group, the most popular solution identified among all groups was having Mary read a smaller part or ask for a different role in the presentation so that she did not have to read. Within this scenario both students with and without learning disabilities were just as likely to state “re-reading the project with family and/or friends” as an effective solution. In scenario three where a student had another student yell at him for bumping into him, the most popular solution identified was to apologize and then “ignore” the other student while “walk away” was the next most common solution noted by all students regardless of ability, gender, and grade. Each group based on ability, gender and grade were also examined more extensively to see if there were any differences among the ability to identify the emotion(s) for each scenario.

Participants without learning disabilities were more likely to state that they would talk with a teacher about the problems that were presented. The ratio of students without learning disabilities to students with a learning disability who chose talking to the teacher as a solution in these scenarios was 4:1. Within the non-learning disability group, females were more likely to talk to the teacher. Individuals with learning disabilities indicated solutions that required accommodations. For example, for scenario two they noted they would ask for special conditions such as extra time for the quiz or writing the quiz in a quiet room to themselves.

Within the learning disability group, a 5:1 ratio of male to female students stated that the student should “practice reading the presentation in front of family and friends” as a solution to scenario one. Whereas, having the student ask her group for a different role in the presentation instead of reading was a popular solution provided by females with learning disabilities.

Participants responses to the third scenario of the school dance demonstrated differences by ability, gender and grade. Male students with learning disabilities were more likely to take the non-aggressive solution of walking away from the situation. Grade seven female students without learning disabilities stated a nonassertive response of “ignoring the other student” as a solution, whereas the grade eight and nine students took a more direct role of apologizing to the student.

In conclusion, females were more likely to take on a direct role in the scenarios when developing solutions such as talking to their group members, talking to the teacher, and apologizing to the student. Males took more indirect solutions such as taking it on

themselves to practice reading for the presentation or when confronted by a student yelling, they were more likely to walk away from the situation. Individuals with learning disabilities were more likely to ask for special considerations within the situation, on the other hand, students without learning disabilities had a higher probability of discussing the problem with the teacher. Individuals with learning disabilities took an external way of dealing with the situation by asking others to solve the problem for them whereas the students without a learning disability took an internal approach by taking ownership of their situation.

Research Question #5: How did the participants perform when identifying the steps involved in producing the best possible solution in the given hypothetical social problem solving situations overall and by ability group, gender, and grade?

The question that was used within each scenario to help identify the best possible solutions was “Describe the steps ____ should take to reach the solution you noted above (in #3).” For this question, participants had to elaborate and provide the steps they would use to solve the solution that was reported in the previous question. When writing steps to the solutions provided, participants seemed to have difficulty. There were very few answers that had the steps written out with effective steps stated. Ability, gender and grade groups were examined more extensively to see if there were any differences in participant’s ability to identify the solution(s) presented for the individuals in the scenarios. There were no differences found by gender in any of the scenarios.

A number of students that had trouble with this question. Many participants took the approach of just restating the same response in the third question for the fourth

question or the participant identified a whole new solution for the situation. However, individuals with learning disabilities were more likely to have trouble with this task compared to their peers without a learning disability. Approximately 64% of the participants with learning disabilities stated the same answer that was written for the previous question for the present question or provided another solution. When the participants were asked to provide the steps they restated the solution instead or they just presented a new solution to the same social situation. There was no elaboration to the answers and the specific steps involved to resolve the situation were not provided. Approximately 37% of the participants without learning disabilities stated the exact same answer that they wrote for the previous question with no elaboration, did not give the steps involved, or gave a totally different solution.

More specifically, grade seven and eight students with learning disabilities were more likely to repeat their response to question three. Whereas, grade eight and nine students with learning disabilities were more likely to neglect the solution they developed in question three and give a new solution without stating any steps to reach this new solution. However, grade nine students without learning disabilities were the group that had the least trouble with this question. Very few students in this group restated answers from question three or identify new solutions for the scenario.

Approximately 12-15% of participants in both groups of participants with and without learning disabilities had no explanation of steps nor did they effectively attempt to answer the question. About 17% of individuals with learning disabilities were able to begin to identify steps to the solutions they provided, compared to 22% of participants without learning disabilities. Participants with learning disabilities had the most

difficulty with identifying a full set of effective steps to obtain the solution provided in the previous question. Examples of the difficulty that these students encountered and the short ineffective responses are provided in the following cases:

- *“read and get better”*
- *“try harder to do his work”*
- *“count to five in his head then say something back”.*

Only about 6% of participants with learning disabilities were able to do this whereas as much as 23% of participants without learning disabilities were able to adequately identify effective steps to the solutions to the social scenarios. Examples of more effective steps written by students without a learning disability are:

- *“ Talk to her group about how she feels and tell them she isn't comfortable reading in front of the class. Then she should ask them if she could read as little as possible until she is comfortable reading in front of the class. She might also practice at home or with friends until she feels comfortable reading in front of an audience.”*
- *“First she could ask her parents if reading a little less would be possible. Then practice what she is going to say in front of partners or parents and maybe even practice in front of the teacher.”*
- *“a) Get the other student alone, b) talk to him, c) say that his comment really put him down, and d) maybe talk to his parents about what happened and see what they say.”*

In conclusion, most participants had difficulty developing steps to the solutions they had stated in the previous question. There were very few answers that had the steps properly written out with effective steps stated. Many participants took the approach of just restating the same response in the third question for the fourth question or the participant identified a whole new solution for the situation. However, individuals with learning disabilities were more likely to have trouble with this concept. The grade nine students without a learning disability appeared to have the least amount of difficulty and was least likely to restate responses from the previous question and identifying a whole new solution. Lastly, individuals with learning disabilities had difficulty identifying a full set of steps for a solution whereas the students without a learning disability had the higher amount of effective well written steps for the solutions to the scenario.

CHAPTER FIVE

Summary, Discussion, and Recommendations

In this chapter, issues related to self-esteem and social problem solving skills that were evident in the research data will be presented and discussed. The findings will be contextualized and discussed to determine their fit with existing research findings. Recommendations and future implications will also be discussed.

