Early Literacy Acquisition and Students with ADHD:
Teacher Beliefs and Strategies for Helping Students with ADHD Acquire Their Early Literacy Practices

By:

Jennifer Gingrich

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Department of Curriculum, Teaching and Learning
Ontario Institute for Studies in Education of the University of Toronto

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Abstract

Attention deficit hyperactivity disorder (ADHD) is one of the most common disorders among children. Due to the high prevalence rate of ADHD, it is likely that a teacher will have at least one student with ADHD in their classroom each school year. Research has also shown that the characteristics associated with ADHD negatively impact a student’s early literacy acquisition, making it challenging for students diagnosed with ADHD to develop reading, writing and oral language skills. This research focuses on instructional strategies enacted by a small sample of educators which are responsive to the literacy acquisition of students diagnosed with ADHD. Data from semi-structured interviews with two qualified teachers was analyzed for common themes and divergences. Themes which emerged through this process of data analysis focus on teachers’ beliefs about ADHD and its impact on students’ early literacy acquisition. Teachers also identified instructional strategies and their perceived impact of these strategies on students’ early literacy achievement. The research found that participating teachers held the belief that particular aspects of ADHD make it difficult for a student with ADHD to acquire early literacy skills and identified a variety of instructional strategies they enact which were particularly responsive to students’ early literacy acquisition.

Key words: Attention Deficit Hyperactivity Disorder (ADHD), early literary, early literacy acquisition difficulties
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Chapter 1: Introduction to the Research Problem

1.0 Introduction to the Research Study

Attention Deficit Hyperactivity Disorder (ADHD) was first recognized by the medical community in the 19th, when accounts of the disorder were mentioned in medical documents dating back to that time period (Centre for ADHD Awareness Canada, 2014). In recent years, however, society has witnessed a drastic increase in the diagnosis of childhood ADHD. In fact,
ADHD is the most frequently occurring neurobiological disorder in children and adolescents (Rodriguez et al. 2007). Due to the disorder’s prevalence, studies of ADHD have been conducted throughout the world, with estimates of the disorder affecting 5-12% of school aged children worldwide (Centre for ADHD Awareness Canada, 2014).

In the United States, the percentage of children diagnosed with ADHD has continually increased. For example, there was a 7.8% increase in 2003, a 9.5% increase in 2007 and an 11% increase in 2011, thus illustrating the escalating rate at which this disorder is being diagnosed (Center for Disease Control and Prevention, 2015). In Canada, ADHD is currently under-diagnosed but it is likely that rates are similar to the United States and other Western Countries (Centre for ADHD Awareness Canada, 2014). These recent statistics highlight the pervasiveness of this disorder in our society and the increasing rate at which children are being diagnosed point to the likelihood that these trends will continue into the future.

Due to the high prevalence rate of ADHD, it is likely that a teacher will have at least one student with ADHD in their classroom each school year (Centre for ADHD Awareness Canada, 2014). In recognition of this fact, school boards are becoming increasingly more concerned with providing students with ADHD and other learning difficulties the proper support. This can be achieved by implementing school-based interventions in which teachers are provided with appropriate training programs to help them understand ADHD and how they can modify their instructional practices to benefit these students (Tannock, 2007). For example, creating an inclusive classroom environment has been found to positively impact these students’ experience in the classroom. Regardless of these measures, as Shaughnessy & Waggoner (2005) point out, “it seems increasingly more and more children are being diagnosed with ADHD, but little is forthcoming about the most appropriate way to treat and education these students with ADHD.
and the educational implications of ADHD” (pg. 216). For this reason, it is imperative that further research is done which examines strategies that help students with ADHD achieve success at school.

1.1 Research Problem

ADHD is associated with characteristics such as inattention, hyperactivity and impulsivity and can affect many areas of a child’s life including their academic life (Rodriguez et. al, 2007). For instance, studies have found that children who have been diagnosed with ADHD are more likely to drop out of school, have fewer years of education and to experience academic failure (Centre for ADHD Awareness Canada, 2014, Tannock, 2007). Furthermore, studies have found that as many as 25% of children with ADHD also have a learning disability, making academic success even more difficult to attain (Tannock, 2007). These negative repercussions on a child’s academic life are directly associated with the characteristics of ADHD. For example, children with ADHD often have difficulty being able to sit still and focus for long periods of time, which are abilities students require to achieve academic success in our educational system (Rowe & Rowe, 1999, Riccio & Jemison, 1998).

These academic difficulties extend into the development of early literacy. Research shows that a large proportion of students with ADHD also have difficulty in the acquisition of early literacy, such as auditory-linguistic areas and primary reading skills (Riccio & Jemison, 1998). For instance, according to Riccio and Jemison (1998), “it is not uncommon that children with ADHD demonstrate academic underachievement…most frequently in the area of reading” (p.43). This is a significant problem because children who have difficulties in reading and writing and are unsuccessful in improving within the first two years of school are more likely to continue to experience academic failure and problems related to this, such as low self-esteem and
feelings of isolation (Rowe & Rowe, 1999). As such, it is necessary that educators and those who work with children with ADHD have an understanding of the “interactive effects of ADHD, acquisition of basic reading skills and linguistic factors” (Riccio & Jemison, 1998, p. 54).

1.2 Research Purpose

ADHD and its impairments have been associated with difficulties in literacy development (Rowe & Rowe, 1999, Riccio & Jemison, 1998, Carroll, et al., 2005, Brock & Knapp, 1996, McInnes et al., 2002, Lorch et al., 1998, Cohen et al., 2000, Tannock 2005). In light of this problem, the purpose of my research is to learn how a small sample of elementary school teachers are enacting instructional strategies that are specifically responsive to supporting the early literacy practices of students diagnosed with ADHD. These strategies can then be shared with the larger educational community in order to benefit the development of early literacy skills for students with ADHD. Sharing strategies with the larger educational community is valuable for helping create an educational system which supports students with ADHD and their development of early literacy skills. Furthermore, it is essential that these students receive the same quality of schooling as their peers. For this to be successful, it is important that teachers have access to and educate themselves about the available strategies for teaching early literacy skills to students with ADHD which they can then implement in their own classrooms.

1.3 Research Question

The principle question that I addressed in my research was: How are a small sample of elementary school teachers enacting instructional strategies that are specifically responsive to supporting the early literacy practices of students diagnosed with ADHD and what perceived impact do they observe these strategies having on student academic achievement in literacy? Subsidiary questions include:
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1. Why do these teachers implement the strategies they do as responsive literacy pedagogy for students diagnosed with ADHD?

2. How do these teachers’ students respond to this instruction and what indicators of learning do these teachers observe?

3. What range of resources and factors support these teachers in enacting these strategies with students?

4. What challenges and/or barriers do these teachers encounter in this work?

1.4 Reflexive Statement

The difficulties that students diagnosed with ADHD have with early literacy skills is important to me as a current Teacher Candidate and future educator. I believe that to be able to read and write proficiently is extremely important for all students, not only for academic success, but also to be a functioning and productive member of society. Having a strong foundation of early literacy skills is extremely important for children. Growing up, I was exposed to and provided with numerous opportunities to develop early literacy skills. These experiences provided me with a strong foundation of literacy skills which I believe helped me achieve academic success not only in elementary school but throughout the entirety of my academic career. Growing up, I was not diagnosed with ADHD or any other learning difficulty. I believe my own experience of not having ADHD allowed me to have an advantage in my schooling and learning. For example, I had no difficulty learning how to read or write and I enjoyed both activities, whether for academic purposes or pleasure. Although I do not have ADHD and did not struggle with any type of learning disability, I believe that regardless of their diagnosis, children with ADHD are entitled to a learning environment which caters to their individual needs in regards to early literacy.
Based on my personal experiences of working with children who have been diagnosed with ADHD, I have witnessed first-hand the ways in which they struggle in the classroom, especially in regards to literacy. I have seen the impact of not being able to read and write can lead to feelings of frustration and isolation. I believe many teachers do not have a full understanding of ADHD and how to help them succeed. Especially with the increase of children being diagnosed with ADHD in the past few years, it is now more than ever critical that teachers are properly equipped with successful literacy strategies. Through this research I hope to discover literacy strategies being used by a small sample of elementary school teachers. Regardless of the small sample size, providing early literacy strategies for teachers to implement in their classroom will be highly beneficial to students with ADHD.

