Postsecondary Students with Reading Difficulties/Disabilities: Exploring Coping Strategies and Learning Techniques

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In the Department of Educational Psychology and Special Education
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Abstract

The purpose of the present study was to explore the coping strategies and learning techniques students with reading difficulties/disabilities (e.g., dyslexia) view as effective and commonly use to cope with the demands of postsecondary education. The present study employed a basic qualitative interpretive research design to discover and understand the perspectives and experiences of the students interviewed for this study (Merriam, 1998). Semi-structured interviews were utilized to provide insight into the experiences of these individuals. Analysis of the data generated from these interviews maintained a focus within the theory of resilience. There were three major themes that emerged from the interviews: (1) struggling to learn: recognizing the impact of learning difficulties and/or disabilities; (2) embracing the positives and negatives of a diagnosis; (3) surviving the learning experience: using coping strategies and learning techniques. Despite the adversities the participants within the current study faced, they all reported instances in which they were able to positively adapt and adjust in order to experience success and resilience in their lives. This study concluded with a discussion of the practical implications of the findings, the limitations and strengths of the study, and areas for future research.
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Lastly, I would like to thank my husband, and our family members, for their unconditional love and support though out this extended journey of mine. Without your support this goal may never have been realized. My sincere gratitude to all those who have helped me along the way.
Dedication

This thesis is dedicated to my parents. To my Dad, who never stopped encouraging me to be the best I could be. Although he personally identified with my academic struggles, he always made me feel like nothing was out of reach. He was always so proud of my every accomplishment, no matter how big or small. Always acknowledging how hard, he knew, I had to work to achieve my academic goals. Your emphasis on hard work and words of encouragement had a tremendous influence on my achievements. And to my Mom, who has been behind me every step of the way. Without you countless hours put into tutoring me through grade school, university would never have been an option for me. Although you understood my struggles, you never let me use them as an excuse. Your strong character and words of wisdom have stuck with me and helped me become the person I am today. Your unconditional support and encouragement, throughout the years, is the reason why my future goals have become my reality. Without you, I would not be where I am today.
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Chapter 1: Introduction

A personal connection to research in the area of students with a learning disability (LD), mainly dyslexia (LD/D), began when a professor at the University of Saskatchewan (U of S) inquired about my LD. This question was not uncommon as I had struggled all my life with various aspects of learning, mainly in the areas of reading, writing, and spelling. There was always something different about the way I learned that was unlike most other students. For instance, it took me a considerably longer amount of time to decode, process, interpret, and comprehend information. These difficulties, combined with what seemed to be a non-existent short-term memory, made studying and memorizing data a timely and frustrating task. When reviewing the research on LD’s and dyslexia the resemblance to my experiences was astounding. That is, there were an overwhelming amount of similarities to what I was experiencing and the characteristics outlined of a learner with a LD or dyslexia. I could not help but think, “How did I make it here?” I thought back on all the strategies that were implemented and how they allowed me to cope with a LD, making it through not only elementary school but high school and even university. These coping strategies or learning techniques were always necessary to help me manage the demands of postsecondary education. I never realized or acknowledged the purpose the various strategies were truly serving or thought much about how these strategies had helped me to get through postsecondary education. My understanding of how important the use of learning strategies were to my educational success occurred shortly after I began to identify as an individual with a LD, namely dyslexia. I have never had a formal diagnosis made by a professional, therefore I could not hold the formal label of being dyslexic or as having a LD. However, the lack of diagnosis does not negate the presence of a SLD/LD in individuals who have not been tested or remain undiagnosed (Nalavany, Carawan, & Rennick, 2010). As I progressed through university, and was further forced to manage and cope with the experience of having a LD, it was my learned ability to function that overcame the barriers I experienced due to having a LD. This is recognized within the literature as compensated dyslexia (Lefly & Pennington, 1991; McLoughlin, 1997; McLoughlin, Fitzgibbon, & Young, 1994). This term recognizes the pivotal role coping strategies have and how they can be used to allow individuals to achieve success in spite of having a LD (Boetsch, Green, & Pennington, 1996; McLoughlin, Fitzgibbon, & Young, 1994). It was these coping strategies that I could recall as being useful in my own
personal experience as I progressed through school. However, similar personal accounts were not reflected within the literature. There was little research highlighting the success of individuals with a learning and/or reading disability such as dyslexia (e.g., Burden & Burdett, 2005; Gerber, Ginsberg, & Reiff, 1992). Other, similar research that exists is mainly quantitative (e.g., Raskind, et. al., 1999; Vogel, & Adelman, 1992), providing you with a list of research findings that contributed to the success of people with LD. Most of the research seemed to focus on the successful outcome of these individuals, not in gaining an understanding of how they got there (e.g., Raskind, et. al., 1999; Vogel, & Adelman, 1992). Therefore, the purpose of my research was to examine the coping strategies and learning techniques students with reading difficulties/disabilities (e.g., dyslexia) use to manage the demands of acquiring a postsecondary education. It is hoped my research can contribute to improving the knowledge and understanding of the experiences and strategies that postsecondary students with reading difficulties/disabilities, like dyslexia, feel contribute to them being where they are today. However, before these areas can be further explored it is important to first consider the current position of postsecondary students with learning difficulties/disabilities.

A learning disability (LD) encompasses a wide range of disorders, including listening, speaking, reading, writing, and mathematics. Dyslexia is one of numerous distinct LD’s (Kirby, et al., 2008), better represented within the category of specific learning disabilities (SLD). A SLD refers primarily to reading disabilities, and dyslexia is the most prevalent type of SLD (Lerner, 1989; Lyon, 1995; Pumfrey & Reason, 1991). Dyslexia is better identified as a SLD that is neurobiological in origin, and characterized by difficulties in word recognition, poor spelling, and decoding abilities. These deficits are unexpected in relation to otherwise average cognitive abilities (Lyon, Shaywitz, & Shaywitz, 2003). Dyslexia is a lifelong disability that is often diagnosed in childhood and continues to disrupt the reading and writing abilities of the individual throughout his or her lifetime (LDAC, 2002). There are varied findings regarding the persistence of difficulties individuals with LD may experience. Some limited research reports the same problems with reading and writing. That is, the problems individuals experienced in childhood or adolescence can be experienced into adulthood (e.g., Bruck, 1989; Heiman, & Precel, 2003; Skaalvik, 2004). Whereas, other research suggests the difficulties with reading and writing individuals once experienced diminish over time (e.g., Abbott & Frank, 1975;
Gerber, Ginsberg, & Reiff, 1992; Gottesman, 1979; Hoffman, et al., 1987; Johnson, & Blalock, 1987; Kavale, 1988; Raskind, et al., 1999; Rawson, 1968; Rogan, & Hartman, 1976). Research trends also suggest individual difficulties can become compounded and worsen as they move into adulthood (e.g., Boetsch, Green, & Pennington, 1996; Bruck, 1992; Fuller, et al., 2004; Gerber, et al., 1990; Gerber, Ginsberg, & Reiff, 1992; Gregg, & Coleman, 2001; Hunter-Carsch, & Herrington, 2001; Mcloughlin, Fitzgibbon, & Young, 1994; Shaywitz, et al., 1998; Shaywitz et al., 1999). The research by Gerber et al. (1990) also supports the notion that the difficulties experienced by individuals with learning disabilities become compounded and worsen over time. Developmental deficits have been speculated to be exacerbated by the increasing demands (i.e., reading larger amounts and more complex material, and writing of lecture notes and essays) and responsibilities (i.e., increased learning pace, larger classes and more self-directed learning) that are placed on individuals as adult learners (e.g., Gerber, et. al., 1990; Gilroy, & Miles, 1996; Kirby, et al., 2008; Mellard, & Hazel, 1992; Riddock, Farmer, & Sterling, 1997; Simmons, & Singleton, 2000). Although previous research has highlighted the successful achievements or outcomes of individuals with LD’s (e.g., Field, Sarver, & Shaw, 2003; Gerber, Ginsberg, & Reiff, 1992; Raskind, et al., 1999; Vogel, & Adelman, 1992), this research has not contributed to gaining an understanding of the strategies or how these individuals were able to obtain these successful outcomes. Research has focused heavily on the experiences, life influence, and affect dyslexia has had on an individual’s life (e.g., Hellendoorn, & Ruijssenaars, 2000; Ingesson, 2007; McNulty, 2003; Pollak, 2004; Riddick, Farmer, & Sterling, 1997; Stampoltzis, & Polychronopoulou, 2009). Numerous studies have also reported the difficulties that students with dyslexia experience as a result of having a disability (e.g., Klein, 1993; Mortimore, & Crozier, 2006; Singleton, 1999). However, research that has informed or provided insight into the learning techniques and coping strategies crucial to the success of postsecondary students with a LD have not been studied extensively. Studies have focused on the effects of dyslexia on adult learners (e.g., Hellendoorn, & Ruijssenaars, 2000; McNulty, 2003; Pollak, 2004; Riddick, Farmer, & Sterling, 1997). However, few studies have considered or acknowledged learners’ evolving needs or inquired about the coping strategies and learning techniques that have allowed them to successfully complete postsecondary education (Kirby, et al., 2008; Lefly, & Pennington, 1991). Over the past decade there has been a steady increase in the number of students entering into postsecondary
education who have a learning disability (e.g., dyslexia; Heiman, & Precel, 2003; Kirby, et al., 2008; Mortimore, & Crozier, 2006; Riddock, Farmer, & Sterling, 1997; Vogel, et al., 1998; Vogel, & Adelman, 1992). However, little research has considered this population and their academic needs (e.g., Kirby, et al., 2008; Lefly, & Pennington, 1991). There is a need for more research embracing qualitative methodologies to further support the findings of quantitative studies investigating reading difficulties/disabilities like dyslexia (Heiman & Precel, 2003; Kirby, et al., 2008).

There has been an abundance of research conducted regarding the learning techniques and study approaches of students without LD’s (e.g., Biggs, 1987; Christensen, Massey, & Isaacs, 1991; Entwistle, & Ramsden, 1983; Schmeck, 1988). However, little research has focused on postsecondary students with a LD and the learning techniques used by these students (e.g., Heiman, & Precel, 2003; Kirby, et al., 2008; Lefly, & Pennington, 1991). Little is known about the coping strategies and learning techniques that postsecondary students with reading difficulties/disabilities or dyslexia employ to manage their academic responsibilities, making this an area of particular interest. Specifically, it is important to explore the effects a specific learning disability (SLD), such as dyslexia, has on students’ coping strategies as they navigate the demands of a higher educational institution. Though there is a wealth of research on reading difficulties/disorders (e.g., dyslexia), few research studies have addressed the identification of practical coping strategies that can be utilized by postsecondary students with a learning disability (e.g., Kirby, et al., 2008; Lefly, & Pennington, 1991). There is a need to further understand the cognitive limitations and learning techniques implemented by individuals with learning disabilities (Heiman, & Precel, 2003; Kirby, et. al., 2008; Skaalvik, 2004; Stampoltzis, & Polychronopoulou, 2009). This information would better enable educators in providing students with the appropriate instruction and supports to maximize learning potential and increase academic achievement (Heiman, & Precel 2003; Kirby, et al., 2008; Pollak, 2004). The increased academic demands that are placed on students attending postsecondary educational institutions significantly impact students with reading difficulties/disabilities like dyslexia. For example, students with dyslexia may have significant difficulty taking lecture notes, writing essays, compiling course material over a period of time, test taking, and comprehending large amounts of complex text (Gilroy, & Miles, 1996; Kirby, et al., 2008; Lyon, et al., 2001; Riddock, Farmer, & Sterling, 1997; Simmons, & Singleton,
These academic demands increase students’ reliance on alternative strategies that will allow them to cope with this increase in academic demands and responsibilities (Lefly, & Pennington, 1991; McLoughlin, 1997; McLoughlin, Fitzgibbon, & Young, 1994). Postsecondary students with dyslexia experience significant difficulties adjusting to these demands due to their cognitive and processing speed deficits, which lead to increased difficulties performing the tasks required to be successful in higher education (Boetsch, Green, & Pennington, 1996; Gilroy, & Miles, 1996; Kirby, et. al., 2008; McGrew, Woodcock, & Ford, 2002; McLoughlin, Fitzgibbon, & Young, 1994; Riddock, Farmer, & Sterling, 1997; Simmons, & Singleton, 2000). For example, higher educational tasks have been found to cause the most difficulty for students with dyslexia (i.e., note taking, prompt lecturing, essay writing, test taking, compilation of course material for tests, complex text comprehension, large amounts of reading, and time management; Kirby, et. al., 2008). Difficulties in word recognition often cause reading to be slower and more effortful for these individuals. This in turn affects their comprehension and ability to construct deeper meaning and understanding of course or instructional content (Lyon, et al. 2001; Perfetti, 1985). Despite the deficits encountered some students with dyslexia are able to experience success, displaying resilience in overcoming these difficulties (Luther, Cicchetti & Becker, 2000; Masten, 2001). Therefore, compensatory strategies are often necessary for postsecondary students with dyslexia to address the more fundamental problems, with reading and writing, typically associated with having a LD (Lyon, et al., 2001). Compensatory strategies allow students with LD’s to meet the academic demands and tasks required of them at the postsecondary level (Kirby, et al., 2008). Therefore, more research is needed that looks at the strategies and techniques postsecondary students with reading difficulties/disabilities like dyslexia employ to manage their academic responsibilities. This study explored the coping strategies and learning techniques postsecondary students experiencing learning difficulties and/or diagnosed with a learning disability reported as contributing to their academic perseverance and/or success.

The findings of this study have potential to provide clarity to existing quantitative findings, looking at the difficulties that individuals with a LD experience, and suggest future directions for research in this area. It is important to examine the stories, views, and experiences of students currently coping with a LD who are enrolled within a postsecondary educational institution. These personal accounts can provide insight into the coping strategies
and learning techniques that students with LD find practical and beneficial to them as learners. This study used a qualitative research approach to explore the learning strategies and coping mechanisms students with reading difficulties/disabilities (e.g., dyslexia) in order to manage the academic demands within higher educational institutions.

1.1 Statement of Purpose

The purpose of the present study was to explore the coping strategies and learning techniques students with reading difficulties/disabilities (e.g., dyslexia) view as effective and commonly use to cope with the demands of postsecondary education. Most research attempts to apply the concepts and methods formulated from the studies of children with dyslexia to that of adult learners (e.g., Mortimore, & Crozier, 2006). This is an ineffective and problematic approach, because adult learners have at this point developed strategies that have allowed them to progress through school and meet admission requirements for postsecondary institutions. In order to support adult learners effectively, it is the analysis of the obstacles, policies, and practices relevant within the higher educational institutions that will provide insight into how to appropriately accommodate the needs of individuals with LD’s within these institutions (Fuller, et al., 2004; Hunter-Carsch, & Herrington, 2001). Therefore, it is beneficial to analyze the experiences of students with reading difficulties/disabilities through the lens of resilience (i.e., succeeding despite the barriers faced) in order to identify their learning needs. This study: (1) explored the experiences students with reading difficulties/disabilities (e.g., dyslexia) have had throughout their academic careers; and (2) sought to provide insight into the learning needs of students with reading difficulties/disabilities (e.g., dyslexia) in order to help educators identify, understand, and use appropriate supports and effective methods that may contribute to their success within postsecondary education setting. The following research questions were explored:

1. What factors have helped/hindered students with reading difficulties/disorders to cope with the demands of postsecondary education?
2. What academic strategies and learning techniques do students with reading difficulties/disorders commonly use to cope with the demands of postsecondary education, and why do they view them as effective?
1.2 Definitions

For the purpose of adding greater clarity, the following terms will be defined:

1.2.1 Learning Disability. The definition of Learning Disability used within this study comes from the Learning Disabilities Association of Canada’s (2002) official definition which states:

Learning Disabilities (LDs) are specific neurological disorders that affect the way a person stores, understands, retrieves and/or communicates information. Expression of a learning disability may vary over an individual’s lifetime, depending on the interaction between the demands of the environment and the individual’s strengths and needs. These disorders affect learning in individuals who otherwise demonstrate average abilities and are characterized by unexpected academic under-achievement or achievement which is maintained only by unusually high levels of effort and support. (LDAC, 2002, para. 2)

1.2.2 Specific Learning Disability (SLD). A Specific Learning Disability refers primarily to reading disabilities, and dyslexia is the most prevalent type of SLD (Lerner, 1989; Lyon, 1995; Pumfrey, & Reason, 1991). A specific learning disability can be defined as:

Children with specific learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written languages. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage. (Wong, et al., 2008, p. 34)

1.2.3 Reading. Reading involves a complex cognitive process required to decode symbols in order to construct or derive meaning (reading comprehension). It includes the interaction between the text and the reader, where prior knowledge, experiences, and attitudes shape the reader’s interpretations. The process of reading requires continuous practice, development, and refinement, as readers are required to use a variety of reading strategies to assist with decoding and comprehension (Vescolani, & Adams, 1966, p.10).
1.2.4 **Reading Comprehension.** Reading comprehension is the process through which recognized words are transformed into meaningful ideas (Hoover & Gough, 1990). It requires a complex process associated with activating numerous cognitive skills (Kintsch, 1998). Reading comprehension often involves the incorporation of visual representations or more in depth symbolic representations of the words read. Comprehension is the underlying purpose of reading; involving the learning, growing, and evolution of ideas that occur as an individual reads (Perfetti et al., 2005).