A. Summary

The research surrounding learning disabilities with regards to self-esteem and social problem solving skills has become more focused. Most research has focused on the academic impact on learning disabilities. However, individuals with learning disabilities are greatly impacted by self-esteem and social problem solving skills.

Self-esteem research has changed from examining overall global self-esteem to examining a more multidimensional view of self esteem that acknowledges the different aspects incorporated in self-esteem such as academics, personal, parental/home, physical, and social. By breaking self-esteem into these domains researchers are able to see that students with learning disabilities experiences low self-esteem. This current study was intended to investigate the self-esteem of junior high school students with and without learning disabilities as well as their social problem solving skills..

Researchers have typically used hypothetical social situations to examine and individual's capability to identify social problems, generate alternative solutions, and describing the steps to reach a goal. Over the past thirty years there has been an increased interest in exploring the social emotional side of learning disabilities.

The participants consisted of fifty-nine junior high school students in grades seven to nine from the Tri-County Regional School Board. Twenty-two of the students had learning disabilities and thirty-seven were classified as having no identified learning disability. Each student completed the Culture Free Self-Esteem Inventory – Third Edition (CFSEI-3) and three social problem solving scenarios that were school related.

All mean scores of the Culture Free Self-Esteem Inventory- Third Edition (CFSEI-3) fell within the average range regardless of ability, gender, or grade in the areas of Academic, General, Parental/Home, Social, Personal, and Global Self-Esteem Quotient on the CFSEI-3. The results from this study revealed that there was no difference in self-esteem among junior high school students with and without learning disabilities. However, having no difference among students with and without learning disabilities with academic self-esteem is not consistent with previous research (Zelege 2004; Bear et al., 2002; Grolnick & Ryan, 1990; Kistner & Osborne, 1987; Renick & Harter, 1989, Cooley & Ayres, 1988) which stated that students with learning disabilities had lower self-esteem in the area of academic skills when compared to their normally achieving peers.

A significant difference was found between ability and grade on the Academic domain of the CFSEI-3. Grade seven students with a learning disability had a higher self-esteem on the Academic domain of peers without a learning disability in the same grade. However, grade eight and nine students with a learning disability had lower scores on the Academic domain compared to the students without a learning disability.

A significant difference was found by gender on the CFSEI-3 Personal domain. Males were found to have a higher self-esteem on the Personal domain than females.

This finding is consistent with recent research (Quatman & Watson, 2001; Chubb et al., 1997) which states that females were more likely to have a lower self-esteem than males. Females on the other hand, tended to have higher academic self-esteem than males. However, males scored a higher social self-esteem and global self-esteem than females.

Significant differences were found in the areas of Academic, Personal and Global self-esteem of the CFSEI-3 among the grades. On academic, personal, and global self-esteem, grade seven students indicated significantly higher self-esteem score than grade nine students.

While no significant differences between students with and without learning disabilities were evident in the area of academic self-esteem on the CFSEI-3, a closer examination of the means was carried out. However, students with learning disabilities were more likely to have a higher defensiveness score, indicating that they were more likely to be not as truthful when completing the CFSEI-3.

Grade means indicated that there was a decline in scores in all domains of the CFSEI-3 from grades seven to nine. It was especially noted in the academic and personal domains. Further examination indicated that females demonstrated a marked decline in personal self-esteem from grades seven to nine. On the social domain, scores for both males and females with learning disabilities declined as the grade increased.

Consistent with previous research individuals with learning disabilities demonstrated difficulty identifying social problems, generating appropriate and alternative solutions (Kavale & Mostert, 2004; Schneider & Yoshida, 1988; Gerber & Zinkgraf, 1982; Pearl & Cosden, 1982; Bachara, 1976), and identifying complex emotions (Bauminger et al., 2005). When identifying the problem, students with and

without learning disabilities stated problems that were similar, however, students with learning disabilities were more likely to provide responses taken directly from the text, whereas, students without learning disabilities based their answers on the content of the situation.

When identifying emotions, students with learning disabilities provided simplistic responses such as bad, sad, and upset. Students without learning disabilities provided a greater and more mature range of emotions, especially females who used descriptive words such as embarrassment, humiliated, and speechless to describe how the individuals felt.

Participants stated similar solutions to the scenarios, with some appearing to be effective while others did not seem to be based on the specific social situation. Students with learning disabilities were more likely to ask for special considerations within the situation while, students without learning disabilities tended to suggest discussing the problem with the teacher. Females were more likely to suggest more proactive strategies when developing solutions such as talking to their group members, talking to the teacher, and apologizing to the student. Males provided more indirect solutions such as taking it on themselves to practice reading for the presentation or when confronted by a student yelling, they were more likely to walk away from the situation.

The results indicated no significant difference in self-esteem between individuals with and without learning disabilities. For academic, personal, and global self-esteem, grade seven students indicated significantly higher self-esteem scores than grade nine students. Males were found to have a higher self-esteem on the Personal domain of the CFSEI-3 than females. When examining the social problem solving skills between

students with and without learning disabilities, it was found that students with learning disabilities had difficulties identifying the problem, providing effective solutions and strategies to the situation and difficulty expressing proper emotions of the characters in the scenario. This finding is consistent with research conducted on the difficulties of students with learning disabilities in social problem solving situations (Kavale & Mostert, 2004; Bauminger, Edelsztein, & Morash, 2005; Schneider & Yoshida, 1988).

B. Discussion

i.) Ability and Self-Esteem

Results from the analysis of variance (ANOVA) indicated no statistical significant difference by ability groups. The performance of students with and without learning disabilities was similar on the Culture Free Self-Esteem Inventory – Third Edition (CFSEI-3). This was inconsistent with what the researcher expected to happen and with findings from past research (Grolnick & Ryan, 1990; Kistner & Osborne, 1987; Renick & Harter, 1989; Cooley & Ayres, 1988) that found students with learning disabilities were more likely to have a lower self-esteem than students without learning disabilities.