There is also a more personal purpose for my research. As a Teacher Candidate and future educator, I wish to utilize the results of my research in my teaching career. Through my research, I learned exactly what strategies in regards to early literacy participating teachers were using and their effectiveness on these students’ academic improvement. This has expanded my knowledge and skill set in regards to effective literacy teaching strategies. This experience also enabled me to more fully develop my reflexivity as related to the research process. Reflexivity is important, especially in the teaching profession. Being able to be reflexive in relation to your practice as a teacher is an essential skill to improve the quality of teaching you provide to your students. It was my goal that through this research, I could improve my own personal reflexivity which will relate to teaching these literacy strategies to students with ADHD to help improve their learning.
1.5 Overview

This paper contains five chapters. Chapter 1 has provided a brief introduction to the research topic as well as my personal connection to the issue. Chapter 2 contains a literature review of the current research on the topic of ADHD and literacy development. In Chapter 3, I will describe my methodology and procedure of the study, including information about participants, instruments used for data collection and limitations of the study. In Chapter 4 I report the research findings. Chapter 5 discusses the results of the study and provides recommendations for possible future research of the topic. References and a list of appendices are found at the end of the paper.

Chapter 2: Literature Review

2.0 Introduction

This chapter of my Master of Teaching Research Paper reviews pertinent literature exploring Attention Deficit Hyperactivity Disorder (ADHD). It begins with defining ADHD and discusses diagnostic criteria, prevalence, causes, treatment and complications of ADHD. The review then focuses on ADHD in relation to early literacy specifically. Studies involving reading comprehension and language are explored, as well as research into the co-occurrence of
ADHD and other learning disorders. Finally, strategies which are currently being implemented in classrooms to help students with ADHD achieve academic success are discussed.

2.1 What is Attention Deficit Hyperactivity Disorder?

Attention Deficit Hyperactivity Disorder was originally believed to be associated with minimal brain damage which was revealed through the associated characteristics as a learning disability (Riccio & Jemison, 1998). Today, ADHD has been “reconceptualised as a developmental behaviour disorder distinct from developmental learning disabilities” (Ibid, p. 43). The defining characteristics of ADHD are inattention and impulsivity/hyperactivity which are inappropriate for the child’s developmental level (Wood & Beattie 2004, Rodriguez et al. 2007).

Inattention, impulsivity and hyperactivity symptoms can manifest as excessive talking, frequent interruption of others, speaking out of turn, such as blurting out answers during class and general fidgetiness (Tannock, 2007). These symptoms exist across different environments the child is exposed to, such as school and the home, and impair the normal daily functioning of the child (McInnes, Humphries, Hogg-Johnson & Tannock, 2002). A definitive medical definition can be provided by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) which states that ADHD is a neurobiological disorder characterized by “developmentally inappropriate levels of hyperactivity/impulsivity and/or inattention symptoms” (McInnes et al, 427).

2.1.1 Diagnosis

In 2013, the DSM-5 was published. Although most of the criteria in the DSM-5 is similar to the DSM-IV, there are some changes. These include:
1. examples have been added to the criterion items to facilitate application across the life span;
2. the cross-situational requirement has been strengthened to “several” symptoms in each setting;
3. the onset criterion has been changed from “symptoms that caused impairment were present before age 7 years” to “several inattentive or hyperactive-impulsive symptoms were present prior to age 12”;
4. subtypes have been replaced with presentation specifiers that map directly to the prior subtypes;
5. a comorbid diagnosis with autism spectrum disorder is now allowed; and
6. a symptom threshold change has been made for adults, to reflect their substantial evidence of clinically significant ADHD impairment, with the cut off for ADHD of five symptoms, instead of six required for younger persons, both for inattention and for hyperactivity and impulsivity (Highlights of changes from DSM-IV-TR to DSM-5, 2013, p. 2).

As outlined in the DSM-5, in order for ADHD to be diagnosed, a minimum of six behaviours must be present and observed for at least six months. A key to the diagnostic criteria is that the “behaviour must be inconsistent with the individual’s developmental level” (Wood & Beattie, 2004, p. 50-51). This component is a key criterion because the identified behaviour patterns could be applied to most members of society to some degree.

Critics of the DSM-5 diagnostic criteria claim that weaknesses exist. These include lack of clear definition in regards to what constitutes a normal developmental level and a lack of guidelines to help integrate information about the child from different sources, such as teachers and parents (Biedman & Faraone, 2005). These weaknesses make it difficult for clinicians to accurately diagnose ADHD in certain cases. These weaknesses have also resulted in the diagnosis process of ADHD being labelled by critics as being a subjective process, rather than an objective one, due to the lack of concrete medical testing (Ibid).

Symptoms of ADHD can also be confused with symptoms of other disorders. For example, trouble concentrating, which can be viewed as inattentiveness, is also observed in
obsessive compulsive disorder, depression, anxiety and posttraumatic stress order (Bokor & Anderson, 2014). ADHD itself can also be confused with other disorders, such as bipolar and Asperger’s, both of which illustrate similar symptoms (Ibid). Furthermore, it is necessary to be aware of any underlying issues a child may have which may lead to symptoms of ADHD being displayed. For instance, a child who is inattentive due to a hearing impairment does not have ADHD (Ibid).

There are also conflicting international views about exactly how to diagnose ADHD. These differences are highlighted in the diagnostic criteria outlined in the DSM-IV used in the United States and the European diagnostic criteria outlined in the International Classification of Diseases (ICD-10). The main difference between these classification systems lies in the fact that the European diagnostic criteria applies to criteria for hyperkinetic disorder (HKD), leading to questions about differences in how ADHD is being diagnosed by the two systems. Regardless of this fact, both classification systems include criteria of inattention and hyperactive/impulsive characteristics which are inappropriate for the child’s age level (Biedman & Faraone, 2005).

2.1.2 Incidence & Prevalence

ADHD is the most common neurobiological disorder in children. Researchers estimate that 8-12% of children worldwide are affected (Biedman & Faraone, 2005). In America, it is estimated that approximately 7.5% of school children will be diagnosed with ADHD (Wood & Beattie, 2004). This statistic is important for teachers and the school system because it is clear that ADHD affects a significant proportion of children coming through the educational system.

Reported prevalence rates of ADHD is dependent upon certain factors, the most notable being the exact diagnostic criteria used. For example, criteria outlined in the DSM-IV in relation
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to ADHD is much broader than the criteria outlined in the ICD-10. Results of an American study found that prevalence was higher at 16.1% when diagnostic criteria was based on symptoms alone compared to a prevalence of 6.8% when functional impairment was also a criterion for diagnosis (Biedman & Faraone, 2005). Based on these rates, it is obvious that incidences of ADHD may appear to be more prevalent than what is actually the case. Furthermore, evidence has shown that there are individual differences between specialists in regards to how they diagnose. For instance, studies have shown that many children with ADHD remain undiagnosed while some children who are diagnosed have been diagnosed incorrectly (Graham & Coghill, 2007). These situations would also contribute to differences in prevalence rates.