1.2.5 **Dyslexia.** Dyslexia is one of several distinct learning disabilities characterized by specific language-based disorders (Kirby, et al, 2008). The International Dyslexia Association and the National Institute of Child Health and Human Development (NICHD) define dyslexia as:

   A specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge. (Lyon, Shaywitz, & Shaywitz, 2003. p. 1)

1.2.6 **Academic Literacy.** The ability to use language to meet the demands of post-secondary education is called academic literacy. Academic literacy involves competence in language that is far more advanced than the skills of listening, speaking, reading, and writing. This includes translating the academic language used at the post-secondary level, which is imbued with cognitive as well as analytical processing. Academic language has functions like exposition, clarification, and conclusion; the academic demands for language therefore require us to do things with language like explain, define, compare, contrast, classify, agree, disagree, illustrate, elaborate, make claims, see implications, infer, exemplify, anticipate, and conclude (Weideman & Dyk, 2014). Competent understanding and use of the skills required to attain academic literacy are examples of the increased academic demands students experience at the post-secondary level.

1.2.7 **Coping Strategy.** Coping is expending conscious effort to solve personal and interpersonal problems, and seeking to master, minimize or tolerate stress or conflict
The coping strategies used by individuals tend to change over time. Psychological coping mechanisms are commonly referred to as coping strategies or coping skills. The term coping generally refers to adaptive or constructive coping strategies (i.e. the strategies help reduce stress levels). People commonly use a mixture of all three types of coping strategies (e.g., appraisal-focused, problem-focused, and emotion-focused). Although all three methods can prove useful, some claim that those using problem-focused coping strategies will adjust better to life (Taylor, 2006). The coping strategy commonly referred to within this study is problem-focused coping. Individuals using problem-focused coping strategies try to deal with the cause of their problem. They accomplish this by gaining information and understanding the problem and learning new skills to manage the problem. Problem-focused coping is focused on changing or eliminating the source of the stress. The three problem-focused coping strategies identified by Lazarus and Folkman include taking control, information seeking, and evaluating the pros and cons (1984, p. 141).

1.2.8 Learning Technique. There is much confusion in the current literature concerning the interchangeable use of the terms learning technique and learning strategy (Jones & Idol, 1990). The definition adopted for the purpose of this study will focus on the preliminary structures of the learning process, referred to as learning techniques. Where learning techniques are described as the individual components that are collectively employed as an overall learning strategy. These learning techniques only constitute a learning strategy when two or more are coordinated in a goal-oriented way, and aid in the identification, selection, organization, elaboration, transformation, and/or integration of information (Ploetzner, Lowe & Schlag, 2013). Identifying the individual learning techniques used by participants within this study is important because the combination of techniques that make up a learning strategy, may vary between students. Examples of the learning strategy and the corresponding learning techniques are as follows: (1) rehearsal strategies such as copying, underlining, or shadowing; (2) elaboration strategies such as paraphrasing or summarizing; (3) organizational strategies such as outlining or creating a hierarchy; (4) comprehension monitoring strategies such as checking for comprehension failures; and (5) affective strategies such as being alert and relaxed (Weinstein & Mayer, 1983).
1.3 Significance of the Study

There are a variety of reasons this is an important study to conduct. First, past research has predominantly focused on children and youth using clinical observation rather than inquiry as the main source of data (e.g. Gerber et al., 1990. Therefore, few studies have considered the coping strategies and/or learning techniques used by postsecondary students with LD’s. Second, recent research typically has been concerned with identifying ways to remediate academic deficits rather focusing on effective compensatory strategies for students with reading difficulties/disorders like dyslexia (e.g., Heiman & Precel, 2003; Raskind et al, 1999; Skaalvik, 2004). Lastly, this study explored students’ experiences throughout their academic career which will contribute to this area of research by providing insights into the compensatory strategies being used by postsecondary students with reading difficulties/disabilities (e.g., dyslexia).

1.4 Chapter Organization

A review of the literature related to postsecondary students with a learning disability, specifically dyslexia, follows in chapter 2. Chapter 3 focuses on the methodology and procedures that were employed in the course of the study. The results of the study are described in Chapter 4. Finally, a discussion and analysis of the results, strengths and limitations of the current study and implications for future research are included in Chapter 5.
Chapter 2: Literature Review

The review of the literature examines current theory and practice related to postsecondary students with dyslexia. The literature review is divided into three major sections. Section one reviews the history of students’ educational experiences with dyslexia, including the identification process and differences between male and female diagnosis. Section two focuses on the accommodations and support services available for students with reading difficulties and/or disorders, including those compensatory strategies, and predictors of success revealed in students with dyslexia. Finally, section three discusses research related to resiliency theory and students with reading difficulties and/or disorders.

2.1 The Educational Experiences of Students with Learning Disabilities

In recent years, there has been an increase in the number of students with learning disabilities (LD) that are attending postsecondary institutions (Cox & Klas, 1996; Heiman & Precel, 2003; Kirby, et. al., 2008; Vogel & Adelman, 1992). The Learning Disabilities Association of Canada (LDAC, 2002), reported that LD is among the most common forms of disabilities, affecting 1 in 10 Canadians. An examination of the postsecondary education within Canada revealed that 13.9% of students with LD, aged 15 to 64, were attending full-time. Two-thirds of these students reported that the use of assistive supports, such as tutors, note takers, and modifications or adaptations were necessary in order for them to complete their coursework (Stats Canada, 2009). This is in contrast to the one-quarter (28.3%) of Canadians with LD (aged 22-29) that report having less than a high school certificate (LDAC, 2002). The value of pursuing higher education has progressively taken priority as, “the capacity to earn a living is becoming increasingly related to postsecondary education” (Miller, Snider, & Rzonca, 1990, p. 349). This may be one factor responsible for the recent increase in students with learning disabilities entering into higher educational institutions.

2.1.1 Identifying students with dyslexia. Most students with dyslexia have a history of academic struggles and educational failures which overtime are more likely to be interpreted as personal failures, affecting the self-esteem of these individuals (Dale, & Taylor, 2001; Hellendoorn, & Ruijssenaars, 2000; McNulty, 2003; Orr, & Goodman, 2010; Riddick, Farmer, & Sterling, 1997). Riddick, Farmer, and Sterling (1997) studied the past and present experiences of 16 university students and found that in general students had negative perceptions of many school experiences, were currently experiencing difficulties in university,
and had low self-esteem. There were both positive and negative expressions toward the label, but early identification, recognition of increased difficulty, parental support, and personal qualities like motivation, persistence and assertiveness were expressed to be protective factors. Hellendoorn and Ruijssenaars (2000) performed a similar study involving 27 Dutch adults, and similarly found that although educational experiences were predominantly negative, support from family had a positive impact.

For these individuals, recognition of their dyslexia may allow them to legitimize their difficulties and help to alleviate personal detriment (Dale & Taylor, 2001). Although, there are different perceptions as to whether being diagnosed with a disability will provide the student with more positive experiences or impose negative expectations made by others (Barga, 1996; Dale, & Taylor, 2001). Older students were more likely to go through school with no recognition they may have dyslexia, whereas, younger students, were more likely to be given some sort of recognition. However, this recognition has been expressed to not always lead to positive outcomes or responses made toward the student (Dale & Taylor, 2001). Individuals with dyslexia reported they feel that they are perceived as being stupid by teachers and classmates, and are more likely to wrongfully contribute their difficulties with reading to low-intellectual functioning (Johnston, 1985; Kos, 1991; Skaalvik, 2004). When the learning difficulties of students with dyslexia are not recognized or responded to negatively, these students find themselves to be at the bottom of the class by default (Dale, & Taylor, 2001). This is due to the stigmatization associated with having a LD, where students are subject to differential treatment from peers, teachers and even their own parents. The most problematic of these being lowered expectations for the student, ultimately affecting their level of achievement (Barga, 1996). Constant exposure to these negative perceptions has shown to affect a students’ self-concept over time. For example, within the study done by Stampilzis and Polychronopoulou (2009) where they interviewed 16 Greek university students with dyslexia and found that their negative memories and experiences within grade school negatively affected their self-esteem. This study emphasized how important the conceptualization of one’s disability can be and how it will contribute to positive adjustment and personal development (Gerber, Reiff & Ginsberg, 1996; Hellendoorn, & Ruijssenaars, 2000; McNulty, 2003). A students’ positive or negative experience once diagnosed with dyslexia is thought to lie within the outcome experienced by the student. When diagnosis made sense out of their academic
struggles and involved support and help, students felt the diagnosis was a positive experience. When diagnosis created limiting or situations of separation or differential treatment students found the diagnosis to have a lasting negative experience (Barga, 1996).

The unavoidable participation in social comparisons, self-judgments, and academic judgments also contributes to students with dyslexia forming low self-esteem and mistaken self-concepts (Skaalvik, & Skaalvik, 2002). These decreased perceptions of ability lead to further increasing the learning complications and difficulties experienced by these individuals. For these individuals protective strategies were thought to be implemented when perceptions of their ability were threatened, encouraging students with dyslexia to devalue situations where possible failures could be encountered, making them seem less important or allowing them to make excuses for their failures. Research outlines the range of possible self-protective strategies implemented by dyslexic students to include, devaluing situation, self-serving attributions, self-handicapping including procrastination, withdrawal of effort, avoiding help-seeking and strategic self-presentation (Covington, 1984; Kaplan, 1980; Miller, & Ross, 1975; Rosenberg, 1979; Ryan, & Pintrich, 1997; Skaalvik, 2004; Tice, 1993). These self-protective strategies are thought to be implemented within childhood and although they may evolve they are still found to be implemented within adulthood (Skaalvik, 2004).

Children and adults who have a better understanding of their learning disability are more likely to experience academic success and emotional growth (Cohen, 1985; Kronick, 1977). Their ability to put their disability into perspective has been found to benefit them and contribute to their ability to be successful (Shulman, 1984). Students who had a better understanding and more positive perspective of their disability also had a more positive self-concepts and higher academic achievement (Heyman, 1990). Despite these findings, students are often not given sufficient information that would allow them to develop a functional representation of their disability. This lack of understanding negatively impacts the way these students view themselves and can lower their expectations of achieving academic success. Many students therefore feel that it is necessary to hide their learning disability from others (Gerber, Ginsberg, & Reiff, 1992). This is further supported from the research findings that suggest that teachers, parents and other individuals tend to have more negative perceptions of students with learning disabilities (e.g., Barga, 1996; Rothman & Cosden, 1995). Parents are thought to have the most influence on the level of understanding and the perceptions a student
will hold of their disability. Parents are often responsible for providing their child with the information about the nature of their learning disability, and their possible expression of disappointment can further limit a students’ expectation of what can be achieved (Stone, 1984). Children who feel that their parents accept, understand, and are supportive of them are more likely to gain a better understanding of their disability and are more likely to access the necessary supports (Stone, 1984).

How an individual conceptualizes their disability has been found to play a major role in their ability to adapt, and cope with the difficulties they experience, “conceptualization of a disability has been shown to be a positive adjustment factor in a person’s development” (Stampoltzis, & Polychronopoulou, 2009, p. 318). Therefore, successful individuals with dyslexia should have a more accurate and accepting conceptualization of their disability; an increased understanding of their disability informing their attempts to manage it.

Reframing is a common technique students are using in order to increase acceptance and understanding of what it means for them to have a disability. A study by Pollak (2004), including 32 UK university students, found that students who were able to overcome their difficulties were more likely to use reframing strategies, and those who saw their dyslexia as a defect had lower self-esteem. The main recommendation resulting from this research suggested that higher education institutions need to reframe their definition of dyslexia, and review the learning and teaching approaches utilized. This study reported the factors that students with LD identified as contributing to their success, which include understanding their disability, developing and using compensatory strategies, mentors, tutors, and counselling services (Vogel, Hurby, & Adelman, 1993). Students also commented on the impact that faculties’ attitude and willingness to provide accommodations affected their success within specific classes (Baggett, 1994; Nelson, Dodd, & Smith, 1990). In addition, educators need to consider how dyslexia affects males and females differently.

Dyslexia has been found to be more predominant among male populations, with dyslexia being three to four times more common among males than females (Anderson, 1997). This gender disparity has recently been questioned, where more recent research suggests that dyslexia affects males and females in equal proportions (Anderson, 1997), and attributes the increases in diagnosis in males to be due to teacher reported bias’ (Anderson, 1997; Shaywitz et al., 1990). This bias is thought to be due to the fact that boys are more likely to be reported for
diagnosis testing due to the increased outward behaviours typically displayed by males. In order for females with dyslexia to be recognized they had to display more severe learning problems, as the display of externally disruptive behaviours was less likely of them. This supports the notion that females with dyslexia were more likely to be overlooked rather than the view that suggests dyslexia is a disability more common among males (Anderson, 1997; Shaywitz et al., 1990; Vogel, 1990). Regardless of gender, LD’s are known to have profound effects on students of all ages.

2.1.2 Persistence of learning disabilities. Dyslexia is a lifelong learning disability and although it is more commonly diagnosed within early childhood it is known to persist into adulthood, causing chronic problems in reading, and writing, well into adulthood (Gregg et al., 2005; Kirby, et al., 2008; Mortimore & Crozier, 2006). There are varied findings regarding the persistence of the difficulties individuals with learning disabilities experience (as a result of previous debate over whether LD is a lifelong disability). The limited existing research related to the persistence of a LD throughout one’s life reports that the same problems can be experienced into adulthood (e.g., Bruck, 1989; Heiman & Precel, 2003; Skaalvik, 2004), other research trends suggest difficulties become compounded and worsen as they move into adulthood (e.g., Boetsch, Green, & Pennington, 1996; Bruck, 1992; Fuller, et al., 2004; Gregg, & Coleman, 2001; Gerber, et al., 1990; Gerber, Ginsberg, & Reiff, 1992; Hunter-Carsch, & Herrington, 2001; Mcloughlin, Fitzgibbon, & Young, 1994; Shaywitz, et al., 1998; Shaywitz, et al., 1999), and yet other research suggests the difficulties experienced diminish over time (e.g., Abbott, & Frank, 1975; Gerber, Ginsberg, & Reiff, 1992; Gottesman, 1979; Hoffman, et al., 1987; Johnson, & Blalock, 1978; Kavale, 1988; Raskind, et al., 1999; Rawson, 1968; Rogan, & Hartman, 1976). The research by Gerber et al. (1990) supported the notion that the difficulties experienced by individuals with learning disabilities become compounded and worsen overtime. It was speculated that the developmental deficits are possibly exacerbated by the increasing demands and responsibilities that are placed on individuals in adulthood (Gerber, et al., 1990). Much research has found that dyslexia persists into adulthood but although students will not outgrow dyslexia there is evidence that as they progress through school their accuracy with reading will improve (Bruck, 1992; Gregg, et al., 2002; Shaywitz, et al., 1998; Shaywitz, et al., 1999). It is the problems with reading and writing fluency that have been found to continue to cause difficulties throughout their education and life (McGrew, Woodcock, & Ford,
Research has found reading fluency to be a strong predictor in discriminating between those students with dyslexia and those without (McGrew, Woodcock, & Ford, 2002). It has also been found to impact high-speed word recognition, spelling and comprehension which contributes to postsecondary students with dyslexia commonly requesting the accommodation to have more time to complete tests (Camara, Copland, & Rothschild, 1998; Gregg, et al., 2002). “Although some specific skills may be improved, learning disabilities do not go away” (Raskind, et al., 1999, p. 46). Learning disabilities affect people in different ways as they progress through their personal and academic lives (Raskind, et al., 1999). Research has acknowledged learning disabilities persist into adulthood (e.g., Bruck, 1989; Carroll, & Iles, 2006; Gerber et al., 1990; McGrew, Woodcock, & Ford 2002; Raskind, et al., 1999; Shaywitz, et al., 1999), but most of the research has been conducted on children and young adults. The majority of this data has been collected by means of clinical observation rather than methodical enquiry (Gerber, et al., 1990).

The difficulties that people with dyslexia experience, as they move through the school system from elementary to high school, and into postsecondary education, has been found to change over time (Fuller, et al., 2004; Hunter-Carsch, & Herrington, 2001). Kirby, et al. (2008), express that, “it is increasingly important to further understand the cognitive limitations and compensatory strategies of students with LD in order to provide appropriate instruction in learning strategies and study approaches to maximize their academic success” (p. 85).

Illustrating the importance of providing varied instruction and identifying learning strategies that are to be implemented at the various stages to assist their progression through the education systems.

The transition of research findings on children, regarding the effective strategies for teaching literacy, will fail to be effective and could even be detrimental when these same strategies are applied to adult populations (Mortimore, & Crozier, 2006). The experiences and needs of adult learners differ greatly from those of younger learners. Making it important to analyze how the obstacles, policies, and practices change at the postsecondary level of education, and the impact it has on adult learners with dyslexia (Mortimore, & Crozier, 2006). The reverse has also been proven to be ineffective (adult results applied to children), outlining the importance of studying the specific age group of interest, to determine the effective learning methods and strategies to improve individuals’ reading and writing skills (Bruck, 1989;
In response to this incongruence, there has been a recent increase in the amount of research on adults and students enrolled in higher education, although much of the research focuses on the learning and study strategies of students without learning disabilities (LD) or dyslexia (Biggs, 1987; Christensen, Massey, & Isaacs, 1991; Entwistle, & Ramsden, 1983; Schmeck, 1988). More students diagnosed with dyslexia are choosing to further their education and therefore accuracy and identification of students with a diagnosis has become more accessible for researchers to access this population.