In the present study, most of the students with learning disabilities were in the Severe Learning Disabilities program which provides extensive academic and social support to help students understand their academic difficulties. This may have impacted the outcome of results on the CFSEI-3. Having support from this program with assistive technology, program adaptations for the classroom, and special guidance from the Severe Learning Disabilities teacher, may have improved the student's performance and

attitudes. This could impact the student's self-esteem making him/her feel good about their abilities.

The means among ability, gender and grade were further examined and although there were no statistical significant differences found, a pattern of discrepancies were noted. Participants with learning disabilities appeared to have lower scores in all domains of the CFSEI-3 when compared to participants without learning disabilities. While the scores of students with learning disabilities were within the average range on the CFSEI-3, they were lower than those of students without learning disabilities. This is consistent with research indicating that students with learning disabilities to have poor overall self-concepts when compared to normally achieving children (Zelege, 2004; Cooley & Ayres, 1988; Defrancesco & Taylor, 1985).

While not statistically significant, participants with learning disabilities were more likely to have a higher score on the defensiveness score. This indicates that students with learning disabilities were more likely to be defensive when answering questions on the CFSEI-3, indicating a higher likelihood that these students were not as truthful completing the self-esteem inventory. Students with learning disabilities were more likely to be defensive indicating that the scores of these students are less indicative of what the actual self-esteem of students with learning disabilities may be.

ii.) **Decline in academic, social, and personal self-esteem over grades**

A review of the mean scores on the CFSEI-3 indicated a marked decline in academic, social and personal self-esteem over grades. When examining the Academic domain, females with learning disabilities went from having a high average self-esteem

score in grade seven to a low average self-esteem score in grade nine. Males also had an above average self-esteem score on the academic domain in grade seven decreasing to a score in the low average range in grade nine. These high scores in grade seven may be due to the fact that students with learning disabilities enter the Severe Learning Disabilities program in junior high school. In grade six, elementary school students with learning disabilities would not have had this amount of academic support. Having the extra support with more concentration on academics may initially increase the student's academic self-esteem. This program helps students improve their grades and thus increase their academic self-esteem.

Many of the grade seven students with learning disabilities were also not officially diagnosed with a learning disability until grade six. This may positively impact student's self-esteem as they finally realize that their school struggles are due to a learning disability and that their academic difficulties are not because they are stupid. This is consistent with MacMaster, Donovan and MacIntyre's research (2002). MacMaster et al. (2002) found that students with learning disabilities had higher levels of self-esteem following the diagnosis of a learning disability. One reason Mac Masters et al. (2002) suggested that the reason for this improved self-esteem had its roots in the social comparison theory; indicating that children with learning disabilities were now comparing themselves to other students with learning disabilities rather than peers without learning disabilities.

On the Social domain of the CFSEI-3, scores for both males and females with learning disabilities also declined as the grade increased. There was a marked decline in social self-esteem from grade seven to grade nine for the students with learning

disabilities. Males scored higher than females on the Personal domain of the self-esteem inventory, perhaps indicating that females struggled with personal self-esteem more than males. This is consistent with findings from past research (Chubb et al., 1997; Quatman & Watson, 2001) which notes that females are more likely to have a lower self-esteem than males. Females appear to experience lower self-worth due to society's views of how a female is suppose to look and act. This may add additional stress for adolescent females to strive to be that "perfect girl". Personal self-esteem may be impacted when they are unable to meet the demands society peers have placed on them. Males do not have these same pressures of society to have a thin attractive body image therefore, males are not as likely to have their personal self-esteem decrease

iii.) **Identifying Emotions**

Participants in all three grades were able to identify similar emotions when presented with three hypothetical scenarios. However, when looking at the results by ability it was found that participants without learning disabilities were more likely to identify two or more emotions as well as use more descriptive words to describe emotions. Examples of descriptive words include "uncomfortable", "nervous", and "scared". Female students without learning disabilities were even more descriptive using words such as "humiliated", "speechless", "threatened", and "offended" to express the emotions evoked in the scenarios. Participants with learning disabilities were more likely to identify one or two emotions and the emotions they stated were most likely to be simplistic. Examples of descriptive words include "bad", "mad", and "sad/upset".

While “bad” is really not an emotion, individuals with learning disabilities see it as an emotion on a regular basis. Also, some students with learning disabilities did not identify emotions, instead they gave statements such as “she may feel she can’t read because other kids are better”. These findings are consistent with Bauminger’s findings that children with learning disabilities had difficulty understanding and recognizing complex emotions (Bauminger, Edelsztein, & Morash, 2005). They seem to have difficulty understanding that a person may experience two conflicting emotions, such as love and hate, at the same time within the same situation. This may be why many of the students with learning disabilities in the present study identified only one emotion for each scenario. When a student with a learning disability identified two emotions they were typically similar to each other in definition, such as “sad” and “upset”.

iv.) **Figuring out the problem**

Gender and grade did not appear to impact participants. Ability to identify problem in social situations, did not have an impact in the current study. However, differences were noted between ability groups. For all three scenarios, students with and without learning disabilities identified similar problems in the scenarios. However, there was some variability in responses. Students without learning disabilities were more likely to state a problem that was more socially appropriate and their responses indicated an ability to draw conclusions from the information provided. Conversely, students with learning disabilities were more likely to find their answers in the scenario text. This is consistent with research that indicated students with learning disabilities have the capacity to misread social interactions and have difficulties identifying problems in social

situations (Bauminger, Edelsztein, & Morash, 2005; Kavale & Mostart, 2004; Schneider & Yoshida, 1988; Gerber & Zinkgraf, 1982; and Pearl & Cosden, 1982).

v.) **Problem Solving Strategies**

Participants stated similar solutions to the scenarios, however, there was variability among responses. When identifying solutions, females were more likely to state that they would take the initiative to solve the problem. For example, they suggested talking to their group members, teachers, or apologizing to the student. Males were more likely to take an indirect role to solve the problem. For example, they noted the person could practice reading in front of others to become comfortable for the presentation or when confronted by a student yelling, walk away from the situation. Female solution involved other whereas, males avoided others and took responsibility. This falls in to society's expectation of male and females traditional roles of the male going out and dealing with things on their own and females being the peacekeeper and seeking the help of others.