Differences in prevalence between sexes also exist. For example, factors such as male sex, young age and lower socioeconomic status have all been found to be linked with a higher prevalence of ADHD (Biedman & Faraone, 2005). However, as studies have indicated, “the male-to-female sex ratio for the disorder is greater in clinical studies than in community studies” (Ibid, p. 237). These results highlight the fact that females with ADHD are less likely to be referred to receive services than their male counterparts, resulting in a higher prevalence among males.

2.1.3 Causes

Currently, an exact cause of ADHD is unknown. However, numerous studies have been conducted in an attempt to determine possible causes of the disorder. Research has illustrated that genes are a significant component of ADHD, with some studies indicating that the disorder has a 76% heritability rate (Bokor & Anderson, 2014). Studies have been conducted which show a strong link between ADHD and familial transmission. For instance, the results of adoption
studies have shown that biological relatives of a child with ADHD are more likely to have ADHD than their adoptive relatives, thus implying a genetic cause for the disorder (Biedman & Faraone, 2005). Environmental factors which have been studied as possible links to ADHD include poor maternal diet during pregnancy, premature birth weight and exposure to alcohol and maternal smoking as a fetus. Studies conducted with rats have shown offspring to be hyperactive when the female was exposed to nicotine while pregnant (Ibid). The interaction of genes and the environment has also been considered by researchers. However, when studying gene-environment interaction, it is more difficult to determine an exact genetic cause and there is little conclusive evidence in regards to this link at present (Graham & Coghill, 2007).

Biedman & Faraone’s (2005) research into the causes of ADHD indicate certain factors which were found to be more common among households of children with the disorder. These included lack of family cohesion, chronic household conflict and parents suffering from mental disorders, especially the mother. Presently, “hypotheses about the cause of ADHD have evolved from simple one-case theories to the view that it is a complex, multifactorial disorder caused by the confluence of many different types of risk factors” (Biedman & Faraone, 2005, p. 243). These risk factors include genetics, biological, environmental and psychosocial, each of which can interact and contribute to ADHD in a child. Although there is no conclusive evidence in regards to the cause of ADHD, future research is likely to focus on genetics in order to determine the genetic makeup of ADHD.

### 2.1.4 Treatment

A pharmacological approach is the most popular form of treatment for children with ADHD. Over the past 40 years, the most popular pharmacological treatment for ADHD has remained the same, with the main choice being the stimulant drugs methylphenidate and
amphetamine. These drugs help to improve attention while decreasing impulsivity and hyperactivity and it is estimated that approximately 90% of individuals will respond positively (Bokor & Anderson, 2014). The use of medication has been found to have numerous advantages, the most significant being the time in which a reduction of symptoms occurs. With the majority of medications, relief from symptoms can be seen within a few days of starting treatment, with immediate release stimulants seeing results within a few hours (Ibid). Quick reduction of symptoms is an important aspect of successful medication because it decreases impairment while normalizing functioning. This then enables the child to benefit more fully from things like skills training. Other advantages include cost-effectiveness and the relative ease in which medication can be administered by the individual themselves without support from others (Kaiser & Pfiffner, 2011). Due to the popularity of pharmacological approaches, the school environment has become accustomed to these medications, as many school-aged children are prescribed them to treat the disorder. For example, it was found that 6% of school children in the state of Maryland were prescribed methylphenidate hydrochloride for the disorder in 1987 (Rowe & Rowe, 1999). Furthermore, teachers are often relied upon to supervise the administration of medication to ensure that their student has received the proper dose.

There are also negative aspects of medication which cause some to be wary about a strictly pharmacological approach. For example, some individuals do not respond to medication and therefore do not experience a reduction in symptoms and normalization in functioning. Some individuals also experience negative side-effects (Kaiser & Pfinner, 2011). Immediate release stimulants also have negative consequences due to the fact that their effectiveness often wears off between three and six hours. This means that the individual must take multiple doses throughout the day in order to effectively manage their symptoms, which can be inconvenient.
and a source of embarrassment, especially if the dose must be taken at school (Biedman & Faraone, 2005). Additionally, due to the fact that ADHD medication is a controlled substance, some worry that use can lead to addictive and abusive behaviour in the future. However, there has been no support for this theory and meta-analyses of studies have found that use can actually reduce the risk of future substance abuse by providing a protective effect (Ibid). Recent research into pharmacological approaches has informed clinicians on how to better manage their patient’s medication, resulting in “many choices of stimulant drugs that allow [clinicians] to choose the best regimen based on patient’s needs for coverage throughout the day” (Ibid, p. 242).

There are also non-medical approaches of treating ADHD. Psychosocial treatment is an alternative form of treatment from the pharmacological approach and can be divided into two categories: behavioural intervention and skills training. Behavioural intervention involves working with those close to the child, such as parents and teachers, and educating them about how to structure the child’s environment. The ultimate goal of behavioural intervention is to increase positive behaviour while decreasing problem behaviour (Kaiser & Pfiffner, 2011). The intervention and skills training approach target the direct deficits associated with ADHD by providing one-on-one as well as group training in areas such as social, anger management and organizational skills. Training in these basic life skills has been found to help improve management of emotions and feelings of failure, which can in turn improve self-esteem (Bokor & Anderson, 2014). Research has indicated support for the use of psychotherapy in the treatment of ADHD, with many cases reporting positive effects of behavioural parent training in particular (Graham & Coghills, 2007).

Overall, it is important to note that often medication or non-medical treatment alone does not result in an individual experiencing a life free of symptoms and a guarantee of normal
functioning. In fact, experts stress that “even with effective pharmacotherapy, non-medication techniques are usually needed” (Bokor & Anderson, 2014, 339). Due to this fact, a multimodal approach which combines pharmacological and psychosocial approaches is now a popular choice. This is especially significant in reference to the academic success of a child with ADHD. Medication alone cannot guarantee that a student with ADHD will experience academic growth. It is therefore necessary to consider additional, non-pharmacological approaches, such as providing relevant skills training, in order to best help children experience as much academic success as possible (Wood & Beattie, 2004).

2.1.5 Complications of ADHD

Research has shown that ADHD affects all aspects of a child’s life including social, academic and personal (Rodriquez et al., 2007, Kaiser & Pfiffner, 2011, McInnes et al., 2002, Graham & Coghill 2007, Biedman & Faraone, 2005, Bokor & Anderson, 2014). Impairments include poor academic performance, lack of meaningful relationships, family conflict, injuries, trouble maintaining employment and antisocial behaviour. These impairments are directly associated with ADHD symptoms of inattention, impulsivity and hyperactivity (Biedman & Faraone, 2005, Kaiser & Pfiffner, 2011). Studies have also found that drug experimentation and criminal activity can be another affect if conduct disorder is present. As Bokor & Anderson (2014) explain, “the presence of conduct disorder with ADHD is the main contributor to developing a substance use disorder” (p. 338). Complications also extend into adulthood in approximately two-thirds of childhood cases of ADHD (Graham & Coghill, 2007). Although in adult cases of ADHD, it less likely for the individual to meet all the diagnostic criteria, around 50% will continue to show some degree of impairment (Biedman & Faraone, 2005). It is clear
that ADHD has numerous complications which extend into all aspects of an individual’s life, drastically impeding their everyday functioning.