2.1.3 Diagnosis controversy. Although current diagnosis of LD, and especially dyslexia, are more likely to occur earlier in the educational process, this has not previously been the case. This practice is reflected in the dramatic increases in the number of diagnosis reported at the postsecondary level (Hagar, & Goldstein, 2005; Nichols, Harrison, McCloskey, & Weintraub, 2002). Students with dyslexia, and other specific learning disabilities (SLD), represent the single largest group of people identified and served at the postsecondary level (Harrison, & Nichols, 2005). It has been reported that 12% of children within Canadian schools have a LD (LDAC, 2001), but there are 85% of students who do not receive their first formal diagnosis until they enter into postsecondary education (Learning Opportunities Task Force, 2002c). These numbers do not include those students that chose not to disclose their disability to the institution (Harrison & Nichols, 2005; Kirby et al., 2008). Recently, the number of students entering postsecondary education diagnosed as dyslexic has increased substantially (Kirby, et al., 2008; Mortimore, & Crozier, 2006; Vogel, et al., 1998), where it is thought that students with dyslexia are entering into postsecondary education more often now than has been the case in the past (Heiman, & Precel, 2003; Kirby, et al., 2008; Mortimore, & Crozier, 2006; Riddock, Farmer, & Sterling, 1997; Vogel, et al., 1998; Vogel, & Adelman, 1992). This increases the need for developing an understanding of their learning needs and exploring the identified differences, in order to be able to make recommendations that will improve literacy proficiency and long-term outcomes for students with dyslexia.

2.1.3.1 Students feigning dyslexia. There are many different views as to why there has been such an increase in the number of students with dyslexia entering into higher education, but also the increased number of individuals diagnosed with dyslexia within the postsecondary population (Harrison, Edwards, & Parker, 2008; Harrison, & Nichols, 2005; Learning Opportunities Task Force, 2002c). For example, Harrison, Edwards and Parker (2008), have
suggested that this increase can be attributed to the number of students attempting to feign dyslexia, in order to gain an advantage over their peers at the university and college level. They proposed that secondary students are attempting to be wrongfully diagnosed with a disability in order to gain access to academic supports and special treatment by professors, where access to these services are thought to provide students with the motivation to exaggerate or magnify symptoms in order to get a diagnosis (Sullivan, May, & Galbally, 2007). The number of students engaging in some sort of academic dishonesty has become a growing problem, especially within North American postsecondary institutions (Hughes, & McCabe, 2006). Where students feel that there are more potential benefits associated with engaging in this type of behaviour (attempting to feign or mimic symptoms of a disability), they also perceive the potential chance of being caught as minimal, and unlikely (Sullivan, May, & Galbally, 2007). Students admit to this type of cheating in order to gain an advantage over their peers, which leads one to reason students would attempt to feign symptoms of dyslexia in order to gain the same type of advantages over their peers (Sullivan, May, & Galbally, 2007). This diagnosis also allows students access to academic supports, special accommodations, and bursaries (Harrison, 2004). The lack of profiling available within the definition of dyslexia, along with the perceived positive gains of diagnosis by students, is thought to be the cause for the substantial increases in diagnosis of dyslexia within postsecondary education within the recent years (Hughes, & McCabe, 2006). This contributes to the findings that declaring dyslexia and attention deficit hyperactive disorder (ADHD) as being the most commonly diagnosed and accommodated disabilities within North American postsecondary education (Harrison, & Wolfforth, 2006).

Dyslexia and ADHD are of the disabilities most commonly accommodated for at the postsecondary level, this is only one of multiple explanations formed to account for the increased diagnosis of dyslexia made in postsecondary students (Harrison, & Wolfforth, 2006). Another explanation describes that the problem may be due to the recent increased prioritization on student marks and credentials within the educational system (Harrison, Edwards, & Parker, 2008). Recent research shows that the current emphasis on standards-based testing and high stakes testing within schools is likely contributing to the increased number of students looking to be diagnosed with a LD or dyslexia (Hughes, & McCabe, 2006). A diagnosis would afford these students access to assistance and help them to attain the grades
expected for entry into postsecondary institutions. The increased focus on reform tests is thought to place more emphasis on students obtaining high grades rather than actual student learning. This forces students with dyslexia and other LD’s to either become more likely to drop out, due to the limitations imposed on them by their disability, or attempt to attain the favourable marks. A diagnosis is seen as a viable option that will allow students access to the supports and give them a chance at acquiring the necessary marks to be competitive (Vogel & Holt, 2003). The recent increased awareness and the growing interest in studying adult education and those adults with disabilities attending postsecondary education is another proposed perspective as to why there has been such an increase in students with dyslexia attending postsecondary education (Harrison, & Nichols, 2005). Although the research on this group of individuals is sparse, recently, there is growing interest to study the effects and learning methods and/or study strategies of adults with dyslexia (Fink, 1998; Raskind, et al., 1999; Skaalvik, 2004). These studies have reported on both the successes and continuing difficulties experienced by these individuals, attempting to establish a profile of adult dyslexia that provides insight into their learning styles and needs (Heiman, & Precel, 2003; Raskind, et al., 1999) The recent increased attention placed on postsecondary students with dyslexia is thought to be a possible contributor to the increases expressed, considering the number of postsecondary diagnosis with dyslexia and attending students with dyslexia (Harrison, Edwards, & Parker, 2008; Harrison, & Nichols, 2005). This is thought to be one of the more simple explanations for the recent dramatic increases. This leads the students to seek out identification and diagnosis of dyslexia for the provision of supports, in order for them to cope with their difficulties, contributing to the substantial increases in diagnosis of dyslexia at the postsecondary level (Mortimore, & Crozier, 2006). Another straight forward explanation includes the imposition of effective adaptive strategies by students with dyslexia, allowing them to make it through elementary and secondary education relatively unaffected (Kirby, et al., 2008; Lefly, & Pennington, 1991). It is thought that students may not recognize or fully experience the effects of their dyslexia until entrance into postsecondary education where the extra academic demands and the intensified learning process prove to be too much for the student to manage. Where access to accommodations and supports, for students with dyslexia, becomes an important aspect of their educational process.


2.2 Accommodation and Support Services

The perceived simplicity attached to the process of acquiring a diagnosis and in turn receiving access to supports and services does not represent the process accurately (Barga, 1996; Cox, & Kläs, 1996). In actuality, access to accommodations is not always an easy task and is therefore often avoided altogether by students with disabilities (Sarver, 2000). Although it is law resources be accessible to these individuals, accessing these supports is often very time consuming, and turns out to be more of an inconvenience for students (Sarver, 2000). Students have reported that gaining access to these supports is often a frustrating, unpleasant, stigmatizing, and unrelenting process that they would rather avoid (Field, Sarver, & Shaw, 2003; Sarver, 2000). Students who do not utilize supports within the community are more likely to experience more difficult transitions into postsecondary education and decreased overall participation (Miller, Snider, & Rzonca 1990). Although other factors such as severity of difficulties and personality are critical components, the proper support and services can enhance ability and therefore should be identified and provided early (Stampoltzis, & Polychronopoulou 2009). Supports for students with learning disabilities are important and these supports should foster independence rather than create dependence, which is the unfortunate result of some common adaptation requests (Field, Sarver, & Shaw, 2003).

Adaptations that may help students succeed but do not increase learning, such as substitutions, and waivers, should be avoided as they create dependent learners rather than supporting independence in students with LD’s (Cullen, Shaw, & McGuire. 1996; Yost, et al., 1994). There are significant differences in the degree to which students with and without dyslexia report meeting the academic standard required in higher education (Mortimore, & Crozier, 2006). Students with dyslexia report considerably more difficulties in a wide range of areas. For example, the most pronounced differences were reported in the areas of note taking, organizing and writing essays, and expressing ideas in writing (Fuller, et al., 2004; Mortimore, & Crozier, 2006). There is a wide range of difficulties experienced by students with dyslexia, and “the success of students with dyslexia is clearly hard won” (Mortimore, & Crozier, 2006). The difficulties experienced by students with dyslexia vary from individual to individual, which complicates the process of understanding and providing each student with the appropriate supports. There are many studies that identify a multitude of difficulties that students with dyslexia encounter (e.g., Fuller, et al., 2004; Gilroy, & Miles, 1996; Klein, 1993;
McLoughlin, Fitzgibbon, & Young, 1994; Mortimore, & Crozier, 2006; Riddick, et al., 1997). For example, reading (time), writing (exams/essays), spelling, copying (note taking), word retrieval, sequencing, memorization, rote memory tasks, concentration, lecture translation, comprehension, organization, and time management make up the range of difficulties often reported within the research. Different studies focus on a combination of these factors and the influence they have on their academic performance. Though there is a wealth of research on dyslexia and the deficits or the effects that it has on student learners, little research has addressed or influenced the identification of practical learning or coping strategies to be utilized by postsecondary students with a learning disability (Kirby, et al., 2008; Lefly, & Pennington, 1991).

Individuals with learning disabilities who are attending higher educational institutions report experiencing increased strain in competing with their peers without disabilities (Heiman, & Precel, 2003). This is likely due to the students with LD working longer hours, studying more, and needing more time to complete academic and daily living tasks in order to keep up with their peers. This leaves little time for participation in other physical, social, or extra-curricular activities. Consequently, “success appears to be heavily related to coping skills that students already have in place prior to college” (Harris, & Robertson, 2001). Research is starting to recognize the important role that learning and compensatory strategies have on the success of students with dyslexia within postsecondary education (Heiman, & Precel, 2003; Skaalvik, 2004; Stampoltzis, & Polychronopoulou, 2009).

2.2.1 Compensatory strategies. Recent research has focused on the learning and study strategies implemented by students with dyslexia which allow them to progress thorough the education system (e.g., Heiman, & Precel, 2003; Kirby, et al., 2008; Lefly, & Pennington, 1991). Students with dyslexia can become increasingly more skilled and refine some aspects of their reading abilities as they progress through school. Unfortunately, no matter the advancements made by these individuals, they will continue to demonstrate problems and deficits in the area of reading and writing (Gregg, et al., 2005). For these individuals, reading fluency is considered to be the single best discriminator in determining the presence of dyslexia among postsecondary students when compared to those without dyslexia (McGrew, Woodcock, & Ford, 2002).
The study by Kirby, et al., (2008) found that there are major differences between the reported learning strategies and study approaches of postsecondary students with dyslexia from their peers who do not have dyslexia. Although compensatory strategies have shown to decrease the deficits experienced by students with dyslexia, the results of this study suggest that these students still experience significant difficulties in the areas of identifying main ideas and in studying for tests. These are common areas of deficit among students with dyslexia reported in the research, along with difficulties in note taking, essay writing, comprehension, and synthesis of relevant information (Gilroy, & Miles 1996; Riddock, Farmer, & Sterling 1997; Simmons, & Singleton 2000).

This study revealed that students with LD preferred and would use very different techniques than those students without a LD. Students with LD preferred oral and visual strategies and would commonly report developing unusual techniques to enhance learning, whereas students without LD prefer written strategies. Another important distinction between the two groups was that students without LD reported various strategies that allow them to speed up their learning, whereas students with LD reported no such strategies, there is “nothing that could help them learn faster”.

Students with dyslexia experience increased difficulty adjusting to the academic demands required to obtain higher education due to their difficulties with word recognition and spelling (Kirby, et al., 2008). These difficulties in word recognition result in making reading slower and more effortful for these individuals. This affects their comprehension and ability to construct deeper meaning and understanding of the content (Lyon, et al. 2003; Perfetti, 1985). Therefore, in order for postsecondary students with dyslexia to ensure they are successful compensatory strategies are often necessary. It is expressed that even for students who have developed effective coping strategies reading continues to pose a problem for students with dyslexia in higher education. The increased fluency required to read university level texts is suspected to contribute to perpetuating this problem (Nicolson, & Fawcett, 1990).

Reading difficulties can lead to negatively affecting a student’s self-concept and in attempt to repair these perceptions some students can become motivated to implement either coping strategies or seek self-protective strategies (Rosenberg, 1979; Kaplan, 1980; Covington, 1992). Research into self-concept and motivation has identified different self-protective strategies that are commonly used by students in order to increase favourable evaluations.
Some of these strategies include, devaluing situations and activities (Rosenberg, 1979; Kaplan, 1980), self-serving attributions (Miller, & Ross 1975), self-handicapping or procrastination, withdrawal of effort, avoiding help-seeking (Covington, 1984; Ryan, & Pintrich 1997) and strategic self-presentation (Tice, 1993). Students commonly use these strategies for the purpose of devaluing potential failures, or making excuses for them, as well as attempting to avoid being negatively perceived by others. These self-protective strategies that were often initiated in childhood have been found to continue into adulthood.

The term, compensated dyslexic, has been found within some of the research and is used to describe students who have devised ways to overcome or compensate for the deficits experienced as a result of having dyslexia (Erskine, & Seymour, 2005; Kirby, et al., 2008; Stampoltzis, & Polychronopoulou, 2009). This suggests these individuals have successfully employed learning strategies and study approaches that have allowed them to manage their experiences of the difficulties typically encountered by students with dyslexia (Fink, 1998; Kirby, et al., 2008). Individuals with dyslexia were able to further develop their reading skills through engaging in interest-driven reading, where they were able to develop and apply higher order meaning skills allowing them to overcome some of the deficits previously experienced. It is thought that because these individuals read text usually within one particular area it allows them to gain background knowledge of the area which aids in their ability to be able to predict and become more familiar with the words common to that particular area. It was also common for these adults to become extremely skilled in using contextual cues, orientation to the context of information, improves reading speed and accuracy (Fink, 1998). For these individuals with dyslexia were able to become relatively accurate and fluent readers within a particular area, suggesting that interest-driven reading can provide poor readers with some of the underlying skills needed in order to become proficient readers (Fink, 1998). This illustrates employing strategies and study methods can help students with dyslexia improve other skills, such as, time management, and study aids, that allow them to compensate for the deficits experienced due to their disability (Kirby, et al., 2008; Raskind, et al., 1999). Many factors contribute to a students’ success at the postsecondary level, increased interest in identifying the factors that might help students bridge the gap and increase their chance at success has become a common focus of research (Heiman, & Precel, 2003).
2.2.2 Predictors of success. As important as improving academic literacy skills is in individuals with dyslexia, developing attributes of success within these individuals is also significant (Raskind, et al., 1999). Self-awareness, determination, activity, emotional stability, goal setting, and use of support services were the greatest predictors of success for individuals with learning disabilities (Raskind, et. al, 1999). Other research focused on the effect self-determination has on success, and found that individuals who are highly determined are more successful in achieving their set goals (Field, Sarver, & Shaw, 2003). Similarly, qualitative studies focusing on the drive and focus of students with LD’s found these factors were key factors in determining one’s level of success (Covey, 1989; Garfield, 1986; Peters, & Austin, 1985; Peters, & Waterman, 1982; Price, 1984).

Reiff, Gerber, and Ginsberg (1994) identified a number of components of success which include, self-control, goal orientation, adaptability, creativity, and social and personal support. Researchers have attempted to determine possible formulas for success (e.g., Gerber, Ginsberg, & Reiff, 1992), to help students with LD’s, by focusing on the similarities within the formulas of the highly successful individuals. This examination revealed, of the qualities included, control was an overriding theme evident among adults with learning disabilities (Kauffman, et al., 1986). Other qualities thought to contribute to the formula for success included: desire, perseverance, reframing, learned creativity (alternative learning strategies), and mentors. Similar findings have been reported on studies of gifted individuals (Kauffman, et al., 1986). Research into the successful attributes of individuals with learning disabilities has found realistic adaptation skills, increased self-awareness/self-acceptance, proactivity, perseverance, emotional stability, goal setting, and effective use of supports as being important factors contributing to an individual’s success (Spekman, Goldberg, & Herman, 1992).

The research into the successful attributes of individuals with LD may suggest a different direction for further research, re-evaluating the current educational practices and intervention strategies, shifting the focus from academic improvements to the development of these personal attributes (Raskind, et al, 1999). Developing the compensatory strategies of students with dyslexia rather than providing accommodations and supports aimed at remediating the deficits experienced by these students is a common suggestion for future research (Heiman, & Precel, 2003; Kirby, et al., 2008; Raskind, et al., 1999). Several studies have begun to focus on the
coping strategies and characteristics of resilience that allow individuals with reading difficulties/disabilities to positively adapt despite the challenges faced.

2.3 Resilience Theory and Reading Difficulties/Disorders

The exploration of the factors that result in adaptive outcomes in the presence of adversity for those with a SLD/dyslexia will be outlined once a brief historical overview of the construct of resilience is reviewed. Resilience is a dynamic process encompassing positive adaptation within the context of significant adversity (Luthar, Cicchetti & Becker, 2000). There is an abundance of research conducted regarding resilience in children and those who have faced various high-risk situations (Masten, 2001). Research on resilience is commonly rooted within the disciplines of developmental psychology and psychiatry, where the construct is used to describe the characteristics and positive adaptation of at risk individuals (Gu & Day, 2007). Resilience is viewed as a “multidimensional and socially created construct evolving over time” (Gu & Day, 2007; Mansfield et al., 2012). Resilience is defined by Luthar, Cicchetti, and Becker (2000) as the ability to positively adapt despite experiencing significant adversity.