When developing solutions, students with learning disabilities were more likely to ask for special considerations and students without learning disabilities had a higher probability of discussing the problem with the teacher. Individuals with learning disabilities took an external method of dealing with the situation by not taking responsibility for their situation and asking others to solve the problem for them. Conversely, students without learning disabilities took an internal approach by taking ownership of their situations.

In the education system students with learning disabilities are taught how to deal with their impairments. These students are given a problem and told the solutions on how to deal with it therefore, when identifying the solutions students with learning disabilities were more likely to respond with answers that they were taught. Responses would include asking for special supports such as extra time for tests or writing tests in a quiet room. They were less likely to self-generate a solution. Therefore, when faced with a problem, a student with a learning disability is more likely to think “what do people always tell me to do?” and they are likely to perform the response that was given to them. For example, in the second scenario when the male is faced with having to complete the math test in a certain period of time, a student with a learning disability probably was told to ask for supports in class when asked to do something that is difficult such as asking for extra time to complete the test. The reason why students with learning disabilities were more likely to ask for special supports may be due to their participation in the Sever Learning Disabilities program where they are taught the strategies to use when faced with a particular problem. These students are taught to be advocates for themselves and to ask for special supports when they are needed for the classroom.

vi.) **Social Problem Solving Steps**

Most participants had difficulty developing steps to the solutions that were developed in the previous question. There were many steps that were not properly written out with effective, well-developed steps. Individuals were more likely to not develop effective, well-developed steps but instead restated the solution from the previous questions. They were also more likely to identify an entirely new solution

instead of developing steps to the original solution. Having trouble identifying steps involved in creating a solution is consistent with findings by Schneider & Yoshida (1988). Children with learning disabilities experience difficulty identifying social problems, generating alternative solutions, and describing the steps to reach a goal (Bauminger et al., 2005; Schneider & Yoshida, 1988). Also, consistent with research was the finding that individuals with learning disabilities had difficulty identifying a full set of well-defined and effective steps for solutions to the scenarios.

C. Recommendations for School Professionals

1. Conducting research on self-esteem and social problem solving skills among students with learning disabilities provides additional information to school psychologists. This information can be used to develop interventions for these students. As well, the issues of self-esteem and social problem solving could be addressed with all students to ensure that universal access to these life skills.
2. Results of this study suggest that School Psychologist need to be aware of student's self-esteem and social problem solving. School psychologists can explore these areas in addition to the traditional cognitive and academic areas.
3. School psychologists can be utilized in many ways to support school staff and also to provide in-service on self-esteem and social problem solving skills among students with learning disabilities. Teachers sometimes do not realize the pressures of junior high school; the struggles that students face in adolescence, as well as students with learning disabilities with their own self-esteem issues.

- Some teachers may see school as just dealing with academics and do not see anything outside of teaching academics as part of their job description. School psychologists need to provide indicators of what teachers need to look for among students with regards to self-esteem and teachers need to be taught how to properly interact with the junior high school population.
4. School psychologists can also work with principals to help improve school culture. A more proactive approach to working with students is needed. Principals can be encouraged and supported in their leadership roles to provide a safe accepting environment.
 5. School psychologists can be utilized to provide group work on self-esteem and/or social problem solving skills among students with learning disabilities. Working with students with learning disabilities on self-esteem, school psychologists can focus attention on the other important issues of learning disabilities that are not seen within the schools as much as academic difficulties.
 6. Teachers who have increased knowledge about self-esteem and social problem solving skills among students with and without learning disabilities can support their students. It helps teachers to properly communicate with these students as well as to be better equipped to identify when a student may be struggling with self-esteem or social issues. It is important to note that students with learning disabilities are not being inappropriate on purpose in social situations, it is that they may not know or have the skills to deal with social issues.
 7. Having administration more knowledgeable about self-esteem and social problem solving skills among students with learning disabilities can provide

acknowledgement and support for these students and school staff. The administration should become advocates for students with learning disabilities experiencing difficulties with self-esteem and social problem solving skills. Expanding awareness and advocating for acknowledgement of these concerns will help students with learning disabilities feel more supported.

D. Recommendations for Future Research

1. Many of the learning disability students who participated in this study were in the Severe Learning Disability program. Further research could examine if there are differences in self-esteem between students with learning disabilities not in specialized programs but in regular class settings and their non-disabled peers.
2. Gathering greater numbers of participants, from many different locations throughout Nova Scotia could be beneficial. Future research could focus on comparing urban versus rural school settings in the self-esteem of students with and without learning disabilities.
3. Examining social problem solving skills through hypothetical social scenarios that require hand written answers did not seem the most efficient way to obtain information. By having hand written responses there was no way to ask the participant to elaborate after the information had been collected. Also, there was no way to examine if students with learning disabilities were able to provide the answers that they wanted to provide. In future research, other ways should be used to gain information on student's problem solving situation. Having computer writing programs available to help students write their answers may be

- beneficial. Another way could be to have multiple choice questions or interviews using the hypothetical social scenarios.
4. The use of in-depth interviews may have been more informative. This method would allow for lengthy, in-depth responses and elaboration.
 5. Conducting more research in the area of social problem solving skills through hypothetical situations based on academic situations would provide information that could be helpful for students with learning disabilities to provide more effective strategies to deal with academic social situation and provide a more productive academic life therefore increasing their academic self-esteem. When developing these academic situations, using more hypothetical situations among various school situations could be helpful.
 6. Results of this study indicate that there is a need for some type of intervention to promote the use of appropriate social problem solving strategies in the classroom as well as in actual social situations. Different social intervention programs and techniques that introduce and support the use of appropriate strategies in various social situations could be introduced and studied.