Focusing on the complications of ADHD in regards to academics specifically, the symptoms of ADHD all contribute to poor academic performance (Bokor & Anderson, 2014, Rodriguez et al, 2007, Riccio & Jemison, 1998, Corkum et al., 2010, Wood & Beattie, 2004, Kaiser & Pfiffner, 2011). In fact, in their study on ADHD and academic success, Rodriguez et al. (2007) found a “strong and consistent pattern of association between core ADHD symptoms and scholastic impairment” (n.p). Inattention, hyperactivity and impulsivity all have negative repercussions for school. For example, students with ADHD are easily distracted which makes it difficult for them to stay focused for long periods of time. They also often miss instructions and have less consistent work habits than their non-ADHD peers (Wood & Beattie, 2004). Furthermore, all of these symptoms make it difficult for educators to successfully teach students suffering from the disorder, negatively impeding their academic success. Many studies have been conducted to research ADHD and academic impairment. In their study of 85 school-aged children with ADHD, Corkum, McGonnell, & Schachar (2010) found that 72% of their sample was underachieving in school. It is obvious that ADHD and the core symptoms associated with the disorder greatly impact a child’s academic success.

2.2 Attention Deficit Hyperactivity Disorder & Early Literacy

This paper will now focus on a review of the literature in regards to ADHD and early literacy specifically. Early literacy is the acquisition of reading, writing and oral language or communication skills during the first few years of formal education, usually pre-Kindergarten to grade 2. A number of factors are associated with early literacy including the acquisition of these skills to social relationships and cognitive processing (Crawford, 1995). Due to the important
developmental and cognitive aspects of early literacy, it has been studied from a variety of perspectives including those with a focus on ADHD. Research has shown that there is an association between ADHD and early literacy (Rowe & Rowe, 1999, Riccio & Jemison, 1998, Carroll et al., 2005, Brock & Knapp, 1996, McInnes et al., 2002, Lorch, et al., 1998, Cohen et al., 2000). For example, a 1994 study conducted by Wood & Felton found that 45% of their third grade sample with reading difficulties also met ADHD criteria. The study went on to acknowledge the importance of educators and parents having an “understanding of the interactive effects of ADHD, acquisition of basic reading skills and linguistic factors” (Riccio & Jemison, 1998, p. 44).

2.2.1 Reading Comprehension

An important element of literacy is reading comprehension, which is essential to the success of early literacy acquisition. Reading comprehension is very complex and requires a variety of cognitive skills, such as word recognition and an understanding of subject matter (Brock & Knapp, 1996). Due to the fact that any weaknesses in these areas will result in reading comprehension failure, many researchers have studied ADHD in relation to reading comprehension in order to find out the affect ADHD may have on this early literacy skill. According to Lorch et al. (1998), “by investigating [reading] comprehension, we gain insight into many aspects of children’s cognitive function” (p. 164). These aspects include allocation of attention, encoding, interpretation and retrieval of information, an understanding of subject matter and the generation of inferences, all of which have an effect on a child’s reading comprehension ability.

Brock & Knapp (1996) conducted a study which compared the reading comprehension abilities of children in grades 4-6 with ADHD and a comparison group without. The study
focused on the childrens’ ability to recognize and understand passages of text they had just read. Because reading comprehension is affected by a number of variables, such as word identification, subject knowledge and reading speed and level of maternal education, the researchers took great care to make sure that their sample of children was similar in respect to these factors. The results of the study found that the ADHD group scored significantly lower on all measures of reading comprehension ability (Brock & Knapp, 1996). For example, the ADHD sample was much slower to recognize names and series of numbers. Since variables known to affect reading comprehension were controlled, it can be concluded that the differences found in the study are a result of the presence of ADHD. As Brock & Knapp (1996) explain, because of the “nature of reading comprehension and its demands for sustained attention, it seems logical that the presence of ADHD would have an adverse effect on this skill” (p. 173).

Other studies examining ADHD and reading comprehension have found somewhat differing results. Lorch et al. (1998) conducted a review of the literature on this topic, including a 1991 study by O’Neil and Douglas. Their study indicated that there was no major difference between the ADHD groups and comparison group in regards to the amount of main ideas children recalled. However, results found that the strategies used to recall information were much more effective in the comparison group. In their review of Zentall’s 1988 study, it was found that both groups of children provided the same number of main points and descriptions. However, the ADHD group provided shorter descriptions and recalled less of the story (Lorch et al. 1998). Other studies have found that children with ADHD are less likely to be able to accurately retell the overall goal of a story and they have more difficulty recognising and correcting when they have made an error while reading (Tannock, 2007).
Based on a review of the above studies, it is clear that results have differed. However, it can be concluded that all studies indicate that the presence of ADHD does affect a child’s reading comprehension to some degree. Because reading comprehension is an important element of early literacy, it is essential that students with ADHD receive appropriate assistance in order to achieve successful reading comprehension acquisition. Brock & Knapp (1996) suggest that “future studies should investigate teaching strategies designed to improve [children’s] reading comprehension skills” (p. 181).

2.2.2 Language

Language, such as oral communication skills, is also relevant to early literacy. Being able to communicate verbally and comprehend verbal communication is an important literacy skill for children to acquire. Oral language deficits are detrimental because they negatively affect a child’s social skills, behaviour, academic success and mental health (McInnes et al., 2002). Language impairment has been studied in association with ADHD due to the relation between the two disorders. For example, research conducted by Cohen et al. (2000), found that in their sample of 7-14 year old children who were all psychiatric patients, approximately 64% had been diagnosed with language impairment. Out of these 64% of children, 46% had also been diagnosed with ADHD, thus indicating a clear association between the two. Furthermore, studies have found that up to 50% of children with ADHD have impairments related to the linguistic computational system, such as expressive and receptive elements of speech (Tannock, 2007).

An important aspect of language is comprehension. Studies have found that children with ADHD have more difficulty comprehending spoken language as well as self-monitoring their own comprehension when listening to explanatory text (Tannock, 2007). McInnes et al.
(2002) studied listening comprehension and working memory in relation to ADHD and language impairment. Their sample of 77 children was divided into four groups: children with only ADHD, children with only language impairment, children with both ADHD and language impairment and a control group consisting of children with neither disorder. Results of the study indicated that the group of children with ADHD had the lowest scores when listening to descriptive passages, illustrating deficits in listening comprehension (McInnes et al., 2002). Similarly, Cohen et al. (2000) found that measures of verbal recall for sentences were lowest for both the ADHD group and the language impairment group.

However, when measuring for other aspects of language impairment, such as verbal working memory and discourse pragmatics, the ADHD group measures were not consistently poorer than other groups and overall results for Cohen et al. (2000) “indicated that children with language impairment were at the most disadvantage” (p. 358). Although these results indicate differing outcomes, they should not be completely dismissed when discussing the association of ADHD and language impairment. Research in this area is limited and studies which have been conducted have had small sample sizes, usually with male subjects only (McInnes et al., 2002). Additionally, research has found that both language impairment and ADHD are linked to academic failure (Cohen et al., 2000). These findings are relevant because they illustrate the difficulty these students may experience in attempting to comprehend verbal instructions in school.

2.2.3 Co-occurrence & Causality

The co-occurrence of ADHD and other disorders has also been studied by researchers (Riccio & Jemison, 1998, Rowe & Rowe, 1999, Carroll et al., 2005, Pennington, Groisser & Welsh, 1993). For instance, it is known that ADHD often co-occurs with depression and anxiety
as well as conduct disorder (Pennington et al., 1993). Based on the review above, it is clear that both reading and language difficulties is common among children with the ADHD. It is estimated that around 80% of children with the disorder also have at least one learning disability (Corkum et al., 2010). This estimate is replicated in a longitudinal study conducted in 1988 in New Zealand by McGee and coworkers. In their study of 11 year old children diagnosed with ADHD, about 80% also had a disability related to reading or writing (Rowe & Rowe, 1999).