Research on resilience is focused on understanding the processes and/or characteristics that allow individuals to positively adapt and develop in the presence of challenging circumstances (Masten, 2001). According to Masten (2001), resilience is an inferential and contextual construct requiring two main judgements to be fulfilled. The first judgement states, individuals are not considered resilient if they have never experienced a significant threat to interfere with normative development. The potential negative life outcomes associated with having a SLD/dyslexia would qualify as a significant threat that interferes with normative development. Individuals who are able to positively adapt and experience success despite the challenges a SLD/dyslexia presents suggest they possess the quality of resilience. The second judgement is concerned with determining if the adaptation or developmental outcome is “good” or one of success. The lives of students with SLD/dyslexia are often marked by significant struggles, for these individuals to overcome not only the external factors associated with the disability but also the internal issues that are linked with the diagnosis suggests that these individuals would fulfill the second judgement set by Masten, affirming their resilience. Although an overview of resilience has been provided the following paragraphs will offer some perspective as to the attributes included in the research on resilience and students with SLD/dyslexia.
Recent research has focused on acknowledging the developmental complexity of measuring the resilience of students, recognizing that individual and environmental factors need to be considered (Mansfield et al., 2012). It is suggested that there are many factors associated with educational resilience, and therefore Wang (1997) suggests that an ecological model be used in order to acknowledge not only the personal characteristics, but also the external influences associated with the educational process and student resilience. In order to analyze all the potential factors, Bronfenbrenner’s (1998) “ecosystemic model” has been utilized. The factors include personal characteristics (ontosystem); parent, teacher, and peer influences (microsystem); relatives, classroom, and social networks (mesosystem); as well as the influence of even larger systems such as schools, school boards (exosystem), and communities (macrosystem). Luthar, Cicchetti, & Becker (2000) also suggests that the chronosystem needs to be acknowledged as it is thought that resilience is not stable over time. In a study by Lessard, Butler-Kisber, Fortin & Marcotte (2014) found that students who had strong ontosystem abilities such as the ability to plan, anticipate, make choices, and establish relationships experienced resilience; they were successful within school. Other ontosystem abilities mentioned within resilient students include, high motivation, resourceful, participation in sports and the school, and belief in their own abilities. Within the microsystem, these students had at least one strong support, either a parent, guardian, teacher, school psychologist, or other stable professional. Students who were able to relate to others also showed strong networking abilities (mesosystem), on which they could rely on when problems arise. To address the chronosystem, this study suggested that students who were making plans for their future by creating long-term goals and acknowledging the people in their life that could support those choices acknowledges the importance of time when studying resilience. Other research, mainly focused on the ontosystemic factors associated with resilience in students, include support from a study by Martin and Marsh (2006), who identified five factors associated with resilience. These factors included confidence (self-efficacy), coordination (planning), composure (low anxiety), control and commitment (persistence). These students have been reported to have high self-esteem, clear expectations, strong locus of control, and an overall healthy outlook on life (Wang, Haertel, & Walberg, 1994). The positive relational ability of resilient students, reported within Lessard, Butler-Kisber, Fortin & Marcotte (2014), was also supported within the literature of Garmezy (1974) and Masten (1994). Resilient students have also been found to engage in extracurricular activities and an
overall participation in school life is beneficial to students’ success. These students also reported working hard to complete learning tasks and possibly the most important factor was the belief they had in themselves, that they could be successful. Masten (2001) explains that, “resilience does not come from rare and special qualities, but from the everyday magic of ordinary, normative human resources in the minds, brains, and bodies of children, in their families and relationships, and in their communities.” It is clear that even though students with SLD/dyslexia face adverse situations there is a strong need for parents, teachers, school professionals, and community members to support students in learning to help themselves (Lessard, Butler-Kisber, Fortin, & Marcotte, 2014). Although support from others is essential, in order to increase the likelihood that individuals with dyslexia experience resilience the most important factor seems to involve the attitude the individual adopts in order to deal with the adversity.

2.4 Summary

There is controversy and debate around the extent and nature of the difficulties experienced by individuals with dyslexia, this lack of knowledge affects the quality of material that contributes to informing effective and relevant intervention strategies offered to these individuals (Mortimore, & Crozier 2006). There are many studies suggesting commonalities regarding the experiences individuals with dyslexia encounter throughout their lives. For example, Stampoltzis and Polychronopoulou (2009) recognized there are clear and demonstratable effects of dyslexia on self-concept and an individual’s daily life functioning that require further research. Insight into the coping strategies of these successful individuals would be beneficial to inform the development of appropriate and effective interventions for students with dyslexia perusing postsecondary education. A better understanding of the compensatory strategies implemented to cope and manage the difficulties associated with having dyslexia are important factors that can influence the development of better supports for these students (Erskine, & Seymour, 2005; Kirby, et al., 2008; Stampoltzis, & Polychronopoulou, 2009).

Many different elements have been explored in attempt to understand the complexities contributing to the difficulties experienced by students with dyslexia (Hellendoorn, & Ruijsenaars, 2000; Ingessson, 2007; McNulty, 2003; Pollak, 2004; Riddick, Farmer, & Sterling, 1997; Stampoltzis, & Polychronopoulou, 2009). A neglected source of valuable information that would provide insight into the effectiveness of educational policies, interventions, and the
provision of support services has been the voice of those students with dyslexia (Burden, & Burdett, 2005). Little research exists that accounts for the views and perceptions expressed by students with dyslexia (e.g., Heiman & Precel, 2003; Kirby, et al., 2008). The present research attempts to account for this neglected perspective by allowing individuals with reading difficulties/disabilities (e.g., dyslexia) the opportunity to provide detailed descriptions of the learning and study strategies they found effective in their school experiences. That is, individuals will be able to share the learning and study strategies that have enabled them to cope with demands of postsecondary education and experience success.
Chapter 3: Methodology

3.1 Rationale for Qualitative Methodology

The present study explored the coping strategies and learning techniques of postsecondary students with reading difficulties/disabilities (e.g., dyslexia), and the influence their difficulties/disorders had on their educational experiences. Research in social science requires an investigation into the meaning of participants’ responses (Lincoln, & Guba, 1985). Basic interpretive qualitative design studies are topical studies that seek to discover and understand the perspectives and worldviews of the researched participants (Merriam, 1998). Qualitative research requires, “the search for meaning and understanding, the researcher as the primary instrument of data collection and analysis, an inductive investigative strategy, and the end product being richly descriptive” (Merriam, 2002, p. 6).

Braun and Clarke (2006) noted several characteristics of thematic analysis that benefit qualitative research. Thematic analysis is concerned with “identifying, analyzing and reporting patterns (themes) within data. It minimally organizes and describes your data set in (rich) detail” (p.79). Through a thematic analytic approach to exploring qualitative data, this research sought to understand the experiences and strategies employed by postsecondary students with reading difficulties/disabilities like dyslexia. Where, “thematic analysis can be a method that works both to reflect reality and to unpick or unravel the surface of ‘reality’” (Braun, & Clarke, 2006, p. 81). Few studies have examined what coping strategies and learning techniques students with LD use and how they cope in a postsecondary learning environment (e.g., Heiman, & Precel, 2003). The few studies that have looked into the learning techniques of postsecondary students with dyslexia used mainly quantitative analyses to look at factors, such as academic difficulties, study approaches, and exam writing (e.g., Heiman & Precel, 2003; Kirby, et al, 2008). The aim of the present study was to address the insufficient knowledge regarding postsecondary students with a reading difficulties and/or disorders. Where more information is needed to inform further research in this area, as there is still much controversy and debate around the extent and nature of the difficulties experienced by individuals with reading difficulties/disabilities like dyslexia. This lack of knowledge affects the quality of material that contributes to informing effective and relevant intervention strategies offered to these individuals (Mortimore, & Crozier, 2006). A better understanding of the compensatory strategies implemented to cope and manage the difficulties associated with having a learning
disability is an important factor that can influence the development of better supports for these students.

The present study employed a basic qualitative research design to discover and understand the perspectives and experiences (i.e., strategies used) of the postsecondary students with reading difficulties/disabilities (e.g., dyslexia; Merriam, 1998). Specifically, the following research questions were explored:

1. What factors have helped/hindered students with reading difficulties/disorders to cope with the demands of postsecondary education? and
2. What academic strategies and learning techniques do students with reading difficulties/disorders commonly use to cope with the demands of postsecondary education, and why do they view them as effective?

3.2 Basic Qualitative Research

The nature of the present study was qualitative and the researcher sought to gain an understanding of participants’ academic experiences (Merriam, 2002), since the point of view of the participant is most significant in the construction of meaning regarding these experiences (Leedy, & Ormrod, 2005). This study explored the past and present experiences students with reading difficulties/disabilities (e.g., dyslexia) encountered as they moved through the educational system. The main area of interest included insight into the educational experiences of these students, their views and feelings about having reading difficulties/disabilities, and what strategies or supports they used to overcome their difficulties. A basic interpretive qualitative method was suited to the aim of this study, with the focus being on understanding the real experiences of those students with reading difficulties/disabilities. This approach allowed the researcher to gain insight into the subjective experiences that participants felt had the greatest impact on their academic lives, since it highly values the process of learning and understanding in the search for meaning, and recognizes that the interaction between researcher and the participant are vital to capturing their lived experiences (Lincoln, & Guba, 1985). Participants were allowed to reveal their story and outline their experiences in their own words through the use of personal interviews. The use of open-ended questioning allowed the participants to provide explanations of their experiences as well as reflect on the coping mechanisms they utilized in order to ensure their success. Transcriptions of the participants’ expressions are presented within the research, unaltered from the original dialogue. The
The authenticity of the dialogue allowed the researcher to present common themes or identify any similarities that were made evident through the participants’ recollections. Their experience in coping with an LD as they progressed through the educational system using the lens of resilience (i.e., succeeding despite the barriers faced) was important in order to identify their learning needs.

3.3 Participant Selection and Recruitment

Upon University of Saskatchewan Ethics Board Approval (Behavioural Research Ethics # 14-350), purposeful sampling was used to select five postsecondary students currently enrolled in an undergraduate/graduate program at a Western Canadian university who self-reported they had a reading difficulty/disability (e.g., dyslexia) and were interested in participating in the study. Student self-report of reading difficulties/diagnosed reading disability was used since it is recognized that the provision of documentation confirming a diagnosis in postsecondary students may be difficult to acquire, as most postsecondary students cannot provide recent or current diagnostic documentation (Orr & Goodman, 2010). The following inclusionary criteria was used to determine whether participants were qualified to participate in the study: (1) age: participants were sought who ranged in age from 18-30 years of age; (2) demonstrated reading difficulties/disabilities (e.g., self-report of reading problems, formal diagnosis of a LD with mainly reading difficulties at some point in their educational career; (3) education: all participants were current, undergraduate/graduate students at targeted Western Canadian university. Successful completion of at least one year of university was not a necessary component, but could benefit the quality of the data provided, allowing students to provide explanations of the coping mechanisms utilized in order to allow them to achieve success at the postsecondary level.

The recruitment process initially invited students enrolled in undergraduate and graduate programs at the Western Canadian University to voluntarily participate in the study through advertisements on campus. Specifically, permission was requested from instructors teaching undergraduate and graduate courses on campus (i.e., all colleges) and to the university’s student disability services centre to forward email invitations to their current students. In addition, posters advertising the study were posted throughout the campus to attract potential students suited for participation in the study who had not received the advertisement through emails sent from instructors and/or the disability services centre (see Appendices A
and B). Snowball sampling was also employed to allow individuals or participants who have seen/received the advertisement to invite other (qualified) students at the university to take part in the study.

Students who were interested in participating in the study contacted the researcher and were informed of the study’s parameters and how confidentiality would be maintained. Participants with increased complexity in their experiences and who were able to provide in-depth descriptions of the issues and strategies used to overcome their disability were highly sought-after for the purpose of this study (Bogdan, & Biklen, 2003; Patton, 1990). Although a small sample may not classify as a representative sample of all students with reading difficulties/disabilities in other universities, the personal accounts of these individuals may be useful in determining those strategies and supports that are not only beneficial to students but are the ones sought after by those in need (Raskind, et al., 1999). Allowing educational resources to focus on providing students with those skills and strategies that are identified as valid and practical options.

3.4 Data Generation

Two interview sessions, an initial interview and a follow-up interview, were held with each of the five participants who met the inclusionary criteria. Each initial interview was approximately 1½ to 2 hours in duration and held at a time and place on campus agreed upon by both parties. All of the interviews were digitally recorded.

At the initial interview session, participants were provided with a consent form explaining the study’s purpose and were reminded of their voluntary participation in this study and that they were able to withdraw at any time before the transcript release was signed (see Appendix C). For data transcription purposes, approval was obtained from participants authorizing the recording of the interviews for data analysis. These interviews followed a semi-structured format, where open-ended questions were used to focus the content or direction of the interviews (see Appendix D). The researcher’s personal and practical background in working with individuals with reading difficulties and/or disabilities, paired with extensive consultation with the literature regarding successful adults and college students with learning and reading difficulties/disabilities, guided the selection of questions used within the interviews. This ensured that the questions used were clear and concise and would yield useful information from participants. The interview structure had a broad focus reflecting the
complexity of the research issue, and followed an open-ended conversational style interview format. There were specific concepts of interest to the researcher that provided a general direction and focus to the progression of the interview. Although pre-selected questions were outlined they were there only as a guide, not all questions were used within the interviews. The goal was to allow the participants to share their unique experiences through personal interviews. This arrangement allowed participants the opportunity to discuss related topics and to answer the questions in as much or as little detail as they chose. Further questioning or query probes were important only to help draw out details and provide clarity to their experiences. This allowed the range of answers from participants to reflect their personal experiences as opposed to choosing a generic response common of questionnaires.

Follow-up interviews allowed the participants to review the interview transcript, and add, change, or delete portions of the transcript with which they did not feel comfortable. Participants signed a transcript release form once they had reviewed and approved their final transcript (see Appendix E). Considerable effort was made to protect the identity of all participants. Pseudonyms were assigned to participants and all personal identifying information was cleared from the final manuscripts. Participants were advised that direct quotes may be used within the final manuscript, and this may interfere with assuring complete anonymity. In attempt to prevent this breach of confidentiality, participants were given final approval of their interview transcripts and could remove any information they felt could potential identify them.

3.5 Data Analysis

The process of data analysis was completed on a continuous basis throughout the stages of data collection. Braun and Clarke (2006) suggested a six phase process of analyzing qualitative data, where analysis is not a linear process of simply moving from one phase to the next. Instead, it is a more recursive process, where movement is back and forth as needed, throughout the phases. It is also a process that develops over time (Ely, et al., 1997), and should never be rushed. The first phase of data analysis begins by “familiarizing yourself with your data” (Ely, et al., 1997, p. 87). Where, reading and rereading the data as well as taking notes or making ideas for coding are an important step as these notes and ideas will be referred to in subsequent phases. This was the initial process of identifying meaning or patterns in the data set. The process of transcribing verbal data is necessary to conduct thematic analysis (Braun, & Clarke, 2006). Once transcription was completed and the researcher became familiar with the
data, the next phase included generating initial codes or coding the interesting features of the data from across the entire set. Once identified, these codes were transferred onto cue cards. In phase three, searching for themes, the codes were grouped into potential themes. Resiliency theory (Luthar, Cicchetti, & Becker, 2000) was used as a frame to assist in the identification of themes related to what has helped these individuals achieve academic success despite the adversities they have faced in life. Once the themes were determined, from these groupings, the theme names were formed. Phase four, reviewing themes, involved the refinement of those themes. This involved ensuring the themes worked in relation to the coded extracts (level 1) and within the entire data set (level 2). Defining and further refining the themes was phase five of the data analysis. The researcher compared each new piece of data to the existing data in order to generate coherent categories of meaning, going back and forth between collecting and analyzing the data (Fassinger, 2005). Lastly, phase six producing the report, involved using the set of refined themes to create the final analysis of the report. An account of themes emerging or being discovered was a passive account of the process of analysis, and it denies the active role the researcher always plays in identifying patterns/themes, selecting which are of interest, and reporting them to the readers (Taylor & Ussher, 2001). This research was focused on the unique experiences of each participant and the similarities and differences among them. This in turn contributes to a greater understanding of the school and life experiences of postsecondary students with reading difficulties and/or disorders such as dyslexia.

3.6 Evaluation Criteria

Accurate identification and description of the phenomenon under study and authentic communication of the findings to an interested audience is the basis for establishing credibility in qualitative research (Gay, & Airasian, 2003; Marshall, & Rossman, 1999; Patton, 1990). The foundation that guided the present study was the basic interpretive qualitative design outlined within Merriam (2002), and Caelli, Ray, and Mill (2003). Merriam (2002) noted that research is considered basic interpretive qualitative when it is dissected by the researcher’s belief that individuals construct reality while interacting with their social worlds (Caelli, Ray, & Mill, 2003).

Aspects of evaluation criteria were integrated to further establish trustworthiness within the present basic interpretive qualitative research, including examining both the traditional (i.e.,
credibility; Lincoln, & Guba 1985) and relational features of evaluation criteria (i.e., role of the researcher; Lincoln, 1995).

3.6.1 Credibility. It was argued by Sandelowski (1986) that “a qualitative study is credible when it presents such faithful descriptions or interpretations of a human experience that the people having that experience would immediately recognize it from those descriptions or interpretations as their own” (p. 30). This study endeavoured to gather thick descriptive data about the coping strategies of postsecondary students with reading difficulties and/or disabilities, allowing the reader to identify with the struggles and experiences represented within this study. While also allowing the participant to leave with a better understanding of themselves, where, “... A good interview lays open thoughts, feelings, knowledge, and experience...[and] leaves [participants] knowing things about themselves that they didn’t know – or least were not aware of – before the interview” (Patton, 1990, pp. 353-354).

The researcher ensured that the study results accurately reflected reality by providing detailed descriptions of the data shared by participants. The researcher used member checking to further ensure the credibility of the study data (e.g., the transcript was reviewed with each participant to allow respondent validation of criteria). Additionally, participants were provided with the opportunity to review the final copy of the interview transcript to provide clarification or to elaborate on the data shared. This final transcript review allowed participants to approve the data for accuracy.