References

- Bachara, G. (1976). Empathy in learning disabled children. *Perceptual and Motor Skills*, 43, 541-42.
- Baer, J. (1999). Adolescent development and the junior high school environment. *Social Work in Education*, 21,4,238-248
- Bakken, J.P. & Wojcik, B.W. (2004). Technology resources for persons with learning disabilities. In S. Burkhardt, F.E. Obiakor, & A.F. Rotatori (Eds.), *Advances in special education: Volume 16: Current perspectives on learning disabilities* (pp.21-34). Netherlands: Elsevier.
- Bateman, B.D. (1965). An educational view of a diagnostic approach to learning disorders. In J. Hellmuth (Ed.), *Learning disorders* (Vol. 1, pp. 219-239). Seattle, WA: Special Child.
- Battle, J. (2002). *Culture free self-esteem inventories: Third edition examiner's manual*. Austin, TX: Pro-Ed.
- Bauminger, N., Edelsztein, H.S., & Morash, J. (2005). Social information processing and emotional understanding in children with learning disabilities. *Journal of learning disabilities*, 38, 1, 45-61.
- Bear, G.G., & Minke, K.M. (1996). Positive bias in the maintenance of self-worth among children with Learning Disabilities. *Learning Disability Quarterly*, 19, 23-32.
- Bear, G. G., Minke, K.M., & Manning, M.A. (2002). Self-concept of students with learning disabilities: A meta-analysis. *School Psychology Review*, 31,3, 405-427.
- Bohan , J.S. (1973). Age and sex differences in self-concept. *Adolescence*, 8, 379-384.
- Boscardin, M.L. (2004). Transforming administration to support science in the schoolhouse for students with disabilities. *Journal of Learning Disabilities*, 37,3, 262-269.
- Burkhardt, S. (2004). Non-verbal learning disabilities In S. Burkhardt, F.E. Obiakor, & A.F. Rotatori (Eds.), *Advances in special education: Volume 16: Current perspectives on learning disabilities* (pp.21-34). Netherlands: Elsevier.
- Carlson, C.I. (1987). Social interaction goals and strategies of children with learning disabilities. *Journal of Learning Disabilities*, 20,5, 306-311.
- Chapman, J.W. (1988). Learning disabled children's self-concepts. *Review of Educational Research*, 58,3, 347-371.

- Chubb, N.H., Fertman, C.I., & Ross, J.L. (1997). Adolescent self-esteem and locus of control: A longitudinal study of gender and age differences. *Adolescence*, 32, 125, 113-129.
- Clever, A. & Bear, G. (1992). Discrepancies between competence and importance in self-perceptions of children in integrated classes, *Journal of Special Education*, 26, 2, 125-138.
- Coleman, M.J. (1983). Handicapped labels and instructional segregation: Influences on children's self-concepts versus the perceptions of others. *Learning Disability Quarterly*, 6, 3-11.
- Connor, J.M., Poyrazli, S., Ferrer-Wreder, L., & Grahame, K.M. (2004). The relation of age, gender, ethnicity, and risk behaviors to self-esteem among students in nonmainstream schools. *Adolescence San Diego*, 39, 155, 457-463.
- Cooley, E. J., & Ayres, R.R. (1988). Self-concept and success-failure attributions of nonhandicapped students and students with learning disabilities. *Journal of Learning Disabilities*, 21, 3, 174-78.
- Dickstein, E.B., & Warren, D.R. (1980). Role-taking deficits in learning disabled children. *Journal of Learning Disabilities*, 13, 7, 378-82.
- Elksnin, L.K. & Elksnin N. (2004). The social-emotional side of learning disabilities. *Learning Disability Quarterly*, 27, 3-8.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140.
- Fullan, G. & Hargreaves, A. (1991). *What's worth fighting for?: Working together for your school*. Ontario: Ontario Public School Teachers' Federation.
- Gans, A.M., Kenny, M.C., & Ghany, D.L. (2003). Comparing the self-concept of students with and without learning disabilities. *Journal of Learning Disabilities*, 36, 3, 287-295.
- Garrod, A., Smulyan, L., Powers, S.I., & Kilkenny, R. (1999). *Adolescent protraits: Identity, relationship and challenges (3rd Ed.)* Boston, Mass: Allyn and Bacon.
- Geary, D.C. (2000). Mathematical disorders: An overview for educators. *International Dyslexia Association: Perspectives*, 26, 6-9.
- Gerber, P.J., & Zinkgraf, S.A (1982). A comparative study of social-perceptual ability in learning disabled and nonhandicapped students. *Learning Disability Quarterly*, 5, 374-78.

- Grolnick, W.S., & Ryan, R.M. (1990). Self-perceptions, motivation, and adjustment in children with learning disabilities: A multiple group comparison study. *Journal of Learning Disabilities, 23*,3, 177-84.
- Kass, C.E. & Myklebust, H.R. (1969). Learning Disability: An educational definition. *Learning Disabilities, 2*,7, 377-379.
- Kavale, K.A., & Forness, S.R. (2000). What definitions of learning disability say and don't say: A critical analysis. *Journal of Learning Disabilities, 33*,3, 239-256.
- Kavale, K.A., Holdnack, J.A. & Mostert, M.P. (2005). Responsiveness to intervention and the identification of specific learning disability: A critique and alternative proposal, *Learning Disability Quarterly, 28*, 2-16.
- Kavale, K.A., Kaufman, A.S., Naglieri, J.A. & Hale, J. (2005). Changing procedures for identifying learning disabilities: The danger of poorly supported ideas. *School Psychologist, 59*,16-25.
- Kavale, K.A. & Mostert, M.P. (2004). Social skills interventions for individuals with learning disabilities. *Learning Disability Quarterly, 27*, 31-45.
- Kistner, J. & Osborne, M. (1987). A longitudinal study of ld children's self-evaluations. *Learning Disability Quarterly, 10*, 258-266.
- Johnson, B. (2004). Psychological co morbidity in children and adolescents with learning disorders. *Journal of Indian Association for Child and Adolescent Mental Health, 1*,1,7.
- Johnson, D. (1995). An overview of learning disabilities: Psychoeducational perspectives. *Journal of Child Neurology, 10*,1,2-8.
- Latson, S.R. (1996). Preventing parent burnout: Model for teaching effective coping strategies to parents of children with learning disabilities. In J.L. Steinberg (Ed.), *Learning disabilities: Information and resources* (pp. 67-70). Prides Crossing, MA: Landmark Foundation.
- Lavoie, R.D. (1996). Life on the waterbed. In J.L. Steinberg (Ed.), *Learning disabilities: Information and resources* (pp.71-74). Prides Crossing, MA: Landmark Foundation.
- Learning Disability Association of Canada (2002). *Learning disability defined*. Retrieved February 24, 2006, from <http://www.ldac-taac.ca/Defined/defined-e.asp>