Riccio & Jemison (1998) conducted a review of the literature in order to investigate the co-occurrence of reading disability and ADHD. Most studies of this type include a comparison between children with ADHD, children with reading disability and children with both ADHD and reading disability. Results of the review “consistently indicated that reading problems were not predicted by the presence or severity of attention factors” (Riccio & Jemison, 1998, p. 54). This means that the presence of ADHD did not guarantee that the child would also have a reading disability. Results also indicated that regardless of the co-occurrence of both ADHD and reading disability in a child, a child with a reading disability demonstrated similar difficulties as a child with ADHD.

Pennington et al. (1993) conducted a review of the literature in regards to co-occurrence of ADHD and reading disability. In Felton et al.’s notable study in 1987, results indicated that ADHD and reading disability were separate disorders. This conclusion is due to the fact that effects of both disorders were found independently of the other, with no interaction effects. Overall, results into the co-occurrence of these two disorders has been mixed, with some showing support for Felton et al. and others indicating that there are interaction effects (Pennington et al., 1993). For instance, some studies have found children with both ADHD and
reading disability measuring poorer scores than those with either ADHD or reading disability separately.

Other research examining the relationship between ADHD and other learning disabilities focus on the possibility of causality. Although co-occurrence of ADHD in particular and childhood disorders in general often occur, research is lacking in regards to a possible causality between disorders (Ibid). There are two main theories of causality currently in the academic world: i) Disorder A causes Disorder B and ii) Disorder B causes Disorder A. These theories point to a causal relationship between the disorders, with the presence of one disorder directly increasing the likelihood of the second disorder to occur. For example, as Carroll et al. (1995) states “it is not that difficult to envisage how a primary problem with reading might contribute to inattentiveness or disruptiveness in the classroom” (p. 525). Conversely, one could see how the symptoms of ADHD cause difficulty with reading. Inattentiveness, hyperactivity and impulsivity are all symptoms which could cause a child to struggle academically (Corkum et al., 2010). In general, more research is needed focusing on the co-occurrence and causality of ADHD and other disorders.

2.3 Current Strategies

Through this review of the literature, it is clear that ADHD and its symptoms do have an impact on a child’s early literacy and their ability to acquire these necessary skills. This paper will now review strategies which are currently being used to help children with ADHD at school. Although these strategies are not specifically targeted towards addressing early literacy, they are being implemented successfully in classrooms to address students with ADHD and help them achieve academic success. As Tannock (2007) points out “classroom practices can make a
difference for children with ADHD” and these strategies could be applied to help these students acquire early literacy skills (n.p).

It is necessary for teachers to have an understanding of ADHD and how they can best help these students succeed because it is very likely that teachers will have at least one child with ADHD in their classroom each school year (Centre for ADHD Awareness Canada, 2014). Due to the symptoms of inattention, hyperactivity and impulsivity students with ADHD exhibit, teachers often struggle with having these students in their classroom. These struggles include having to spend a disproportionate amount of time supervising the student, having to constantly remind the student about appropriate behaviour and having to set aside additional time for remediation (Shaughnessy & Waggoner, 2015). All of these struggles can lead to the teacher neglecting the rest of the students as well as take away from the time the teacher could be devoting to direct instruction. However, these struggles can be overcome when the proper strategies are implemented correctly and the student’s ability to learn is improved.

Many researchers with a focus on ADHD have offered strategies to help children with ADHD to cope both at home and at school (Bokor & Anderson, 2014, Brock & Knapp, 1996, Rowe & Rowe, 1999, Corkum et al., 2010, Wood & Beattie, 2004, Kaiser & Pfinner, 2011, McInnes et al., 2002). It is extremely important that strategies are implemented as soon as a child has been diagnosed with ADHD. In regards to literacy specifically, research has shown that it is extremely difficult to intervene after a child reaches the third grade, at which point any efforts to improve literacy are usually unsuccessful (Rowe & Rowe, 1999). In fact, if interventions are indeed unsuccessful after this critical point, the student will have great difficulty in catching up to their classmates’ level and are at a high risk of continual academic failure. However, “evidence has shown that unsatisfactory progress in literacy is preventable for
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all but a small proportion of children,” such as those with serious neurological auditory-perceptual impairment (Rowe & Rowe, 1999, p. 4).

Medication is one effective strategy being used successfully in the classroom. By reducing symptoms, medication allows normal functioning for a certain period of time. This in turn provides the student with an opportunity to learn by being able to take in skills and information without the hindering symptoms of ADHD (Corkum et al., 2010). Brock & Knapp (1996) have found that medication can have a positive effect on ADHD and comprehension. In their study, seven of the 21 children with ADHD were also taking stimulant medication. The results of the study, which compared the reading comprehension of 21 children with ADHD to 21 children who did not, showed that the children with ADHD who were not on medication scored much lower on the measures of reading comprehension. These children’s scores were lower than both the 21 children without ADHD and the seven children taking medication to manage their ADHD. The results also showed that differences in reading comprehension between the seven children on medication and the 21 children who did not have ADHD were not significant. As Brock & Knapp (1996) point out, this finding indicates the “possibility that medication may improve the reading comprehension of children with ADHD” (p. 183).

Although medication has been found to help students with ADHD focus and function in the classroom for a period of time, it is important to note that medication alone will not result in academic success (Corkum et al., 2010). For this reason, it is necessary to include other strategies which do not depend upon a strictly pharmacological approach. As previously mentioned, skills training is a nonpharmacological form of treatment used to manage ADHD. Organizational skills training has been shown to be very helpful for students with ADHD. Problems with organization are associated with ADHD and students often report losing personal
belongings, forgetting due dates and assignments, having difficulty prioritizing and poor management skills (Kaiser & Pfiffner, 2011). This type of skills training requires direct skill instruction and often begins with scaffolding from a teacher, parent or other provider. Results of this type of training are typically positive, with the best results occurring when the strategy is part of a larger skills and behaviour training program (Ibid). Organizational skills training is especially relevant for older students because it allows individuals to be more independent which increases self-esteem.

There are numerous additional strategies being used in classrooms to help students with ADHD. Kaiser & Pfiffner (2011) discuss the importance of adapting the classroom environment to meet the needs of the student. For example, the teacher may provide an area in the classroom for the student to go to if they are feeling overwhelmed and need a break. A teacher may also seat the student near the front of class so that they are able to monitor the student more easily to make sure they are on task and understand what to do. Similarly, in order to ensure the student understands the task, the teacher should also provide either visual or oral modeling. McInnes et al. (2002) have found that visuals, such as diagrams, graphic organizations and illustrations, are very important for students with ADHD. Due to the stress of processing new and intricate information, visuals aid the student by reducing the amount of information for both the verbal and visual-spatial memory. Another modification provided by Wood & Beattie (2004) is to provide the student with a “buddy.” The responsibilities of the buddy include making sure the student has all important dates written down, such as tests and assignments and can aid the student in any other way necessary. The goal of these modifications is to help decrease the probability of problem behaviour occurring by providing the student with an environment that has been modified to meet their needs.
An additional strategy which has been implemented in classrooms is a reward system. The goal of reward systems is to provide an incentive, such as a gold star at the end of the day, to improve behaviour. According to Biedman & Faraone (2005), “strategies which use reward and response cost to change behaviour has been useful against symptoms and associated features of ADHD,” thus illustrating the effectiveness of this particular strategy (p. 243). Similarly, providing a student with praise and encouragement is also an effective strategy. Students with ADHD in particular respond positively to praise and this also helps improve self-esteem (Wood & Beattie, 2004).