3.6.2 Role of the researcher. A researcher’s prior understanding is motive for inquiry into a particular research area or topic (Caelli, Ray, & Mill, 2003; Merriam, 1998). Strauss and Corbin (1998) argued that qualitative researchers are “unafraid to draw on their own experiences when analyzing materials because they realize that these experiences become the foundation for making comparisons and discovering properties and dimensions” (p. 5). What directed the researcher to research the topic in the present study was because of a personal connection to the struggles of students experiencing reading difficulties and/or disorders who are pursuing a post-secondary education. Although professionally undiagnosed, I have recognized characteristics and a strong personal relation to the qualities of LD in myself, mainly dyslexia. As a student, and especially in postsecondary education, I had to employ many coping strategies in order to manage the intense educational demands of acquiring a higher level of education. Some strategies I would use seemed uncommon to all learners.
However, it was not until university, and conversations with peers, that I and others realized these were definite coping strategies I had personally developed in order to manage my dyslexia and maintain a higher level of academic performance. Thus, it became my personal goal to gain a level of self-awareness into not only my learning style, but also the coping strategies that allowed me to find success in postsecondary education. In doing so, I found the need to increase the awareness of the possibility of achieving success in spite of having reading difficulties. It was a priority for me to highlight the strategies and supports that would provide students practical resolutions to their academic challenges. Although, there is a close personal connection, I was aware that it was necessary for me to monitor and declare my personal biases while conducting this research.
Chapter 4: Results

This chapter introduces the five participants who participated in this study and presents their thoughts and experiences related to the learning strategies and coping mechanisms students with reading difficulties/disabilities (e.g., dyslexia) use in order to manage the academic demands within higher educational institutions. Participants were given pseudonyms in order to protect confidentiality. The quotes that were used from the participants’ interviews were often edited as another way to protect participant confidentiality as well as ensure statements were coherent. For instance, individual names mentioned by participants were altered or omitted, and repetitive words or statements (i.e., yeah, so, you know, like) were removed. Information gathered from participants in relation to the research question was revealed, and resiliency theory was used as a frame for generating themes from the data (Luthar, Cicchetti, & Becker, 2000; Masten, 2001).

4.1 Participants

Seven individuals responded to the call to participate. However, prolonged scheduling difficulties resulted in two potential participants dropping out of the study. This study consisted of five adults who were currently enrolled in undergraduate or graduate programs at a Western Canadian university. The participants ranged in age from 26 to 33 years of age and included one female (Sam) and four males (Tony, Mathew, James, and Parker).

The first participant to be interviewed was Tony, who was 26 years old at the time of the interview. Tony was diagnosed early in his school career with ADHD and a reading disability (i.e., dyslexia). He was misdiagnosed in his later elementary school years with Bipolar and Depression which was eventually classified as a mood disorder. Tony’s family moved regularly because of his father’s job in the Agriculture industry, whereas his mother stayed home to raise the three boys of which Tony was the middle child. When Tony was about 16 his parents divorced. At this time Tony struggled to finish high school and then attended two different colleges in the United States. Tony took some time away from school due to his personal and academic struggles and worked for two years. Once his life stabilized, Tony decided to attempt postsecondary again and started attending a school of horticulture. Shortly after, he moved into a degree program in Agronomy at a Western Canadian university where he is currently in the final stages of completing his degree.
The second participant to be interviewed was Sam, who was 28 years old at the time. Sam moved from another province to enroll in a master’s degree program in Biology at a Western Canadian university. After completing her undergraduate degree in Ecology, Sam worked in the Yukon as a Plant Ecologist before returning to university. Sam reported she struggled significantly with the increased demands of a masters’ program and was encouraged by her supervisor to seek further academic support and explore the possibility of a disability diagnosis. Late into Sam’s life and academic evolution, her overwhelming frustration forced her to seek further testing. Sam was diagnosed at the university’s student disability services centre with a learning disability, specifically dyslexia. Sam is the first of her generation in her family to pursue postsecondary education. Her mother has always been supportive and proud of Sam’s accomplishments and is only now aware of her disability diagnosis. Sam has not yet informed her father of her disability diagnosis as she feels he may experience the same, if not more, learning difficulties. Sam’s intense work ethic and determination has allowed her to make it through elementary and high school without her learning difficulties being detected. However, the increased demands at the master’s level have challenged her and forced her to refine and incorporate new strategies in order to complete her master’s degree.

The third participant interviewed was Mathew, who was 30 years old at the time of the interview and enrolled in his first year of a doctoral program at a Western Canadian university. Mathew is originally from Eastern Canada where he completed a four year university undergraduate degree before going on to complete a master’s degree. Mathew then took a few years away from his vigorous postsecondary pursuits to work, only to return soon after with the goal of completing a Ph.D. Mathew was diagnosed with dyslexia in his school career and received various academic supports throughout elementary school. In high school, Mathew started to resist being provided with academic supports in an attempt to distance himself from the stigma of having a learning disability. Although Mathew’s family was supportive of his diagnosis, they were unsure of how to help him. However, his family maintained high expectations for their son’s academic endeavours.

James, who was 30 years of age at the time of the interview, was the fourth participant in this study. He recently moved to Western Canada with his wife in order to further his education on a full-time basis. James reported he attended a program for gifted students with a learning disability at an early age. James was officially diagnosed with a reading disability and Attention
Deficit Disorder (ADD) in the seventh grade. James recalls that his father experienced some of the exact same difficulties that he has experienced with a diagnosis as a result of having dyslexia. James’ mother was an educator and he credits the recognition of his disability and the early intervention he received to her. As a child, but especially as an adult, James reported he has struggled to deal with the adverse psychological implications of growing up with and learning to deal with a learning disability.

The final participant to be interviewed was Parker, who was about to turn 33 years old at the time of the interview. Parker first attended a Western Canadian university while playing football, but did not complete the degree he was working on. He then took a few years off to work before returning to further his education at another Western Canadian university. Parker always felt there was something different about the way he learned and why he struggled. However, it wasn’t until a teaching assistant in an anatomy class encouraged him to go to the university’s student support centre for help that he was diagnosed with Attention Deficit/Hyperactivity Disorder (ADHD) and a Learning Disability in reading. Parker is now working while he completes his undergraduate degree in Bio-Chemistry. Parker recognized that a diagnosis late in life, although beneficial, has also complicated his learning process. That is, he is faced with difficult task of trying to balance and perfect learning strategies he has always used while learning and implementing new strategies. Parker reported that his struggles went unnoticed by his parents when he was younger due to the fact that they were both busy working and attending school while he was in elementary school. Although they are supportive of his diagnosis, he feels their level of understanding of his struggles is limited.

Participants were interviewed by the researcher to explore the learning strategies and coping mechanisms students with reading difficulties/disabilities (e.g., dyslexia) use in order to manage post-secondary academic demands. As participants’ stories were reviewed, four major themes were identified using a resiliency perspective (Luthar, Cicchetti, & Becker, 2000): (1) Struggling to learn: Recognizing the impact of learning difficulties and disabilities; (2) Embracing the positives and negatives of a diagnosis; (3) Surviving the learning experience: Using strategies and learning techniques; and (4) Envisioning and moving toward a successful future. These themes are discussed and linked together using meaningful participant quotes.
4.2 Theme 1 Struggling To Learn: Recognizing the Impact of Learning Difficulties and/or Disabilities

Sam, Parker, Tony, James, and Mathew all reported that they have experienced significant difficulties with the basics of reading and writing as they have progressed through school. They have all experienced increased frustration due to a lack of short term memory functioning and delayed comprehension and information retrieval. As Sam shared, “I struggle so profoundly with the basics that it is frustrating.” Parker experienced similar frustrations, stating:

I can spend hours reading a paragraph and get nothing out of it or I can move on and come back later. I can read something and understand it, but then I won’t remember it. So then, I will read it again, and again, and again, until it becomes too hard to get through anything and finishing the rest seems like an even bigger chore.

Sam also struggles to retain information when she reads. She explained:

I can say that I have never finished a book. I don’t remember ever finishing a book, even in high school. I’d read the first twenty pages and the last twenty pages and then look up reviews on them in order to figure out what I needed and do the assignments that way. I always joke that I have a book shelf full of half read books because that is just the way it goes. I pick up a book really excited because I love to learn, and I only make it half way through. Whether my attention just drops or I’m not interested anymore, for whatever reason I just can’t make it through an entire book.

Mathew described he had similar difficulty finishing a book: “In English, I performed very poorly. It was a struggle for me to read. I didn’t read my first book until, I think, university.”

While Tony provided an analogy of his frustration with reading:

It’s like I’m looking at a test where I’m reading Dr. Seuss but they’re giving me Lord of the Rings. I can do all the reading of my life and take the test over, and over, and over, but I’m still not going to be able to memorize the information, it doesn’t work like that for me. If there was only some way that I didn’t need to bring in a thesaurus and a dictionary and spend most of my time looking up words, working on just a single question, trying to put it together into something that I can understand. I just get frustrated and waste my time reading things over, and over.
Lastly, James felt he retained much more information when he hears it versus reading it, explaining, “I am probably pulling a 75% higher retention rate out of listening than I would be reading, so if someone can speak on the subject, great.”

The rote memory these participants described using in order to read also made other areas such as memorization and organization much more difficult. Mathew commented he must put extra effort into memorizing information:

Not being able to manipulate the information in the short term, so bringing it in and understanding it then putting it back down onto paper helps me really truly understand it. I can’t just memorize from reading it from a text or notes, I have to make it my own.

Sam has similar difficulties when memorizing information. She explained:

When I’m asked a question I always know what page it is on and where it is located on that page, but I can’t remember what it says. I know where to go in the notes to reference something, even if I can’t remember the details about it, but I can tell you where to find it. That was always a technique, organizing the notes and knowing where everything is kind of helps.

James also described the effort he puts into memorizing information:

For individuals with dyslexia it is the processing of short term information and being able to manipulate it, so note taking is the worst thing for me. For me to be able to listen to a lecture, try to understand what they are saying and put it into notes at the same time. If I’m busy copying notes and not listening, that’s where it becomes a big problem. The ideal thing would be to go and listen to the lecture and have a full set of notes afterwards.

Tony reported experiencing similar problems trying to take notes and listen at the same time. He shared, “I wasn’t reading the story, I was just copying it down. Nothing was going into my head.” Parker commented on the inconsistencies he experiences when learning different types of information:

If I can take a physics equation and break it down and understand it, why can’t I take English and break it down and understand it? I know they are not the same but it should be the same process.

All of the participants also reported they similarly experience difficulty keeping simple words and basic information straight. For example, James explained he continually struggles with remembering homonyms:
One of the things with a reading disability is that I’ll read a novel or write an essay and can’t keep my *then* and *than’s* straight. And, I’m probably never going to be able to keep them straight. I finally, in the last four years, got the three, *there’s* (*there*, *their*, *they’re*) pulled apart and separated in my head. Sometimes it’s those little grammar things that mix me up.

Similarly, Sam recognized she often mixes up words:
I make up a lot of words or I mix words together. I try to use big vocabulary and sometimes I think the word sounds right but the meaning is a little bit off, because people will look at you a little bit weird. It’s even just simple things, for example, I would write *seeding trails* instead of *trials*, and the worst thing is I can’t even see the difference most of the time.

Mathew shared he feels there is a stigma connected to his struggles, explaining:

> I could not remember what the *b* or *d* was like. And thinking, if you can’t write your *b’s* and *d’s*, you come off as stupid. I remember that was really hard, even left or right. Some of those very simple comparative things I always confused.

Parker experienced similar difficulties, stating, “I can know the name and know the structure but linking them together can be hard.” Sam, James, Tony, Mathew, Parker’s difficulties reading and writing fluently have continued throughout their academic careers. They shared how these difficulties have complicated the process of articulating their thoughts through writing. Sam felt that there is a disconnect between what she knows and how she is able to express what she understands in writing. She reported, “I know what I’m talking about, but it is going from the head, to the hand that something gets lost. The actual process of sitting down, organizing the writing, and making it coherent to somebody else is a challenge.” James also acknowledged he struggles to express what he knows, explaining “I know a lot of people who are dyslexic who struggle with the fact that the information is all up here [pointed to head], but how do you display it.” Tony has had similar experiences stating, “If I am writing or typing something out and I get stuck, I know what I am trying to say but just not able to get the words.” Mathew shared his frustrations with writing:

> I would write, then look at it and it wasn’t even close to what I was thinking, which is frustrating. That’s why I continued with my education, because I want to be more articulate on paper. I have all these ideas and it’s so frustrating not to be able to get them out in the way that I want them to be. It feels like you are kind of locked in yourself.
Parker had similar experiences, describing:

I don’t know if I really knew how to express myself. I spoke with one of my professors and he said, “you have all the concepts, you just can’t get them down on paper.” Part of it is, if I am interacting with someone they can tease the answers out of me, because if I know it, I know it. But on paper I start questioning myself and then I don’t know what I am trying to answer.

All of the participants reported they have experienced difficulties with their processing speed which often requires them to work longer hours, study more, and take more time to complete academic tasks in order to meet the demands of their postsecondary degree programs. James, Mathew, Parker, Sam, and Tony described how needing to take additional time to complete academic tasks has affected their progression through postsecondary education. For example, James shared that he has experienced shame and imbalance due to his processing difficulties:

I would rather people not know how long or how much time and effort it actually takes for me, because the fact that I have to put in more time and effort is an expression of my disability. Studying longer than everyone else is an admission that there is a problem, it is an admission that you are not as good as everyone else. I think it is kind of unhealthy actually, to tell you the truth, the amount of time that I have put into things. I would say it is a direct result of going through school being learning disabled.

Mathew has had similar experiences and stated, “It was the little things that took me a lot longer and were really frustrating, to be a little slower than the other folks.” Sam revealed she is frustrated with the extra time and effort she is required to put into her academic tasks:

To try to guess how long it is going to take me to do things and I freak out, don’t ask me how long it is going to take me to write my thesis because if it had have been up to what my mind thinks I would have been done a year ago. Instead I’m still sitting here struggling. It takes a lot of time, and it takes a lot of work.

Parker shared the time and effort he needs to use to complete his school work has a domino effect on his progress:

Even though I put time and effort in, the grind really starts to wear on you if you don’t have things lined up perfect. Then I am still a step behind when I should have graduated a
long time ago but it seems to be taking forever. You have to invest the time to get the 
return, and there is not always that time to invest.

Similarly, Tony explained how the time he invests into his studies has affected his decisions:
People ask me, “why don’t you just go for the degree, it’s only another two years.” I have 
to tell people that I am a student [who needs extra support] and for a two year diploma 
the way those courses are structured, I would be looking at another four years. What 
would four years look like if I decided to do four? I’m looking at, at least eight years. 
Other people just don’t understand what it is like for me to get through this.

4.3 Theme 2 Embracing the Positives and Negatives of a Diagnosis

James, Sam, Tony, and Parker shared how the people around them helped to them 
acknowledge that there may be more to their academic struggles than a typical students may 
experience and encouraged them to seek further academic support. For instance, James 
acknowledged:

I was diagnosed because my parents recognized it early, because my family recognized it. 
Then in my elementary school there were learning assistance classes and enrichment. I 
kind of bounced back and forth between both of them. The enrichment was to help kids. 
There was learning enrichment for students who were ahead so they wouldn’t get 
frustrated and create problems. Then there was learning assistance for students who were 
falling behind. The experts in the field recognized that in different areas I fit both. 

Sam shared it was her thesis supervisor who helped her realize there may be more to her 
academic struggles than what others experience:

My supervisor, after working with me in the field, noticed that I have these really strange 
tendencies. When I finally decided I was going to go back to school she said, “you might 
want to tell your new supervisor that you are thinking you might have dyslexia.” She 
urged me to see if there was a diagnosis.

Tony recalled he was surprised when he was diagnosed with dyslexia:

I didn’t even know I was dyslexic really, until I took the test this last time, almost two 
years ago now, and they told me that I’m [a] severe dyslexic. I was surprised because I 
never really put things together. But when I told my dad and my brothers they were like, 
“yeah, we could have told you, that you were dyslexic.” They said they could see it for a 
long time.
Parker had a different experience from Tony. He stated:

I never really knew what I had, I just knew there was something different about me. I didn’t get things the way that everybody else got them, and that was frustrating. I went to university and my grades were not great so they told me that my grades need to come up or we kick you out. Then I came here and a teacher’s aide in my anatomy class said that you should go see the people at the student support centre. Making sense of who I am was important. Hindsight being 20/20, looking back I realize that it can explain why there were so many problems.

Sam, Mathew, James, Parker, and Tony described how their history of academic struggles and educational failures felt like personal failures and affected their self-esteem. They shared that misunderstanding their disability further complicated their personal and academic progression. For example,

Sam explained how she struggled to accept her dyslexia diagnosis:

I have never really acknowledged that something was wrong and so that has been a struggle in and of itself. I still don’t want to call it a disability or disorder. I’m dyslexic, yes, but to go to somebody and say I have a learning disability they automatically associate that with something negative. Most of my peers don’t know about it because I have not been super open. They just know that it is taking me longer, and the judgement is not really coming from anyone else, at this point it’s just me.

Mathew described how the stigma of having a disability has affected him:

When I was younger I thought that having a learning disability meant that I was stupid. I remember feeling that the diagnosis, the way it was approached, kind of hindered my confidence. I think that was the hardest, dealing with that more than the disability itself.

James also acknowledged his diagnosis affected his life:

I’ve struggled in my adult life with the emotional fall out of dealing with a learning disability, even going through school knowing about my LD. I can only imagine if you had no idea or no support how it would affect you.

Parker acknowledged there are two sides of his struggle to accept his diagnosis and shared, “There is this bright spot and then there is this dark spot, so figuring out how that all works was difficult and at times frustrating.” While Tony recalled when he first figured out he had
difficulties, stating “Middle school is where I started to find out more about the reading
disability, that is when it really kind of stood out I guess.”

James, Mathew, Sam, and Parker explained the importance of understanding yourself and
your disability in order to be successful. They described how receiving a diagnosis helped them
to make sense of their academic struggles and seek appropriate academic support. For example,
James described how having academic support helped him to succeed:

I already had a good understanding of myself. That was part of the program… learning
self-advocacy and understanding your learning disability, which I am thankful for.
Learning about your disability is so important. To understand what you need out of it is
really important and what that diagnosis means for you.