- Learning Disabilities Association of Ontario (2006). *Operationalizing the learning disabilities association of Ontario recommended practices for the assessment, diagnosis and documentation of learning disabilities*. Retrieved September 13, 2006, from http://www.ldao.ca/resources/education/pei/assessment/assessment_supportDoc.pdf
- Le Greca, A.M. (1987). Children with learning disabilities: Interpersonal skills and social competence. *Journal of Reading, Writing, and Learning Disabilities International*, 3, 167-185.
- Lyon, G., Fletcher, J., & Barnes, M. (2003). Learning Disabilities. In E.J. Mash & R.A. Barkley (Eds.), *Child Psychopathology: Second edition* (pp. 520-586). New York, NY: The Guilford Press.
- MacMaster, K., Donovan, L.A., & MacIntyre, P.D. (2002). The effects of being diagnosed with a learning disability on children's self-esteem. *Child Study Journal*, 32,2,101-108.
- Marcotte, D., Fortin, L., Potvin, P. & Papillon, M. (2002). Gender differences in depressive symptoms during adolescence: Role of gender-typed characteristics, self-esteem, body image, stressful life events, and pubertal status. *Journal of Emotional and Behavioral Disorders*, 10,1, 29-42.
- Mather, N. & Gregg, N. (2006). Specific learning disabilities: Clarifying, not eliminating, a construct. *Professional Psychology: Research and Practice*, 37,1, 99-106.
- Meltzer, L., Roditi, B., Houser, R.F., Jr., & Perlman, M. (1998). Perceptions of academic strategies and competence in students with learning disabilities. *Journal of Learning Disabilities*, 31, 437-451.
- Oliva, A.H., & LaGreca, A.M. (1988). Children with learning disabilities: Social goals and strategies. *Journal of Learning Disabilities*, 21,5, 301-06.
- Pearl, R., & Cosden, M. (1982). Sizing up a situation: LD children's understanding of social interactions. *Learning Disability Quarterly*, 5, 371-73.
- Renick, M.J. (1987). *Measuring the relationship between academic self-perceptions and global self-worth: The self-perception profile for learning disabled students*. Disabilities and Gifted Education, Colorado.
- Renick, M.J., & Harter, S. (1989). Impact of social comparisons on the developing self perceptions of learning disabled students. *Journal of Educational Psychology*, 81,4, 631-38.

- Rosenberg, M. (1985). Self-concept and psychological well-being in adolescence. In R.L. Leahy (Ed.), *The development of the self* (pp. 205-246.). Orlando, FL: The Academic Press.
- Roeholtz, S. (1989). *Teachers' workplace: The social organization of schools*. New York: Longman.
- Sarason, S. (1982). *The culture of the school and the problem of change*. Boston: Allyn & Baron.
- Sattler, J.M. (2001). *Assessment of children: Behavioral and clinical applications: Fourth edition*. La Mesa, CA: Jerome M. Sattler, Publisher, Inc.
- Schneider, M., & Yoshida, R.K. (1988). Interpersonal problem-solving skills and classroom behavioural adjustment in learning-disabled adolescents and comparison peers. *Journal of School Psychology, 26,1*, 24-34.
- Sherry, L. (1996). Impact on the family. In J.L. Steinberg (Ed.), *Learning disabilities: Information and resources* (pp. 63-66). Prides Vrossing, MA: Landmark Foundation.
- Silver, N., & Young, D. (1985). Teaching literature grade 9: Integrating the communication arts. The Essay. Experimental. *New York City Board of Education*, Brooklyn, NY.
- Smith, D., & Nagle, R.J. (1995). Self-perceptions and social comparisons among children with learning disabilities. *Journal of Learning Disabilities, 28,6*, 364-71.
- Sobol, M.P., Earn, B.M., Bennett, D., & Humphries, T. (1983). A categorical analysis of social attributions of learning-disabled children. *Journal of Abnormal Child Psychology, 11*, 217-227.
- Sousa, D.A. (2001). *How the special needs brain learns*. Thousand Oaks, CA: Corwin Press, Inc.
- Toro, P.A., Weissberg, R.P., Guare, J., & Liebenstein, N.L. (1990). A comparison of children with and without learning disabilities on social problem-solving skill, school behaviour, and family background. *Journal of Learning Disabilities, 23,2*, 115-120.
- Weiss, E. (1984). Learning disabled children's understanding of social interactions of peers. *Journal of Learning Disabilities, 17,10*, 612-15.
- Wilburn, V.R. & Smith, D.E. (2005). Stress, self-esteem, and suicidal ideation in late adolescents. *Adolescence San Diego, 40, 157*, 33-47.

Willcutt, E.G. & Pennington, B.F. (2000). Psychiatric co-morbidity in children and adolescents with reading disability. *Journal of Child Psychology and Psychiatry*, 41, 1039-1048.

Zelege, S. (2004). Self-concept of students with learning disabilities and their normally achieving peers: A review. *European Journal of Special Needs Education*, 19,3, 145-170.