Another way to improve student’s self-esteem is to provide alternative forms of assessment. For many students with ADHD, being able to competently express through writing what they are trying to say is a difficult task, whereas verbally retelling is easier. An assessment which uses a “freedom of recall” is therefore a better alternative when assessing for learning (Wood & Beattie, 2004). Also, the time students with ADHD require to develop an answer to a question is greater than other students. In these circumstances, students would greatly benefit from activities such as Think, Pair, Share or being provided with more time to finish a test. All of these strategies in which teachers adapt the classroom environment and modify their instructional practices have a positive effect on behaviour as well as literacy acquisition for students with ADHD (Tannock, 2007). The above are all strategies currently being implemented in classroom settings to help students with ADHD in school.

In this literature review I have supplied background information on ADHD, such as diagnostic criteria, incidence and prevalence, causes, treatment and general complications related to ADHD in order to provide a general understanding of the disorder. I then focused on ADHD and its effects on literacy to explore what the literature says in relation to my research problem of
ADHD and its impairments being associated with difficulties in literacy development. The literature points to children with ADHD experiencing difficulties with both reading and language comprehension. I also discussed co-occurrence and causality of ADHD due to the high number of children diagnosed with ADHD who also have another disorder. I concluded my chapter with a review of the literature focusing on strategies which are currently being used in classrooms to help students with ADHD achieve academic success. These strategies include medication, skills training, adapting the classroom environment, providing reward systems and alternative forms of assessment.

2.4 Conclusion

The literature review I have conducted has provided me with valuable information which is relevant to my research problem and the research I will be conducting. The research has illustrated that the effects of ADHD and its symptoms of inattention, hyperactivity and impulsivity negatively impact a child’s literacy acquisition. The strategies currently being used by teachers I explored during my literature review are not specifically targeted towards addressing early literacy practices but rather academic achievement in general. As such, my research will look at how a small sample of elementary school teachers are enacting instructional strategies that are specifically responsive to supporting the early literacy practices of students diagnosed with ADHD. According to Brock & Knapp (1996), “future study should investigate teaching strategies designed to improve [students’] reading comprehension skills…to facilitate the new learning of children with ADHD (p. 181). It is my goal that with my research, I will be able to achieve what Brock & Knapp have suggested: to add to these strategies and successfully help students with ADHD with early literacy.
**Chapter 3: Research Methodology**

**3.0 Introduction**

In this chapter, I discuss research methodology, beginning with a general description of research approach and procedures used as well as the instrument of data collection. I then discuss the participants of my study, including sampling criteria, procedures for recruitment of participants and brief participant bios. Following this, I describe the process of data analysis as well as the ethical considerations of the research. I discuss some of the limitations as well as the strengths in regards to the research methodology. I conclude this chapter with a brief summary of my main methodological decisions in relation to my research purpose and questions and then provide a brief preview of what to expect in the next chapter.
3.1 Research Approach and Procedures

I conducted a qualitative research study on instructional strategies currently being used by teachers that are responsive to supporting the early literacy practices of students diagnosed with Attention Deficit Hyperactivity Disorder and the perceived impacts they observe these strategies having on student academic achievement in literacy. This qualitative research study involved a literature review of the existing research on the problem of ADHD and early literacy acquisition as well as conducting semi-structured interviews with a small sample of educators whom met my sampling criteria.

Qualitative research is a valuable form of research and is very applicable to my study. Data is collected by speaking directly with participants, as opposed to taking place in a laboratory or sending out an instrument, such as a survey, to be completed by participants. As Walliman (2011) explains, “qualitative data cannot be accurately measured and counted, and are generally expressed in words rather than numbers” (p.72). Furthermore, qualitative research allows the participant’s voice to be heard and the meaning participants hold about the problem is central (Creswell, 2007).

All of these points make qualitative research suitable for my study of discovering how a small sample of elementary school teachers are enacting strategies which are supportive to the early literacy practices of students diagnosed with ADHD and the perceived impact teachers observe these strategies having on academic achievement. In order to make these discoveries, it is necessary to use a form of research which allows the researcher to collect information through instruments of data collection which allow for participants’ voices to be heard and which provides an in-depth account of the problem. By using a qualitative approach, it is expected that the data will be descriptive, with multiple voices being heard and a deeper understanding of the
problem can then be developed (Walliman, 2007). The end result of a qualitative study includes “the voices of the participants, the reflexivity of the researcher and a complex description and interpretation of the problem” while adding to the existing literature (Creswell, 2007, p.37). For these reasons, I have chosen to conduct a qualitative research study.

3.2 Instruments of Data Collection

For this qualitative research study I have employed the use of a semi-structured interview protocol as my only instrument of data collection (see Appendix B). Once my participants were selected based on fulfillment of my sampling criteria, I conducted a 45-60 minute interview with each participant individually. Each interview was audio recorded on my iPad. Semi-structured interviews are a valuable instrument of data collection common to qualitative research (Walliman, 2011). Semi-structured interviews allow the interviewer to probe for further response from the interviewee when desired and allow the interviewee to elaborate when they wish to do so. This is due to the more flexible nature of the semi-structured interview as compared to a structured interview. Similar to a structured interview protocol, with a semi-structured interview, the interviewer has a set list of questions they wish to discover answers to. However, responses are more open-ended and the interviewer relinquishes their control over the flow of the interview (Denscombe, 2007). By using a semi-structured interview protocol I was able to further probe my respondents if needed. The questions which made up my interview protocol enabled me to do this. I designed questions to allow for probing to occur. For example, question 12 (see Appendix B) asks the participant about challenges they have faced trying to support students. The structure of this question allowed me to further probe by asking how they have responded to these challenges.
All of these points about the value of semi-structured interviews are especially relevant to my qualitative research study in relation to my research question and purpose. I am interested in discovering the lived experiences of my participants in relation to supporting students diagnosed with ADHD in their early literacy acquisition. Having a semi-structured interview protocol enabled me to plan an interview focused on my research questions while at the same time allowing room for participants to elaborate on points they felt were significant. As Denscombe explains, “allowing interviewees to ‘speak their minds’ is a better way of discovering things about complex issues” (2007, p.167). This can greatly impact my learning and add to the results of my study.

3.3 Participants

This section will focus on the participants of my study. I will discuss the sampling criteria as well as the strategies I used to recruit my participants. I will also provide a brief biography of each participant which will give the reader a glimpse of each participant’s lived experiences.

3.3.1 Sampling Criteria

Sampling criteria are the criteria applied to my participants which I used when selecting potential participants to partake in my study. The participants of my study were selected based on the following criteria:

1. They had at least five years of teaching experience.
2. They had experience teaching early literacy to students with ADHD.
3. They had experience teaching primary grades.
4. They had demonstrated expertise, commitment and/or leadership in the areas of early literacy and special education (e.g. AQ courses, professional development, curriculum development, graduate degrees in these areas etc.)

The sampling criteria I have chosen inform my research study and respond to the research questions. I was concerned with discovering how teachers are enacting instructional strategies that are specifically responsive to supporting the early literacy practices of students diagnosed with ADHD and the perceived impact these teachers observe these strategies having on students’ academic achievement in literacy. Ideally, I was therefore looking for teachers who had experience teaching students with ADHD, specifically in literacy, as this would inform my research study and relate back to my research questions. Because of my focus on early literacy practices of these students, another criterion was that participants have experience teaching primary grades due to the fact that it is during these younger grades that early literacy acquisition takes place. Having at least five years of teaching experience ensured that my participants had a greater experience teaching students with ADHD than teachers who are just beginning their teaching career. Furthermore, it was necessary that my participants have expertise in the areas of early literacy and special education as this would demonstrate their passion in these areas and thus inform my research. Overall, each of my criteria informs my research by relating back to my research question and helped me when selecting potential participants.