Mathew explained how his understanding of his diagnosis changed as he got older:

Growing up, my interpretation of a disability changed because I thought, initially, it was
that I was less intelligent and that I would have to work harder. But, it isn’t to be less
intelligent but average intelligence with this stark weakness in your intellectual abilities
compared to everything else. Understanding that is really important so you can find
strategies to help you move forward. I think knowing what your good at and knowing
what you’re not so good at and being very honest about that is one of the best coping
mechanisms and one of the advantages for you later on in life.

Sam described her understanding of her disability has not decreased her frustration:

Now there is a reason for the frustration, I’d like to say that it has lessened the frustration,
but it hasn’t. I am still frustrated with myself but I think that is one of the reasons why I
went to have an assessment. I just needed to know for sure, rather than going through and
thinking something is wrong with me, to knowing something is wrong but let’s work with
that and find how to work around that. I mean, with it, because you can’t work around it,
it is always there. There is also a shifting of expectations of yourself, which I am not very
good at.

Parker shared his diagnosis “…made me take a step back and try to re-evaluate what I think of
myself and embrace who I am.”

James, Tony, Parker, Sam, and Mathew described how their family’s support and
understanding have enabled them to access academic supports they need to succeed. For
instance, James described how his family has supported him throughout his school experiences:
I credit it all to my family, that I made it through high school. My mother was an advocate for me and I think that you can only do so much as a parent. She spent a lot of time at the school board talking with people, she was excellent. My father worked eighteen hour days so he was not around much, but my father had the exact same problem as I did throughout school. So, I think he didn’t have as much patience for it to a degree, I think he saw my problems in himself and felt he couldn’t help.

Tony recalled how his dad has supported him through his tough times:

Everybody is given a graduation flower and at the end of the graduation ceremony. Most everybody would go up to their mom, but because my mom was out of the picture at this point, I gave it to my dad and he was very emotional. If you ask him today that would probably be my biggest accomplishment, and my dad’s proudest moment, was seeing me go across the stage and graduating. Not only did I struggle and have things to get over but he was with me through it all pretty much.

Parker described his family’s support in spite of not completely understanding his academic difficulties:

My parent are still old school so they didn’t really understand a lot of it, so there was support but they never really understood me, and to this point they still don’t. It is not always helpful, but the support is there.

Sam also felt her parents did not understand how to address and support her academic difficulties. She recalled:

Both my parents were always helping, one of the memories I always have is my dad trying to help me with my spelling. He would always sound out the words and tell me to repeat it, saying, “Faster, faster, what do you hear?” And I would say, “I don’t know, I hear a bunch of random sounds that apparently you think sound like a word.” That is a very vivid memory, say it faster, faster, and how frustrated I would get. Even when I would ask dad how to spell something and he would say, “Look it up in the dictionary.” I’d be like, how do I use a dictionary when I don’t know how to spell it, I could look for one word forever. I’m also the first generation to be going to university and not only that but a master’s program. So, my family looks at me and they think wow, she is super smart. Where I’m like, no, actually I have a disability. I have just been lucky to have had
educational opportunities that I have been able to educate me out of the disability in a way. It was a lot of hard work.

Mathew reported his school support system was more consistent than the support he received from home:

My family is great but they have, well that is where our experiences are very different. I grew up with a lot of support at the school level but my family, I grew up with a very chaotic family. Loving parents, I’m not saying that but, I didn’t have that kind of support at home that was more of an obstacle.

4.4 Theme 3 Surviving the Learning Experience: Using Coping Strategies and Learning Techniques

Mathew, Parker, James, Tony, and Sam explained how becoming more self-aware and gaining a better understanding of their difficulties/disabilities helped them to survive their learning experiences. For example, Mathew reported:

If I really want to push myself and improve my abilities I have to learn what I’m dealing with. That is where I spent a lot of time learning about myself and about how I learned. That is really something that stuck out as one of the things that really helped me understand my dyslexia. I think that would be an important strategy, is to be self-aware. It is even a good skill for just anybody but especially for somebody with a disability.

Parker explained how discovering you could accomplish a task in more than one way helped him succeed:

It made me realize that there were probably better ways to do certain things. If something isn’t working out one way it is not necessarily because I am stupid and I don’t get it but because that is not the best way for me to learn it or do it. Finding a different way or different strategy will be more beneficial.

James shared how his perceptions of his abilities has changed over time:

You start to feel that you are not as good and that creates a lot of insecurity. With age comes that understanding of yourself and the way you learn. I think the older you get the more precise you become about things, the more you sit down and look at things and decide what to take care of because you have had things pile up on you in the past. Learn from past mistakes.
Tony felt that it was important to understand that, “Frustration is a big thing, like frustration will bring down your self-esteem, and affect your grades if you let it.” While Sam revealed it was understanding how her strengths can support her areas of need that has helped her to succeed:

Realizing that academia just doesn’t surround my strengths, academia surrounds a lot of my weaknesses and so having the strengths pointed out to you helps you understand the things I am actually good at. Now, how can I incorporate that into what I need to do, and trying to work with that.

Tony, Parker, Sam, Mathew, and James have learned the major role understanding their disability can have in adapting and coping with the difficulties they experience. They described how their increased understanding of their difficulties/disability has informed the strategies they choose to use to adapt to and manage their academic struggles. For example, Tony described how he learns differently from his peers:

People learn differently. For some people if you write it out a few times you are probably able to memorize it, after they write it out or read it. I’ve tried that and nothing happens. I need to be able to apply the material in a different way, like with plant systems in biology. It is easy to compare plants to humans and apply it that way. Most of the organs are similar, or used in somewhat the same way, so you can apply it and remember it better.

Parker described how he needs to apply what he is learning to understand new concepts or ideas:

I’ve been noticing that whether it’s in notes or a text book, taking it out and making it make sense to me is what works best for me. I also excel in lab settings, hands on and practically being able to do. It’s the lectures, I feel with lectures I am not actually being taught, I’m being talked at. It doesn’t always feel that there is that involvement, so I’m left to learn on my own.

Sam also felt she needs to apply information in a subject to succeed, explaining “I’d say the subjects that I’m good at are the ones that I can be a part of, the ones that I can have some sort of experience with.” Mathew shared how using cue cards and making diagrams to record and study information helps him to learn the content of his courses:

I would do a lot of cue cards. I loved cue cards, they help me retain a lot of that information. I would also draw, I’d take those ideas and just draw them out, even if it was
a written thing, I would draw it out just to try another way to get that information locked in. Because the format of reading was just not effective form me.

While James explained how it’s challenging to know how much he needs to study:

I find, it is hard to know when enough is enough with studying. You will go to bed and sometimes a goodnight’s sleep is more valuable than just reading over the same chapter again. But, it is hard to gauge, to know that you have done enough. Especially when you know that short term information isn’t staying in your head or you know that when you read this again and it seems like you’ve read it for the first time. That’s not a good feeling.

All the participants identified how their increased motivation and determination helped them overcome difficulties or barriers they encountered. As Mathew explained, “From elementary to high school I always progressed. That’s what got me into university, I always got better at trying to manage my disability. It was always important to me to figure out this weakness.” Tony shared, “I would say if the material is interesting to me than it is the same amount of work but its work that I’m proud, willing, and motivated to do.” Sam described how she would have to build up to conquering a task:

Because my recall is a lot slower, a lot of times it comes down to motivation. It might take me a little while, especially when it comes down to writing large papers. It can take me awhile to get into it, but once I get started then I can kind of roll with it. Even though it might take me a lot longer, its more working up the motivation, and working hard to get through it.

James felt his motivation to succeed helps him to keep moving forward:

I’m a grownup now and I don’t think I wouldn’t have done it or been able to do it when I was eighteen. For a dyslexic, reading is a struggle, if it’s a struggle it’s not pleasurable, if it’s not pleasurable you don’t want to do it, if you don’t do it there is anxiety because you didn’t do it, and the anxiety creates aversion and it just spirals. What it comes down to is just digging down and getting it done.

While Parker felt “To get to that goal you have to go through the stress, if you get to that goal and you don’t go through that stress, then what have you really learned.”
Parker, Mathew, Sam, and Tony reflected on the varying supports they received to meet their diverse learning needs and how helpful they were in allowing them to progress through their education. For example, Parker reported:

From the student support centre there is the test writing options, I have the option to write in a semi-private or private room, and then I can get a note taker too for in class lecture. If you request a private room it is usually within one of the student support centre offices, so nothing is moving. Where in the gym [where some final exams are held] you have a hundred people around you and everybody is doing something else and there are way too many distractions. It negates all of that noise and lets me just deal with my mind and finding the information.

Mathew felt he is able to monitor and address his own academic needs and he has not accessed the supports currently offered through the campus’ student support centre:

At this point I don’t even know what they could do for me, especially with my PHD. If I need more time then it is up to me to find more money to finish the damn thing. I would recommend to anyone even people without a disability, it is a service that you can hand in your stuff online to the student learning centre and they will look at it and spend an hour editing for graduate students. That is a great resource especially at this level, the masters and PHD level.

Tony described the various academic supports he was provided throughout his education:

I’ve got some supports and I’m working all the time to figuring out how I can do things a little better and figuring out what more I can do to improve. Thing like, time and a half or double time for tests, I get a semi-private room, or if I need an extension, I can ask the professor for an extension. It lists on my student support paper what I get. I am grateful for some of the support that was given to me. In high school I had someone sitting there, and I could ask for help, or if they can phrase this question in a different way. That helps me make a little more sense of what they are asking for. They don’t give me the answer, just clarify things that I may be misunderstanding or misreading. But at university the standardized testing method is a whole different barrier for me.

While Sam reflected on how her limited knowledge of, and access to, appropriate supports has affected progression in her academic program:
A lot of the recommendations for accommodations they can offer is time and a half on exams and a note taker, and those are not exactly the supports that I need at this point. I have tried to inquire with them because at this point what I really need is counselling. I kind of need to talk to someone about the things that I am struggling with and they don’t really support or provide any of that sort of support. At the stage that I am at, that is more of what I need. They have recommended a life coach but I’m also a grad student who can’t really afford that. It is that sort of support that I would need that I just have not been able to find yet. When I look back and think how I did make it through that crazy course load I took as an undergraduate. And I can’t help but think that if I had have known and had the accommodations that I could have received, how much better I could have done.

All of the participants felt advancements in technological support have been useful to their educational routine. For instance, Parker stated “I carry one little device and it has everything.” Mathew expanded on the idea of using a device to access course content and keep organized:

Now technology is your best friend. Keeping everything online, because when you read something it takes you so long, and then you have to take notes to make sure you remember it all. So you make sure you can highlight and make sure it is in put in a way that you can use it later on so that you don’t have to read that damn thing over again. That’s a big deal, because then you are more confident reading these journal articles and things. You are able to take the proper notes once you read it and it is a good investment of your time, so you don’t have to read it again. It helps keep it organized, in this online database, so I think that technology is a huge asset that you should use as much as you can.

Tony described how various technological strategies have helped support some of his areas of need:

I usually type everything up but what helps me out is after I’ve typed everything up, like a script almost, then I can read it to the Dragon software [speech recognition software that translates spoken words into written text] and it can write it out nicer for me. It can put in the punctuation and stuff like that for me. I also use, Kurzweil [reading and writing support software], I don’t use it a whole lot but it helps with the readings that need to be read and discussed. That’s where it really helps out.
James described how the student support centre on campus helped him to choose appropriate technological aids to support his learning needs:

One of the advantages of the student support centre was their understanding of the technology. But you also have to kind of know how they apply to you and integrating them into your system. I just haven’t figured it out yet because once school starts it is just too much, trying to work out new technology while you are on the go. You just need something that is easy and works for you right now.

Sam reflected on how technology could have supported her:

Had I known about that sort of thing and the talk-to-text or text-to-talk would have been great help. I’m starting to use some of those things and I know that there is kind of a learning curve with them but I think that those will be helpful in the future for me.

4.5 Theme 4 Envisioning and Moving Toward a Successful Future

Tony, Sam, Parker, Mathew, and James explained although they have improved specific skills that their reading difficulties/disabilities will never go away. Therefore, the difficulties they have experienced due to having a reading difficulty/disability will continue to affect them for the rest of their lives. For example, Tony explained the lasting effect his reading difficulties will have on him in the future:

It will affect me all through my life but when it comes to as much I think not. Nothing is going to change really once I’m done, I’m still going to have this disability, it’s always going to be there. It’s always going to be at the same level, it’s just coping with it and being able to take the information and reiterate it to my own.

Sam also believed she will always have to find ways to cope with her reading difficulties:

I don’t think something like that is ever going to make your life easy because it is also a processing thing. I don’t think it is a bad thing but it will definitely continue to be something that I need to learn how to work with.

Parker shared how he finds a difference between reading for pleasure and work:

I think I will always have a distaste for reading to read unless I am really interested in it. During the summer I do manual labour so if I am doing something in a professional field where reading is required I think it will affect me, but I’ll find ways to cope with it and I
will find those short cuts to make it easier for me is all. I mean, it will be there but I will do whatever I can to combat it and make the best of the situation.

Mathew also questioned how his reading difficulties could affect him in the future:

I guess it depends on where I go, like I found school more challenging than working privately because you are able to work the way that fits you best. But I think it will still be with me, but much less than it was in the past.

James felt he already understands how his reading difficulties affect him differently when he is in school versus when he is working:

I had ten years between high school and University and it didn’t really adversely affect my ability to work. It doesn’t really affect you, well it does and it doesn’t. You tailor your life around your disability too, you gravitate towards an industry where you can excel in spite of it. So, I don’t think it will, I can’t imagine it will, depending on the job choice, but I wouldn’t choose a career that would adversely affect me.

Although each participant shared their experiences of adversity, they have also experienced success. Tony, Sam, Mathew, Parker, and James have all positively adapted despite facing significant adversities. For example, Tony stated “This reading disability, I’m stuck with it, I’ve just got to learn to deal with it in everyday life and find my way.” Sam felt her strengths have helped her to start to deal with her frustrations:

I’m just a hard worker. That is what really, I think, has got me as far as I am. I just work and I don’t think. Until getting diagnosed and coming to terms with it, I don’t think I quite understood just how hard I was working. I need to actually sit down and think about what it is I’m doing and think about the strategies that I am using to hopefully refine them a little bit so that I can continue on. But that takes time, time that I don’t have. At this point I’m not feeling like I’m reaching my potential. I know I am way better than what I am able to show people.

Mathew explained his journey to success:

It was something that I had developed early on and realizing that if I want to do this I am not going to be as fast, that’s the reality. I am going to have to deal with it, and starting to choose what’s important and what’s not. I would encourage someone with a learning disability to identify, you do have advantages. Work on them when you are younger and be honest about what you are good and bad at and you might be in the position of
advantage later on. I was still learning about my disability and just trying to understand a bit more to make it easier. Learning how I could leverage my weaknesses.

Parker described his persistence as one reason for his success:

You feel like you enter into university, already kind of being deficient in that area, so I still always seem to be a step behind. For three years I have been trying to graduate. Either I am stubborn or I just won’t give up.

James shared how he has moved from feeling defeated by his disability to feeling victorious:

When I was younger I used to be quite bitter about it because everyone goes to school from 9-3, so would I but then have a tutor from 4-5, then have to do my homework which would take longer and then go to bed. The next day my friends would come to school and ask did you see what happened on this TV show and it was like my whole life was school and it wasn’t something that was easy for me. It was something that was hard for me and it just became something I didn’t want to do. As an adult you kind of get past that. I think that I have a greater propensity to work straight through, than I did before. There is also that feeling like I have to do well to prove to somebody, who is probably dead by now, some teacher that called me stupid as a kid and prove to them that I am not. This is maybe the long reaching effects of trying to prove them all wrong in some way.

4.6 Summary

Each participant shared experiences that exposed some of the struggles they confronted, and the strategies they used, to overcome their reading difficulties and disabilities as they progressed through school. Their stories revealed four major themes: (1) Struggling to learn: Recognizing the impact of learning difficulties and disabilities; (2) Embracing the positives and negatives of a diagnosis; (3) Surviving the learning experience: Using strategies and learning techniques; and (4) Envisioning and moving toward a successful future. Despite the hurdles these individuals have overcome, each individual shared how they have used their strengths to be resilient in the face of adversity. The next and final chapter discusses this study’s findings in relation to existing literature, the practical implications of the findings, the limitations and strengths of the current study, and areas for future research.
Chapter 5: Discussion

The purpose of this basic interpretive qualitative study was to examine the coping strategies and learning techniques students with reading difficulties/disabilities use to manage the demands of acquiring a postsecondary education. Each participant described what has helped them to achieve success despite the adversities they have faced in life. For some participants success meant graduating high school and returning to university after working, or being accepted into university, while for others success meant completing a master’s level degree program. This chapter reviews and summarizes the main findings of this study, and extends the findings to related research literature. Implications for educators, the strengths and limitations of the current study, and areas for future research are also outlined.

5.1 Summary of Findings

The intention of this study was to examine the stories and experiences of five postsecondary students with reading difficulties/disabilities. Participants’ shared their personal accounts of the strategies and supports that they have found to be practical, beneficial, and allowed them to manage the demands of acquiring a postsecondary education. The experiences of Tony, Sam, Mathew, James, and Parker were captured through quotes and shared through this study. The participants not only shared the stories of their academic and personal struggles due to their difficulties with reading, they shared the strategies and learning techniques they used to help them progress through their educational experiences in order to meet their future goals. Each was able to reflect on their past experiences and expressed pride in the trials they have overcome to meet their academic and professional goals.