Appendix A

Culture Free Self-Esteem Inventory – Third Edition

Page 2 of CFSEI-3

Appendix B

Social Problem Solving Scenarios

Please read the following short stories and answer the questions:

It is Language Arts class and the class has been working on a new novel. The teacher has divided the class into groups of four students to work on a project which the students are required to present to the whole class. Mary is a slow reader who sometimes stumbles over words and is uncomfortable reading and speaking in front of the class. The group is meeting to discuss the roles for each person in the group for the class presentation.

1. What problem(s) might this present for Mary?

2. How do you think Mary feels?

3. Take the time to think about this situation and note the best possible solution(s) to the situation for Mary.

4. Describe the steps Mary should take to reach the solution you noted above (in #3).

John's teacher likes competitions and is always giving pop math quizzes. When students enter the class, tests are often face down on their desks. The teacher takes out a stop watch and tells the students they have 20 minutes to complete the equations. While many of his classmates enjoy these tests and do well on them, John hates math and working under time pressure.

1. What problem(s) might this present for John?

2. How do you think John feels?

3. Take the time to think about this situation and note the best possible solution(s) to the situation for John.

4. Describe the steps John should take to reach the solution you noted above (in #3).

There is a junior high school dance in the school gym. Jacob is at the dance having a great time with his friends on the dance floor. While he is dancing with a friend, he accidentally stumbles and bumps into another student. The student that he bumped into is one of the “popular” kids and enjoys teasing, embarrassing, and tormenting others. This student turns around, becoming very angry and shouts “Watch where you are going, stupid?” Students near Jacob stop dancing and wait for Jacob’s response.

1. What problem(s) might this present for Jacob?

2. How do you think Jacob feels?

3. Take the time to think about this situation and note the best possible solution(s) to the situation for Jacob.

4. Describe the steps Jacob should take to reach the solution you noted above (in #3).

Appendix C

Letter to Tri-County Regional School Board

Dear Phil Landry & Board Members

My name is Bonnie Noseworthy. I am a graduate student in the Master of Arts in School Psychology program at Mount Saint Vincent University in Halifax, Nova Scotia. I am completing my thesis on the self-esteem and problem solving skills of junior high school students with and without learning disabilities. I am seeking permission from the Tri-County School Board to carry out my study in approximately three of the seven junior high schools within your school board. Results from this research should lead to discussions among teachers, parents, and administrators regarding interventions and programs to improve the problem solving skills of adolescents with low self esteem and/or inappropriate social skills.

You are being asked to

- a. Give the researcher permission to contact the junior high school principals to obtain their permission to conduct the research in their schools.
- b. With principals consent, have research packages distributed to students to take home to their parents via the home room teachers.
- c. Allow students and/or parents to drop off consent forms to the principal's office or their home room teachers
- d. Permit students to complete the inventory and questionnaire in small groups during school hours under the supervision of the researcher.
- e. With parent consent, allow principals or school psychologists to indicate which participants attend resource class and have a designated learning disability.

Packages to be distributed to parents will contain: 1.) a letter explaining the purpose of the study, responsibilities of participants and researchers, and outlining participants' rights; 2.) an informed consent form; and 3.) a return envelope. Copies are enclosed. All students will be asked to complete two measures. One is a published self esteem inventory designed to look at the self esteem of students between the ages six to eighteen. The second is a questionnaire that requires your child to answer questions about three typical problem solving situations facing junior high students. Questions such as "How might you solve this problem?" will be asked. It will take approximately 30 minutes to complete both measures.

Students who choose to complete the inventory and the questionnaire can return the informed consent in a sealed envelope to the principal or home room teacher. A convenient time and place for the sessions will be arranged with the appropriate school personnel. Participation in this study is completely voluntary and students may decline to participate or withdraw, at any time, from this study without consequences. Those who do participate may skip or not respond to any questions with which they are uncomfortable answering. All information obtained in this study will be kept strictly confidential. The inventories and questionnaires will be numerically coded for data analysis and will contain no personal identifying information. All data will be stored in a locked file cabinet in position of the researcher and all electronic files will be password

protected. After the thesis has been successfully defended, all original questionnaires and inventories will be shredded. The results of this study will be presented as group data and no individual participants will be identified. Examples of problem solving strategies on the questionnaire may be used to illustrate specific classes of strategies in the thesis and future publications and papers, however, no identifying information will be given.

If you have any questions about this study, please contact me at [REDACTED] or my supervisor, Dr. Carmel French at 457-6187 (carmel.french@msvu.ca). This research activity has met the ethical standards of the University Research Ethics Board at Mount Saint Vincent University. If you have any questions or concerns about this study and wish to speak with someone who is not directly involved with this study, you may contact the Chair of the University Research Ethics Board by phone at 902-45-6350 or by email at research@msvu.ca.

Thank you,

Sincerely,

Bonnie Noseworthy
Student
Master of Arts in School Psychology

Appendix D

Letters to School Principals

Dear Mr./Mrs. _____

My name is Bonnie Noseworthy and I am currently enrolled in the Master of Arts in School Psychology program at Mount Saint Vincent University. For my thesis project, I am seeking permission to conduct a study at your school on the self-esteem and problem solving skills exhibited by junior high school students with and without learning disabilities. Results from this research should lead to discussions among teachers, parents, and administrators regarding interventions and programs to improve the problem solving skills of adolescents with low self esteem and/or inappropriate social skills.

You are being asked to

- a) allow home room teachers to distribute research packages to students to take home to their parents.
- b) Allow students and/or parents to drop off consent forms to the principal's office or their home room teachers
- c) Permit students to complete the inventory and questionnaire in small groups during school hours under the supervisions of the researcher.
- d) With parent consent, indicate which participants attend resource class and have a designated learning disability.

Packages to be distributed to parents will contain: 1.) a letter explaining the purpose of the study, responsibilities of participants and researchers, and outlining participants' rights; 2.) an informed consent form; and 3.) a return envelope. Copies are attached. All students will be asked to complete two measures. One is a published self esteem inventory designed to look at the self esteem of students between the ages six to eighteen. The second is a questionnaire that requires students to answer questions about three typical problem solving situations facing junior high students. Questions such as "How might you solve this problem?" will be asked. It will take approximately 30 minutes to complete both measures.