3.3.2 Sampling Procedures/Recruitment

To locate potential participants I used both purposeful and convenience sampling. Purposeful sampling occurred through the use of sampling criteria applied to select potential participants. With my sampling criteria in mind, I was able to recruit all of my participants through convenience sampling. This was able to occur through the relationships I have developed during
past volunteer experiences where I have been exposed to teachers whom have become role-models and represent exemplary teachers to me. I believed that these teachers met the criteria I had laid out and would thus be ideal participants for my study. I therefore relied upon these existing networks to recruit my participants.

There are potential ethical issues related to the above recruitment strategy. To begin with, I made sure to provide my contact information rather than asking for teachers’ personal contact information. This helped to ensure that potential participants did not feel obligated to participate and that they had the choice to freely contact me if they were interested. Another issue related to this is the fact that I used convenience sampling procedures, meaning that these potential participants already knew me and had an established relationship with me. As such, they may have felt obligated to agree to participate, therefore restricting their “freedom to refuse,” (Walliman, 2011, p.47). To reduce this pressure, I provided information about my research to these individuals, including the research purpose and main questions, and then allowed them to make their decision to participate without being persistent. By using these strategies I hoped that I reduced any feelings of pressure from potential participants and they felt that they had the right to refuse to partake in my study for any reason.

3.3.3 Participant Bios

Two educators were selected as successful participants for my study.

Susan

Susan had experience in both general and special education. She began her career as a grade 2 and 3 teacher and then moved to be a teacher of the blind. At the time of the interview, Susan was employed as a special education teacher at a Catholic school where she had worked for the
last nine years. As a special education teacher, Margaret had experience working with students with ADHD as well as teaching literacy to primary students. She had also received her specialist in special education.

Margaret

At the time of the interview, Margaret had been teaching for 13 years in Catholic schools and was currently a grade 3 general education teacher. She had past experience teaching grades 1, 2 and 6. As a general education teacher, Margaret had experience teaching literacy to primary students as well as experience teaching students with ADHD.

3.4 Data Analysis

Upon completion of the interviews with each of my participants, I began the data analysis portion of my research study. I transcribed each interview verbatim. I then considered each transcript individually and began to develop a coding system, looking for common themes and divergences. I began by using my research questions as an interpretive tool. Coding enabled me to organize the data by finding categories contained in each interview (Walliman, 2011). Through this categorization process, I was able to identify emerging themes found within the data that relate to my research questions. Identifying themes within the data is an important aspect of qualitative research as it is the “starting point in a report of findings from the study” (Bazeley, 2009, p.6). After transcribing each interview individually and discovering themes, I reviewed all of the transcripts together and looked for commonalities to synthesize. Upon completion of identifying and synthesizing the themes within my data, I began an interpretation of my results. This allowed me to begin a meaningful analysis of what I discovered and how this matters in relation to my specific research questions, taking into consideration what I have
learned through my literature review (Ibid). I also paid attention to null data as what participants do not speak to is equally important in relation to significant findings.

3.5 Ethical Review Procedures

This research was conducted in accordance with the ethical procedures outlined by the Ontario Institute for Studies in Education, University of Toronto. As such, each participant was given a letter of consent (see Appendix A) which they signed upon agreeing to participate in the research and partake in a 45-60 minute interview. The information contained in the letter of consent provided participants with information about the MTRP, the research problem, ethical issues and the specific expectations of participants. This information is important because potential participants form their decision on whether or not to participate on the basis of the provided information. It should therefore be clear and concise so potential participants can make an informed decision about participating before giving their consent (Walliman, 2011).

By signing the letter of consent, participants have given their consent to participate in a 45-60 minute interview which was audio recorded. The data I have collected from these interviews contains personal and confidential information (Walliman, 2011). As such, all audio recordings from the interviews have been stored on my computer which is password protected and only accessible to me and my course instructor. After five years, this data will be destroyed. Each participant has also been assigned a pseudonym and any identifying markers which may threaten the anonymity of each participant, such as to their schools or students, has not be included in the results so as to further protect their identity.

As Walliman (2011) points out, as a researcher it is critical to recognize what possible risks may be associated with participating in your study. Furthermore, if there are risks
associated, it is necessary for you to minimize these risks. There are no known risks to participating in this study. My informing participants ahead of time and throughout the interview that they have the right to refrain from answering any questions as well as the right to withdraw their participation at any time will minimize any potential risk that could arise. Participants were also informed of their right to request a copy of the completed research paper.

3.6 Methodological Limitations and Strengths

The main limitation to this study is the limited sample size of two participants. Thus, although the results of the study inform my research problem, a generalization of the experiences of the participants to the larger educational community is not possible. Another limitation is in relation to the ethical parameters of the MTRP set by the Ontario Institute for Studies in Education, University of Toronto. These parameters state that the MTRP can only involve interviews with teachers and other adult educators working within the educational community. Instruments of data collection are therefore restricted. For example, it was not possible to conduct surveys, complete classroom observations or interview children or parents. These are each valuable forms of data collection to consider. For instance, observation uses the “direct evidence of the eye to witness events first hand,” as opposed to relying on what participants speak to during an interview (Denscombe, 2007, p.192). Being able to interview and observe students in the natural setting of their classroom could increase the value of the data by allowing the researcher to read the interview data against the observation data (and other possible sources of triangulation). Surveys are also valuable instruments of data collection in terms of their efficiency and cost effectiveness, especially when dealing with a large sample population (Walliman, 2011).
However, regardless of the small sample size and the ethical limitations of the MTRP itself, the interviews allowed for each participant to speak about their lived experiences in their own words, while focusing on what matters most to them personally. By giving each participant a voice, interviews allow for an overall greater depth into the research problem, rather than breadth (Denscombe, 2007). This is in contrast to other forms of data collection, such as surveys, which greatly limit the response of participants (Walliman, 2011). Similarly, the perceptions of the researcher can become an issue when making observations during data collection. For example, a researcher’s perceptions can unknowingly influence the situation they are observing, leading to unreliable data (Denscombe, 2007). When conducting interviews, the voice of the participant is heard directly thereby decreasing any ambiguity of meaning.

Another limitation to my study is related to the delivery of questions. In order to ensure that she truly met my sampling criteria, Margaret felt more comfortable if I sent the questions to her beforehand. This allowed her to gauge the type of questions I would be asking and whether or not she felt comfortable answering them. In this manner, my participant was able to conclude that she met my sampling criteria and thus qualified to participate. A limitation with providing the questions beforehand to my participant is the possible affect this may have on the candid response to questions posed. However, my participant did not have answers prepared for the interview and the interview was able to flow smoothly and responses felt natural.

3.7 Conclusion

In this chapter I have provided an overview of my qualitative research study and the semi-structured interview protocol I will be using. Semi-structured interviews are a valuable form of research because they allow the interviewer to probe for further response and let the participant speak to what they feel is most significant. For these reasons, I chose semi-structured
interviews as my only instrument of data collection. I identified sampling criteria relevant to my research questions, such as years of teaching experience as well as experience teaching students diagnosed with ADHD. I recruited potential participants through convenient sampling strategies. Upon completion of my semi-structured interviews with participants who fulfilled my criteria, I analyzed the data, looking for common themes and divergences relevant to my research questions. Ethical issues related to my research study include issues of confidentiality and consent. I addressed these issues by ensuring that each participant signed a letter of consent which provides relevant information pertaining to my research prior to participating and by employing the use of pseudonyms and excluding identifying markers. One of the main limitations to my research study is the small sample size and the limit restricting the instrument of data collection to semi-structured interviews with educators only. However, the interviews allowed for a depth of understanding into the research problem which other instruments of data collection cannot deliver. In Chapter 4, I report the research findings.