The first theme, Struggling to learn: Recognizing the impact of learning difficulties and disabilities, showcased the areas Tony, Sam, Mathew, James, and Parker struggled with academically due to having a reading difficulty/disability. Reading material and comprehension of that material was explained as a time consuming and difficult task for each of the participants. Sam, Mathew, Parker, and Tony explained how they had never finished reading a book until later in their lives. Another complicated task for participants was memorization. All of them described how they needed to take the information in and translate it into their own words in order for it to be more likely to stick in their memory. This was relayed to be a very time consuming process. They also all expressed extreme frustration with writing. Participants shared how the thoughts in their head would not translate when they would write them out on paper. Sam described it as if
something was getting lost in the process, where Mathew wished he could be more articulate on paper. James, Tony, and Mathew spoke about how their limited short term memories complicated the note taking process. All participants felt their poor memories were also responsible for their difficulties in spelling words, remembering grammar rules (i.e., understanding homonyms) or understanding directional cues (i.e., left-right confusion). All of the participants expressed that time was one of the biggest obstacles they faced when dealing with their reading difficulty/disability. For example, Parker felt there is not always time to complete a task to your full ability. James explained that he would rather other people not know how much time and effort it actually takes him to complete certain tasks, as this feels like you are admitting you are not as good as those around you.

The second theme focused on how participants embraced the positive and negative effects of receiving a diagnosis, such as dyslexia. James, Sam, Tony, and Parker recalled how the people around them were able to identify their learning needs and encouraged them to seek further academic support. This eventually led to receiving an official reading disability diagnosis. Parker, Tony, and Sam described feeling as though there was something different about the way they learn and they couldn’t quite figure out how it was different until they were diagnosed. Each participant expressed that their diagnosis made sense and helped add clarity to their academic struggles. Unfortunately, participants also reported there were periods of resentment towards their struggles and experiences. For example, Mathew shared when others viewed his diagnosis negatively his confidence was negatively impacted and this delayed progression in his studies. Similarly, Sam described her reluctance to acknowledge that there may be something wrong, and her difficulty in being open about her disability has hindered her academic development. James described the difficulty in trying to deal with not only his academic struggles but also the emotional consequences of dealing with a reading disability. Each participant has worked to make sense of their diagnosis and has eventually come to an understanding of their needs and been able to seek and implement appropriate coping strategies and supports. Parker described this process as taking a step back and re-evaluating what you think of yourself.

In order to be academically successful, each participant identified some of the compensatory strategies and learning techniques that have allowed them to experience success at the postsecondary level. The third theme related to how participants have survived the learning experience by using varying strategies and learning techniques. For example, Parker described
that it took him awhile to realize that there were different ways to do certain things and that finding a different strategy can be more beneficial. Each participant shared the importance of being self-aware and learning more how they best learn. All of the participants recognized that their motivation has allowed them to overcome and persevere through a lot of the struggles they have encountered. For example, Tony described how even though his goals have become clearer the amount of work he has to invest in his studies has stayed the same. He shared he was more proud, willing, and motivated to do the work he needed to succeed. James explained that maturity has helped him to identify what is important in life and what is not. He now has the motivation to complete the things that are important to him. The support and understanding provided by others can have a significant impact on the performance of students who are experiencing difficulties due to a disability. Each participant described the importance of both their family and educators with whom they have worked as they progressed through school. For example, Tony commented how grateful he is to have received the support he has had throughout his schooling. James credited all of his success to the support and understanding he received from his family. A fairly recent source of support participants described has come from the advancements in technology Sam, Tony, and James shared how the talk-to-text, and audio reader software programs currently available to students are extremely useful.

The fourth and final theme related to how participants envisioned, and were moving toward, a successful future. All of the participants agreed that their reading difficulties/disabilities would always be something they would have to address. For example, Sam explained dealing with a reading disability was not going to make your life easy. Each participant felt that their diagnosis was not going to change, and when they are out in the work force in the career of their choice that their reading difficulties/disabilities will not have any greater effect on their lives. James explained that although his reading difficulties/disability will always be there, they won’t adversely affect his ability to work to the extent they have affected him during his school years. Throughout the school years, each participant displayed resilience in the face of adversity. They shared their hope for, and pride, in their academic accomplishments. For example, Sam stated she does not feel like she has reached her full potential. However, she knows she can understand and do more than she is able to show people, and that is what really matters. Mathew and Parker spoke about using their strengths to compensate for their weaknesses and never giving up. However, James described the importance
of not believing the negative things that others may think or say about you, but instead working hard to prove them wrong.

5.2 Integration of Findings with Existing Literature

The findings of the current study are supported by existing research, literature focused on the coping strategies and learning techniques that students with reading difficulties/disabilities use to cope with the increased demands of acquiring a postsecondary education.

5.2.1 Struggling to learn: Recognizing the impact of learning difficulties and disabilities. For individuals with reading difficulties/disabilities, self-awareness and recognition of their difficulties/disability can allow them to legitimize their difficulties and begin to alleviate some of that personal detriment (Dale & Taylor, 2001). Consistent with previous findings (e.g., Kirby, et. al., 2008; Lyon, et. al., 2001; Perfetti, 1985), reading, comprehension, memory and organization skills, and time were noted as significant areas of difficulty for the participants within the current study. Each participant expressed frustration with their memory difficulties and how it affected their ability to read large amounts of text and comprehend course material. They also described how redundant the task of reading could be, acknowledging the time and effort that they each require to complete even the smallest of reading tasks. Deficits in processing speed are common among students with reading difficulties/disabilities such as dyslexia (e.g., Lyon, et. al., 2003; Perfetti, 1985), and students with processing difficulties often require a substantial amount of time and effort to be invested in order to read and comprehend material.

The participants within the current study commented on how their difficulties did not just affect their academic progression, but also further complicated other aspects of their life, affecting their self-confidence, self-identity, emotional well-being and time available to pursue personal and social facets. Previous research has also reported that students who are continually subject to academic struggles and educational failures can experience unfavorable personal interpretations and have low self-esteem and/or poor developed self-concepts (e.g., Dale, & Taylor, 2001; Hellendoorn, & Ruijssenaars, 2000; McNulty, 2003; Orr, & Goodman, 2010; Riddick, Farmer, & Sterling, 1997).

Within the current study, participants also commented on difficulties they experienced in trying to keep even simple information straight (e.g., identifying similar letters like b and d, identifying and using homonyms correctly). This is a struggle not commonly reported within previous research. Participants commented that no matter how hard they try to learn the correct
use of a word or its correct spelling, these are tasks that are a continuous source of frustration and confusion.

Another area of difficulty participants in the current study focused on was the process of articulating their thoughts and ideas through writing. Participants shared that the ideas in their head are not the same as the ideas they are able to represent in their writing. Not being able to communicate effectively through your writing is another barrier experienced by individuals with reading difficulties/disabilities (e.g., Wong, et al., 2008).

5.2.2 Embracing the positives and negatives of a diagnosis. Individuals who have a better understanding of their learning disability are more likely to experience academic success and emotional growth (Cohen, 1985; Kronick, 1977). Many students are aware of their learning difficulties but may be unsure of the cause. They rely on the knowledge and experience of others, often their family members or teachers, to help them identify if their struggles are easily remediated or if intense intervention is necessary. The process of diagnosis, although it is intended to have positive outcomes such as providing students with acknowledgement, understanding, and support, this is not always the case. There are many accounts within the research where diagnosis has led to negative outcomes experienced by the individual (e.g., Barga, 1996; Dale & Taylor 2001), further limiting the expectations and progression of the student. For example, when students’ learning difficulties are not recognized or responded to negatively, student progress can be adversely affected (Dale, & Taylor, 2001). Peers, teachers, and parents may treat students with learning difficulties differently and have lowered expectations of their abilities, which may ultimately influence students’ levels of achievement (Barga, 1996). The process of being diagnosed with a learning difficulty/disability is not intended to negatively impact an individual. However, when a student’s diagnosis is followed by limiting, separating, or differential treatment students may experience lasting negative effects (Barga, 1996). The participants in the current study described similar experiences dealing with the others’ negative judgements and the limitations placed on them. A common misperception participants shared was how others thought they were stupid or that there was something wrong with them. A lack of understanding from peers, teachers, and even parents was reported to have contributed to hindering students’ knowledge of, and ability to cope with, their reading disability diagnoses in a positive way. Students are often not provided with the information and knowledge necessary to allow them to develop a functional representation of their disability (Barga, 1996).
That is, students’ lack of knowledge can negatively impact the expectations teachers and parents hold of the student which can significantly decrease the personal view students have of themselves. It is the outcome of diagnosis that remains to be the most important part of a students’ transition, as it determines whether a students’ experiences are viewed as positive or negative (Barga, 1996).

When the diagnosis of a learning or reading disability is met with the appropriate provision of knowledge and support, this helps to eliminate the negative experiences often associated with being diagnosed. Students who had more positive experiences have described how the diagnosis helped to clarify their struggles and lead them to access support and help as they progressed through their education (McNulty, 2003). Although each participant who had been diagnosed with a reading difficulty/disability in the current study had negative educational experiences, four of the five participants spoke about the positive transformation that took place once they were able to make sense out of their disability. That is, four participants commented on the importance of conceptualizing their disability since a limited understanding of an individual’s difficulties/disability can impact his/her ability to adapt and cope with difficulties. The participants described how they viewed themselves and their learning abilities differently once they were able to understand their learning difficulties. Participants explained that their attempts to address their challenges and the strategies they used better met their needs once they were able to come to terms with their disability. Receiving an official diagnosis of having a reading disability helped these participants to better understand their struggles and further informed their selection of strategies and supports they could use in order to help them achieve success. The current findings align with previous research that suggested individuals who have a better understanding of their learning disability are more likely to experience academic success and emotional growth (e.g., Cohen, 1985; Kronick, 1977).

A student’s level of understanding is highly influenced by their families’ views and understanding of the difficulty/disability the student is experiencing (e.g., Cohen, 1985; Kronick, 1977; Stone, 1984). For example, children have reported that when parents understand, accept, and support their disability the children are more likely to better understanding their diagnosis which increases their likelihood for success (Cohen, 1985; Kronick, 1977; Stone, 1984). The participants in the current study all commented that although they predominantly received positive support from family members, it was very clear that different members had varying
degrees of understanding and acceptance. For example, James shared that he had high levels of family support since his mother was highly knowledgeable of his disability. She unconditionally accepted and understood his struggles which allowed him to form a healthy understanding of his difficulties and abilities very early on in his educational career. Tony, Parker, and Sam experienced varying levels of support from their families. Although participants’ family members may have had varying knowledge levels related to reading difficulties/disabilities, participants still had some level of support and acceptance from their family members (e.g., unsure of how to help or what to do but still offered encouragement and took pride in their accomplishments). Unfortunately, Mathew reported unconditional acceptance and support was not the case for his family. Mathew described that even though his family offered support, their limited understanding and acceptance of his reading disability made dealing with his academic difficulties agonizing. Fortunately, a lot of support was provided to Mathew when he was at school which allowed him to better understand, and work toward addressing his reading difficulties. Participants strongly recognized the need to understand their disability and embrace support from both family and the school.

Participants reported that they often relied on others’ knowledge of their learning struggles to help them determine if they needed to seek further interventions to address their learning challenges. This issue has not previously been mentioned in any of the research explored related to postsecondary students’ learning experiences. However, four out of the five participants in this study commented on how it was the insight from others that encouraged them to seek further academic support and/or a formal diagnosis of their reading disability. For example, family members helped James and Tony identify and find support for their reading difficulties/disabilities. Educators at the university level assisted Sam and Parker in receiving a formal diagnosis for their learning difficulties. It is hoped that the information shared by the participants in this study can help educators to be more aware and responsive to the learning needs of their students. Students with learning and reading difficulties at the postsecondary level deserve to have their instructors understand and support their diverse learning needs. Teaching professionals at all learning levels (i.e., elementary school to postsecondary institutions) need to be aware of not only the learning difficulties students may face but the supports available to meet their varying needs.
5.2.3 Surviving the learning experience: Using coping strategies and learning techniques. As Harris and Robertson (2001) stated, “Success appears to be heavily related to coping skills that students already have in place prior to college” (p. 131). Compensatory strategies can help students with reading difficulties/disabilities be successful at the postsecondary level (Lyon, et. al., 2003; Perfetti, 1985). Research studies have recently shifted focus from studying the deficits experienced due to having a reading difficulty/disability to considering the learning techniques and strategies that can be used to support students’ successful progression through the school years (e.g., Heiman, & Precel, 2003; Kirby, et al., 2008; Lefly, & Pennington, 1991). Participants in the current study shared the importance of self-awareness and the ability to adapt the use of learning strategies in different learning situations, to their academic success. Self-awareness and adaptability have also been mentioned in previous research studies (e.g., Raskind, et. al., 1999; Reiff, Gerber & Ginsberg, 1994; Spekman, Goldberg & Herman, 1992). For example, participants in the current study shared how becoming more self-aware allowed them to identify their strengths and use them to address the areas in which they were experiencing difficulties. Parker summarized this notion commenting that he realized there were probably better ways he could do certain things, and finding the ways that worked best for him was what was most important. The participants all shared their realization that they learn differently than their peers and often had to adapt the material, content, and/or how they were approaching a task in order to better understand the information they were trying to learn.

The difficulties experienced by students with reading difficulties/disabilities varies greatly from one individual to the next, complicating the provision of support services. The importance of accessing appropriate strategies and supports has been explored in previous research. For example, students with reading difficulties/disabilities who access appropriate supports have been shown to have enhanced participation in the learning process and have experienced easier transitions into postsecondary education (Stampoltzis, & Polychronopoulou 2009). Participants in the current study who were diagnosed early in their school careers reported receiving more support within their elementary and high school years compared to the support they have been received at the postsecondary level. At every educational level there are things that each participant felt were necessary and helpful to meeting their educational needs, and others they felt were not suited to address their needs. For example, James shared that a strongly developed
sense of self-awareness, and knowing what you need and what works best for you, can really help you to determine the strategies and supports that best meet your individual needs. Many of the participants shared that as their level of education advanced (i.e., moved beyond pursuing an undergraduate degree to complete a masters, or doctoral degree) they outgrew the support services commonly offered at the postsecondary level (e.g., note taking and extended time to take exams). Sam explained how the supports offered by the university’s student support centre would have been beneficial at the undergraduate level (had she sought out diagnosis sooner), but that these services were no longer suited to her needs at the masters level. She did express that counselling was a support she was in need of, but that was not something financially covered or offered through the support services at her university. Regardless of the participants’ level of education they all noted that their knowledge of, and access to, various strategies and supports is an important factor in pursuing a postsecondary education and achieving academic success.

Although compensatory strategies can help to decrease the deficits experienced by students with reading difficulties/disabilities, there are some areas that will continue to cause problems for these individuals no matter what strategies or techniques they employ. Participants within the current study explained that even though there are a lot of strategies that they can use, they also understand that there are somethings that you aren’t going to be able to work around. For example, in the current study participants commented the amount of work they need to complete may not change but the motivation each person has to complete the work sometimes makes all the difference. That is, motivation and determination become essential since individuals who are highly determined are more likely to achieve success in their set goals (Field, Sarver & Shaw, 2003). As James explained, when he was younger he wasn’t as motivated to tackle his challenges. It wasn’t until he grew up that he found the motivation to go back to school and work towards accomplishing his true desires. Students may be overwhelmed and frustrated by their constant struggle to cope with their reading difficulty/disability. This means students will need to rely on various intrinsic and extrinsic supports and strategies.

Students seek support for their reading difficulty/disability in a variety of forms, which can include recent advancements in technology. The usefulness of technology has not been a common focus in previous research but was frequently mentioned and used by the participants in this study. For example, some participants described how seamlessly they used technology daily to support their learning (e.g., reading software). While others commented on some of the
barriers they faced in trying to insert technology use into their learning routine. Sam and James both reported they have struggled with learning how to seamlessly incorporate technology into your support system. They shared that it often takes time they don’t have to program certain components or make sure that all devices and programs are compatible. They also commented on how easy it is to use other forms of technology such as the talk-to-text software and audio books or texts. Participants described how these technological devices and software have had major time saving benefits since reading and writing are tasks with which they have great difficulty. Mathew described how easy technology has made taking notes in class and studying (e.g., there are options for highlighting notes and making them into flash cards to use when you study). Students can video record a lecture which will allow them to review the concepts that have been covered in class at another time or at a slower pace. Technology can address some of the more fundamental difficulties students with which reading difficulties/disabilities struggle and allow them to more readily meet the academic demands encountered at the postsecondary level.

5.2.4 Envisioning and moving toward a successful future. “Expression of a learning disability may vary over an individual’s lifetime, depending on the interaction between the demands of the environment and the individual’s strengths and needs” (LDAC, 2002, para.2). In spite of the various adversities presented to each participant, the determination to continue and find success for themselves was a common theme they expressed. For example, Tony reported it was the support he received from his father that gave him the confidence he needed to push himself and access the supports he needed to get him through high school. Once Tony got to university, he was comfortable seeking out extra support that allowed him to progress through university and find success. For Sam, it came down to sheer hard work and determination. Sam knew what she wanted to achieve and was willing to do anything to make it happen, even if that meant spending countless hours reviewing and studying material to make good grades. For Mathew, it was his keenly developed self-awareness that helped him to better understand his struggles and work to overcome them. Mathew worked hard to use his strengths to address his areas of academic need. It was much the same for James. James grew up with a parent and teachers who supported him. James became very self-aware and learned he was his best advocate. This level of understanding, combined with his internal drive to achieve his goals, resulted in James experiencing great academic success. Finally, Parker relied mainly on his work ethic to get him through high school. It was this work ethic, combined with access to appropriate
supports, that allowed him to progress through university. One of Parker’s strengths was his ability to identify his areas of need and find creative solutions to his problems. This allowed him to continue his educational pursuits and find success.

The difficulties that individuals with reading difficulties/disabilities experienced as they progressed through school has changed over time (Camara, Copland, & Rothschild, 1998; Gregg, et al., 2002). Although specific skills can be improved over time, the effects of a reading disability do not go away (Raskind, et. al., 1999). The participants in the current study commented that they felt their reading difficulties/disabilities would affect them in the future since they understood that their reading difficulty/disability was always going to exist. For example, Parker, Mathew, and James reflected on their time working outside of school. They shared that their ability to work was not as adversely impacted by their reading difficulty/disability as their ability to function in an educational environment.