Students who choose to complete the inventory and the questionnaire can return the informed consent in a sealed envelope to the principal or home room teacher. A convenient time and place for the sessions will be arranged with the appropriate school personnel.

Participation in this study is completely voluntary and students may decline to participate or withdraw, at any time, from this study without consequences. Those who do participate may skip or not respond to any questions with which they are uncomfortable answering. All information obtained in this study will be kept strictly confidential. The inventories and questionnaires will be numerically coded for data analysis and will contain no personal identifying information. All data will be stored in a locked file cabinet in position of the researcher and all electronic files will be password protected. After the thesis has been successfully defended, all original questionnaires and inventories will be shredded. The results of this study will be presented as group data and no individual participants will be identified. Examples of problem solving strategies on

the questionnaire may be used to illustrate specific classes of strategies in the thesis and future publications and papers, however, no identifying information will be given.

If you have any questions about this study, please contact me at [REDACTED] or my supervisor, Dr. Carmel French at 457-6187 (carmel.french@msvu.ca). This research activity has met the ethical standards of the University Research Ethics Board at Mount Saint Vincent University. If you have any questions or concerns about this study and wish to speak with someone who is not directly involved with this study, you may contact the Chair of the University Research Ethics Board by phone at 902-45-6350 or by email at research@msvu.ca.

Thank you,

Sincerely,

Bonnie Noseworthy
Student
Mount Saint Vincent University

Appendix E

Letters to Parents

Dear Parent

My name is Bonnie Noseworthy and I am currently enrolled in the Master of Arts in School Psychology program. For my thesis project, I am requesting that you allow your son/daughter to participate in a study on self-esteem and problem-solving skills exhibited by junior high school students with and without learning disabilities. Results from this research should lead to discussions among teachers, parents, and administrators regarding interventions and programs to improve the problem solving skills of adolescents with low self esteem and/or inappropriate social skills.

Your son/daughter will be required to complete two measures. One is a published self esteem inventory designed to look at the self esteem of students between the ages six to eighteen. The second is a questionnaire that requires participants to answer questions about three social/academic problem solving situations. Questions such as “How might you solve this problem?” will be asked. It will take approximately 30 minutes to complete both measures. In order to compare the results of students with a learning disability to those of students who do not have a learning disability, I am also requesting your permission to ask the principal or school psychologist to indicate whether your son/daughter receives resource class assistance or has a designated learning disability. I will not have access to your child’s school record.

If you are willing to have your son/daughter participate in the study and she/he is willing to participate complete the enclosed consent form, place it in the envelope and pass it into the principal or home room teacher.

Participation in this study is completely voluntary and you and/or your child may decline to participate or withdraw, at any time, from this study without any consequences. Those who do participate may skip or not respond to any questions with which they are uncomfortable answering. All information obtained in this study will be kept strictly confidential. The inventories and questionnaires will be numerically coded and will contain no personal identifying information. All data will be stored in a locked file cabinet in possession of the researcher and all electronic files will be password protected. After the thesis has been successfully defended, all original questionnaires and inventories will be shredded. The results of this study will be presented as group data and no individual participants will be identified. Examples of problem solving strategies on the questionnaire may be used to illustrate specific classes of strategies, however, participant confidentiality will be maintained.

If you have any questions about this study, please contact me at [REDACTED] or my supervisor, Dr. Carmel French at 457-6187 (carmel.french@msvu.ca). This research activity has met the ethical standards of the University Research Ethics Board at Mount Saint Vincent University and the Tri-County School Board. If you have any questions or concerns about this study and wish to speak with someone who is not directly involved with this study, you may contact the Chair of the University Research Ethics Board by phone at 902-45-6350 or by email at research@msvu.ca. I look forward to your response.

Thank you,

Sincerely,

Bonnie Noseworthy
Student
Mount Saint Vincent University

Appendix F

Informed Consent

Informed Consent

I, _____, am willing to have my son/daughter participate in a study on self-esteem and social problem-solving skills exhibited by junior high school students with and without learning disabilities. This study is being carried out by Bonnie Noseworthy, a student in the Master of Arts in School Psychology at Mount Saint Vincent University, under the supervision of Dr. Carmel French. Results from this research should lead to discussions among teachers, parents, and administrators regarding interventions and programs to improve the problem solving skills of adolescents with low self esteem and inappropriate social skills.

I have been informed that my son/daughter's time commitment to complete the self esteem inventory and social problem solving scenario questionnaire will be approximately 30 minutes.

I understand that my son/daughter's participation is voluntary and that he/she may withdraw at any time without penalty. I understand that all information obtained in this study will be kept strictly confidential and no information will be provided that could identify participants.

I know that all data will be stored in a locked file cabinet in the researcher's office and that electronic files will be password protected. I understand that questionnaires will have a numerical code to maintain student confidentiality and anonymity. After the thesis has been successfully defended, all original questionnaires and inventories will be shredded.

I also understand that examples of problem solving strategies from the questionnaire will be used in the researcher's thesis and may be used in future papers and presentations to illustrate classes of strategies arising from data. However, no names with identifying information can be reported and my son/daughter's identity will not be revealed in any way.

I have been informed that a summary of the finding can be provided to me if I provide contact information.

If you have any questions about this study, please contact Bonnie Noseworthy at [REDACTED] or my supervisor, Dr. Carmel French at 457-6187 (carmel.french@msvu.ca). This research activity has met the ethical standards of the University Research Ethics Board at Mount Saint Vincent University and with Tri-County School Board. If you have any questions or concerns about this study and wish to speak with someone who is not directly involved with this study, you may contact the Chair of the University Research Ethics Board by phone at 902-457-6350 or by email at research@msvu.ca.

Parent's Signature: _____

Son/Daughter's Signature: _____

Date: _____

Phone number(s) I may be reached at: _____

Address (mailing or email) where a summary of the results can be sent:

Researchers Signature: _____