There are a number of attributes and factors that promote resilience among individuals with reading difficulties/disabilities. For example, environmental factors such as the ability to establish positive relationships (e.g., parents, peers, teachers and society members), self-advocacy (e.g., networking, and accessing supports), community involvement, and participation in extracurricular activities can promote resilience. Personal factors such as confidence, time management, composure, and persistence or motivation can also help students succeed in spite of experiencing adversity. Even though the participants in the current study experienced a multitude of adversities, they persevered and strove to achieve academic success.

Some of the experiences these participants had that allowed them to experience success and contributed to their resilience included, an enhanced self-awareness, adaptation skills, motivation, technological support, support from family and/or teachers, and access to other resources such as note takers. All the participants spoke about the influence and impact these strategies and supports have had on helping them to meet their academic goals and experience success. It was interesting to hear how these different strategies and supports were accessed at different times by each of the participants, and how their use positively affected their educational progress. For instance, Tony, James, and Mathew were all diagnosed with a reading disability in elementary and received interventions and support early in their educational career. Whereas, Sam and Parker did not seek a diagnosis for their learning difficulties until much later in their lives (i.e., when in a postsecondary program). Therefore, Sam and Parker had much less time to
learn about their diagnosis and seek out appropriate supports that were available to them. Some participants also noted differences in the development of their level of self-awareness. Where some participants, like Mathew, Parker and Tony, found they were very self-aware from a young age, others did not develop a clear sense of self and fully experience the benefits of a strong sense of self-awareness (e.g., James and Sam). Although Sam’s self-awareness took a little longer to develop, it was her intense drive and determination that motivated her from an early age to conquer the struggles she faced. This was opposite to what James experienced. He reported he needed more time to mature before he was truly motivated to tackle the obstacles placed in front of him as a result of his reading disability. The participants commented numerous times that a strategy or support could have been more beneficial to them had they known about it earlier. Being able to see how that strategy or resource could have fit into their lives and provided them with some form of relief from the struggles they have been experiencing. This outlines the importance of helping students understand and access strategies and supports that can help address their areas of need throughout their educational careers. It is clear that even though students with reading difficulties/disabilities endure adversities, there is a strong need for parents, teachers, other professionals (e.g., psychologists, speech-language pathologists), and community members to support these students in learning to help themselves (Lessard, Butler-Kisber, Fortin, & Marcotte, 2014). Although support from others is essential, the attitude an individual adopts in order to deal with adversity seems to significantly impact their ability to be resilient.

5.3 Implications for Educators and Helping Professionals

The results of this study provide insight into the personal and educational experiences of five adults who reported being diagnosed with a reading disability. These individuals graciously agreed to share their ideas and suggestions as to what strategies and supports might be beneficial in supporting the needs of others pursuing a post-secondary education who experience reading difficulties/disabilities. The comments made by the participants revealed they were struggling in school, and wanted their teachers/instructors to better understand the characteristics a student struggling with a learning disability may display. Often times the student knows that there is something different about the way they learn, but may not recognize that their struggles require more intense intervention and support. Students with a reading or learning disability should be encouraged to disclose their disability and talk to other students with similar diagnoses in order
to share their experiences and discuss coping strategies. The participants within this study mentioned how they wished they were able to talk with other students at the university level about the strategies and techniques they are using.

It is also important that educators and helping professionals have an awareness and knowledge of the various learning disabilities that can impact student learning. It is my hope that as professionals improve their understanding and respond appropriately to the needs of these students, this will allow the student to gain a better understanding of their strengths and weaknesses, improving their self-awareness and acceptance of their disability. It has been demonstrated that children and adults who have a better understanding of their learning disability are more likely to experience academic and emotional growth (Cohen, 1985; Kronick, 1977). It is important for educators to recognize that students bring different learning strengths and styles into the classroom (i.e., not every student learns the same). Educators must be more accepting of learning differences among students, be more willing to make adaptations and/or accommodations, and be responsible for teaching a range of students.

In addition, a knowledge and understanding of learning difficulties/disabilities also needs to be passed onto the parents of individuals with learning difficulties/disabilities. Parents are often responsible for providing their child with support and information regarding the nature of their disability. More importantly, a parent’s perception of their child’s disability can negatively or positively affect not only their personal growth but also their educational progression and achievement (Barga, 1996; Rothman & Cosden, 1995). Therefore, it is important to provide parents with relevant and appropriate information regarding the personal and educational needs of their child. The participants within the current study acknowledged how once they fully understood their disability it became easier to deal with it. Although it did not change the struggles they experienced, an increased level of understand made advocating for themselves and their needs easier, as well it informed their choices in accessing the appropriate strategies and supports that could better support their needs.

As outlined within the current study, participants commented on the compensatory strategies and learning techniques that they used and found beneficial in their progression through education that allowed them to experience success. The research involving the successful attributes of individuals with LD suggests that current educational practices and intervention strategies need to include a focus on the development of these personal attributes.
that contribute to a student’s educational successes (e.g., Barga, 1996; Rothman & Cosden, 1995). As displayed within the current study, participants mentioned the important role both academic strategies (i.e., support resources, adaptations/modifications, and technology) and the development of personal characteristics (i.e., self-awareness, adaptability/learned creativity, and motivation) played in contributing to their successful progression through education. It is important that parents, professionals, and the students themselves are provided with understanding and knowledge of both the academic and personal strategies that can benefit students with reading difficulties/disabilities in navigating their way through their education and their life.

5.4 Strengths of the Current Study

Four major strengths emerged from this study. The first strength of this study was that participants’ reflections provided insight and understanding of some of the learning needs of post-secondary students with reading difficulties/disabilities. Participants shared their experiences of how their reading difficulty/disability affected their personal and academic endeavors, reflecting on the strategies and supports they utilized in order to cope and manage the various obstacles they faced.

Second, this research provides educators with information that can help them to identify, understand, and select appropriate supports and effective strategies that can benefit students with reading difficulties/disabilities. For example, participants shared: the importance of supporting and encouraging students with LD’s to understand their disability, and creating a positive perception of self; the importance of parental and professional knowledge and education around LD’s; the need for strategies and supports to include both academic strategies and the development of personal strategies/characteristics; and the importance of empowering individuals with LD’s to advocate for their needs and have the confidence to pursue their goals and dreams. It is hoped that the findings outlined above will be used to assist individuals, families, and professionals in supporting the positive development and educational progression of students with learning difficulties/disabilities.

The third strength of the current study was that it contributed to the limited literature that exists within this area. Few studies have previously focused on the coping strategies and learning techniques that postsecondary students with LD’s use to manage the demands of acquiring a higher education. Therefore, the results of the current study contribute to this limited volume of
research while also providing insight and understanding of the experiences that individuals with reading difficulties/disabilities withstand throughout their lives.

Lastly, the fourth strength of this study was the impact the research process had on the individual participants. Each participant expressed great appreciation and pleasure in being able to contribute to this study. Participants expressed hope that their stories would benefit others who are experiencing academic and personal difficulties that can be associated with having a reading difficulty/disability.

5.5 Limitations of the Current Study

One potential limitation of the current study was the use of self-report data. This study was interested in the personal and educational experiences of postsecondary adults who had a reading difficulty/disability. Therefore, the findings were based on the exclusive perspective provided by the individual participant. Self-report data includes subjective information provided by an individual (i.e., relies on a single perspective), and does not include others’ perceptions of the same event. Instead of including parent, teacher, or sibling interviews, a second interview was conducted to ensure the information received was as comprehensive as possible. Within the second interview participants could add, omit, or clarify statements from the initial interview to ensure the participant was communicating their experiences as clearly as possible. Self-report data was chosen as the method of data generation since the purpose of the study was to explore the coping strategies and learning techniques experienced by postsecondary adults who had a reading difficulty/disability.

5.6 Implications for Future Research

The findings of the current study suggested several paths for future research regarding the coping strategies and learning techniques of postsecondary students with reading difficulties/disabilities. First, I feel it is important that we strive to provide students and parents with ample information at the time of diagnosis and continued support thereafter. Future research aimed at identifying the information and knowledge that is beneficial to support a student’s transition after receiving a diagnosis of a reading or learning disability is necessary. It is important for educators and parents to understand the nature of a student’s disability to help support the development of his/her positive self-concept and an increased self-awareness. Although the current study did not specifically address this area of concern, it did shed light on some of the negative perspectives students with a reading or learning disability have
encountered. Therefore, future studies should further explore and the impact of negative parent and educator perspectives on students’ academic and emotional development.

Second, it would be beneficial to further explore how individuals with learning disabilities exemplify resilience in the face of adversity. For example, exploring the specific personal characteristics individuals with reading difficulties/disabilities demonstrate in order to overcome adversity and improve their ability to cope with adversity.

Lastly, all participants had plans for the future, but expressed some worry about the impact their reading difficulty/disability would have on their working lives. Although they were optimistic regarding to their futures, the impact of the difficulties they experienced at university made them uneasy about the impact their learning challenges may have on their working future. Some participants expressed the feeling that their level of education had already *outgrown* the provision of supports, making them uneasy about the transition of support from the postsecondary level into the working force. Therefore, future researchers could look into the impact that a reading difficulty/disability may have on an individual within the work force, and what supports there are for these individuals.

5.7 Conclusion

The majority of previous research has focused on the deficits individuals experience as a result of having a reading difficulty/disability. The major contribution of this research was the insight it provided into the need to improve educational practices and intervention strategies to support students with reading difficulties/disabilities at the postsecondary level. Awareness of the appropriate supports and strategies was an important factor contributing to the educational progression of these individuals with reading difficulties/disabilities. Another finding from this study revealed that parental knowledge, understanding, and support had a significant impact on the personal and academic developmental growth of these individuals with reading difficulties/disabilities. That is, students with reading difficulties/disabilities, their families, and the professionals around them need to understand each student’s deficits and identify supports and strategies that can support their learning throughout their education. Despite the problems the participants within the current study faced, they all reported instances in which they were able to positively adapt and adjust when faced with challenges in their adult lives. This resilient attitude was beneficial in allowing each of them to find confidence and comfort as they continue to pursue their goals and aspirations.
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PARTICIPANTS NEEDED FOR RESEARCH IN Educational Psychology

We are looking for volunteers to take part in a study of the academic strategies and learning techniques students with reading difficulties/disabilities (e.g., dyslexia) use to cope with the demands of postsecondary education.

As a participant in this study, you would be asked to: discuss during an in-depth interview your experience as a university student coping with a learning and/or reading difficulty/disability.

Your participation would involve two (2) sessions, each of which is approximately (60) minutes.

In appreciation for your time, you will receive an electronic copy of my research report.

For more information about this study, or to volunteer for this study, please contact:
  Kristy (Student Researcher) at kns887@mail.usask.ca
  or
  Dr. Laureen McIntyre (Supervisor) (Department of Educational Psychology and Special Education) at 306-966-5266 or laureen.mcintyre@usask.ca

This study has been reviewed by, and received approval through, the Research Ethics Office, University of Saskatchewan.
Email message to participants:

Date:

Sender’ Address:

Dear Undergraduate Student:

I am interested in interviewing undergraduate students who have a reading and/or learning difficulty/disability (e.g., dyslexia) with the intent to hear about your experiences. Specifically, I am interested in hearing about the various academic strategies and learning techniques students with reading difficulties/disabilities like dyslexia use to cope with the extra demands of postsecondary education. Your participation would involve two (2) interview sessions, each of which is approximately (60) minutes.

If you are interested in participating, or would like to learn more about this study, please contact me by email at kns887@mail.usask.ca.

This study has been reviewed by, and received approval through, the Research Ethics Office, University of Saskatchewan.

Yours Sincerely,

Kristy Somerville-Soper
APPENDIX C
PARTICIPANT INFORMATION CONSENT FORM

UNIVERSITY OF SASKATCHEWAN

Project Title: Postsecondary Students with Reading Difficulties/Disabilities: Exploring Coping Strategies and Learning Techniques.

Researcher: Kristy Somerville-Soper
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Purpose(s) and Objective(s) of the Research: The purpose of the present study is to explore the academic strategies and learning techniques students with reading difficulties/disabilities like dyslexia view as effective and commonly use to cope with the demands of postsecondary education. The objective of the study is to focus on the methods and strategies that have allowed students with reading difficulties/disabilities such as dyslexia to become successful, and allowing these students an equal chance at higher education and future opportunities. The current study aims to contribute to this area of research by providing insights into those compensatory strategies of postsecondary students with reading difficulties/disabilities like dyslexia.

Procedures:
Potential Risks: Participants will be asked to discuss sensitive topics and events that may elicit strong emotions. Depending on the individuals past and present experiences, participants may have recollections of emotional discomfort or harm. Individuals who are currently experiencing a state of trauma are encouraged not to participate in this study. Debriefing sessions and counsellors will be made available to all participants following participation within the study.

The possible benefits of the study: The findings from this study can provide insight into the learning needs of students with reading difficulties/disabilities like dyslexia in order to help educators identify, understand, and implement appropriate supports and effective methods that may contribute to their success within a postsecondary education setting.

Participation: Participation in this study is voluntary. Participants are encouraged to explore the academic strategies and learning techniques that were used throughout their educational career and the influence their reading difficulty/disability (e.g., dyslexia) had on their educational experiences. Participants could include or leave out topics they do not feel comfortable talking about during interview sessions.
**Withdrawal from the study:** As a participant within this study you can withdraw from the study at any point in time, without any negative consequences to you. If you withdraw from the research project at any time, the data that you have contributed will be destroyed at your request. Participants can withdraw verbally or provide a written withdrawal letter or send an email to this effect. However, once all data has been gathered, through the interview process, you will be given a final chance to withdraw from the study. The transcription and linking of the data will follow and therefore participant withdrawal after this point is not conducive. At any point the researcher can also withdraw a participant from the study if the participant cannot find time to interview with the researcher or for any other reason(s) that may interfere with the progression of the research.

**Confidentiality:** Considerable effort will be made to protect the identity of all participants, pseudonyms will be assigned to participants and all personal identifying information will be cleared from the final manuscripts. Participants will be advised that there is a possibility that direct quotes may be used within the final manuscript, and this may defy assuring complete anonymity. In attempt to prevent this breach of confidentiality, participants will be given the final decision about whether to allow or remove any information they feel is identifying from the final manuscript. The researcher will also assure that confidentiality will be sustained of all topics discussed during the interview sessions.

Participants will be sent portable document format (PDF) copies of the research findings at the end of the study upon request.

**Participant’s Consent Form**

*There are several options for you to consider if you decide to take part in this research. You can choose all, some or none of them. Please put a check mark on the corresponding line(s) that grants me your permission to:*

I agree to take part in the above study:  Yes: ___  No: ___

I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions:  Yes: ___  No: ___

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason:  Yes: ___  No: ___

I grant permission to be digitally recorded/audio taped:  Yes: ___  No: ___

I grant permission to have my organization’s name to be used:  Yes: ___  No: ___

I wish to remain anonymous, but you may refer to me by a pseudonym:  Yes: ___  No: ___

The pseudonym I choose for myself is:  ________________________________

____________________________  __________________________  _______________________
Name of Participant               Date               Signature

____________________________  __________________________  _______________________
Name of Researcher               Date               Signature

This project was reviewed on ethical grounds by the U of S Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to the Research Ethics Office toll free at 1-888-966-2975 or ethics.office@usask.ca.
APPENDIX D
INTERVIEW GUIDE:

Past

1. Please describe the academic problems you encountered within grade school?
2. When and where did you have a formal diagnostic assessment completed?
3. Before you were assessed, how did you see/think of yourself?
4. Did receiving a formal reading disability diagnosis (e.g. dyslexia) change the way you saw yourself, your academic work, or your relationships with other people?
5. In general, do you feel that your family has been supportive or unsupportive to you? How have they been supportive?
6. Tell us about your relations with your peers at school (e.g. close peer relationships).

Present

7. Describe the kinds of problems (e.g. academic, social, emotional, etc…) you have faced at university?
8. Have you disclosed your reading difficulty/disability to the university?
9. Describe how you have coped with your academic difficulties?
10. What strategies and/or techniques make learning easy for you at the university?
11. What strategies and/or techniques make learning difficult for you at the university?
12. What helps you to remember better?
13. What helps you to understand course material/content better?
14. What helps you to learn faster or to finish studying the material quicker?
15. Can anything facilitate or help you to learn faster, explain?
16. In what academic subjects have you NOT had any difficulties?
17. In what academic subjects have you had difficulties?
18. How much stress do you feel due to academic studies?
19. What helps you to concentrate more on academic subjects?
20. Does having reading difficulties/disabilities affect your general self-esteem?
21. Does having reading difficulties/disabilities affect your time management?
22. Describe how you feel now about your reading difficulties/disabilities?
23. Do you access services at the university, or outside of the university?
24. Which services/supports do they provide and which have been helpful/not helpful and why?

Future

25. What are your plans after leaving university?
26. Do you anticipate that having a reading difficulty/disability will give you any difficulties once you have left university?
Data/Transcript Release Form:

Title:
Postsecondary Students with Reading Difficulties/Disabilities: Exploring coping strategies and learning techniques.

I, ________________________________, have reviewed the complete transcript of my personal interview in this study, and have been provided with the opportunity to add, alter, and delete information from the transcript as appropriate. I acknowledge that the transcript accurately reflects what I said in my personal interview with Kristy Soper. I hereby authorize the release of this transcript to Kristy Soper to be used in the manner described in the Consent Form. I have received a copy of this Data/Transcript Release Form for my own records.

_________________________  __________________________
Name of Participant        Date

_________________________  __________________________
Signature of Participant    Signature of researcher