Chapter 4: Findings

4.0 Introduction

In this chapter of my MTRP, I report and discuss the research findings of my study. After transcribing and analyzing the data from my two interviews, I have found themes which relate to my research questions. The themes focus on teacher beliefs about the characteristics of ADHD and how they have a direct impact on student’s literacy acquisition, resources teachers identified as beneficial in their work, instructional strategies enacted by teachers to support these students and teacher beliefs in the importance of providing these students with one-on-one support. All of these themes are discussed in relation to the literature review I conducted in Chapter 2. I also report on null data; I found that participants did not speak to students’ mental
health or co-occurrence of ADHD with other learning disorder even though those topics are prevalent in the literature. Possible reasons why this was not mentioned by teachers are discussed.

4.1 Teachers held the belief that particular aspects of ADHD make it difficult for a student with ADHD to acquire early literacy skills.

Through an analysis of the data it was revealed that teachers held the belief that the characteristics associated with ADHD made it particularly difficult for students to acquire early literacy skills. Teachers spoke about the students’ need for movement which was to such an extreme as being viewed as an “imperative for them to move and do,” as well as inattentive behaviour which was displayed through students’ difficulty in being able to focus. The need for movement and inattentive behaviour teachers noticed being displayed by students made it particularly challenging for these students to acquire their early literacy skills. As noted by Susan, during the language period of the school day, the inattentive behaviour would cause the student to become “focused on something that was not the lesson,” thus greatly impacting the student’s ability to learn the specific literacy skill. Similarly, as Susan explained, the characteristics associated with ADHD were “really impacting [student’s] learning,” to the extent that it appeared as if he had missed literacy instruction even though the student had “been in school all those years.” These findings are consistent with Wood & Beattie’s (2004) research which explored missed instruction during school as a common occurrence among students with ADHD. Both of these findings point to the fact that the characteristics of inattentiveness and the need for movement associated with ADHD make it difficult for a student to grasp instruction, including literacy instruction.
Teachers also spoke about inattentive behavior as having an impact on students’ ability to both read and write at an adequate grade level. For example, Margaret explained a student’s difficulty with not being able to read at the same level as their peer as a “challenge for early literacy.” This participant observed a student’s difficulty with reading as presenting a challenge for this student’s early literacy acquisition. Additionally, Margaret also spoke about a student’s difficulty in relation to writing, explaining that “he’s got lots of ideas…he could tell you a story but he just can’t write it down.” Brock and Knapp (1996) affirm this claim when they explain how the “nature of reading comprehension and its demands for sustained attention” make it “logical that the presence of ADHD would have an adverse effect” on this literacy skill (p. 173). Additionally, Tannock (2007) has found that children with ADHD have more difficulty recognizing when they have made an error and correcting that error while reading. Thus, it is clear that the associated characteristics of ADHD pose a challenge for these students’ literacy abilities in regards to reading and writing at grade level. In sum, the characteristics of ADHD manifested as the need for movement and inattention were noted by teachers as negatively impacting a student’s literacy acquisition and are a reflection of these teachers’ beliefs that the particular aspects of ADHD make it difficult for a student with ADHD to acquire early literacy skills.

4.1.1 Teachers only addressed oral comprehension as a challenge faced by students with ADHD in relation to technology.

Oral comprehension is also a challenge for students with ADHD. As discussed in a study by McInnes et al. (2002), their sample of children with ADHD had the lowest scores when listening to descriptive passages, thus illustrating deficits in listening comprehension. In my findings, oral comprehension was only mentioned in relation to technology through Margaret’s
connection between a lack of oral skills and students’ overexposure to technological devices through her statement that “it looks like kids these days don’t have the oral language skills that they used to because of video games, and TV and iPads.” This is something that was not mentioned in my review of the literature. However, regardless of this lack of affirmation, Margaret’s comment points to the possibility of future research in the area of ADHD and overexposure to technology and effects on oral language skills.

4.1.2 Teachers noted additional impacts of ADHD on a student’s life in addition to literacy acquisition, such as student’s self-esteem.

Teachers also discussed the characteristics of ADHD adversely affecting other aspects of a student’s life in addition to early literacy acquisition. These aspects were mainly related to issues of self-esteem and confidence. For instance, Margaret spoke about the potential of students with ADHD being labeled and the consequent effect of this labelling on a student’s self-esteem. This labelling was largely due to classmates’ perceptions of the student as “not as smart as the others.” These feelings of inequality in relation to not being “as smart as the others” relates back to the student’s struggle with achieving at a level similar to their peers. As Margaret explained: “ADHD students, they typically do have a lower self-esteem. And I mean, I can see why because they’re probably not viewing themselves as equal to their peers.” This ties into Rowe and Rowe (1999) and their research into the relation between academic failure which is often experienced by students with ADHD and problems related to this, such as low self-esteem and feelings of isolation. Indeed, research has found that ADHD effects all aspects of a student’s life including social, academic and personal (Bokor & Anderson, 2014, Kaiser & Pfiffner, 2011 and Biedman & Faraone, 2005). As observed by participants, students with ADHD struggled with feelings of inequality which impacted a student’s social life. This finding demonstrates the
many negative effects students with ADHD suffer from that extend beyond academics and how these challenges impact their daily lives. Overall, findings demonstrated participants’ recognition that the associated characteristics of ADHD also had negative effects on a student’s self-esteem.

4.2 Teachers identified a variety of resources, both within the school and the larger community, which helped teachers support the literacy practices of students.

All participants identified a number of different resources which helped them support the early literacy practices of students. These resources derived from a variety of sources and were not limited to those within the school. For instance, in addition to the support received within the school environment, teachers spoke about outside agencies, programs, occupational therapists and families and caregivers as important resources. Overall, teachers felt that they were highly supported within their work and were provided with a variety of resources to help these students. This support was demonstrated through Margaret’s comment when she stated “I wouldn’t say we have any barriers to resources,” thereby affirming the school’s commitment to helping students with ADHD and their early literacy acquisition.

4.2.1 Teachers spoke about outside resources such as agencies, programs and occupational therapists as important resources to support students.

Participants identified a number of resources available outside of the school environment which they found particularly useful in supporting students with ADHD with their early literacy acquisition. One specific program, called Empowering Reading, was “developed to address literacy needs of children from grades 2 to 5 who have seemingly missed all the early literacy instruction.” This program was taught by Susan whom found it to be “very effective” in supporting these students. Susan found the Empowering Reading program to be helpful due to
the decoding strategies used and all of the “little tricks and tips built right into the program” that students learn and eventually take the initiative to use on their own. These “tricks and tips” included phonic rules in the form of simple rhymes which students would use in order to identify words. The Learning Disability Association of Ontario was also identified as a helpful resource for teachers, especially for providing information on how to “help kids with ADHD in the classroom setting,” in terms of achieving academic success. Susan spoke about the presence of occupational therapists from the Community Care Access Centre in the school and the insight they provide as a valuable resource. These occupational therapists are consulted by teachers and special educators to come assess the learning and behavioural needs of students with ADHD. Overall, Susan described her experience with occupational therapists as positive, stating that they provide “an interesting perspective that teachers would not have normally thought of,” in terms of recommending what the student needs to be a successful learner in the school environment.

All of the above resources were identified by participants as being helpful in their work of supporting students with ADHD. The literature did not speak to outside resources such as those mentioned in my findings. As such, these claims could be elevated by further research. However, although these findings were not replicated in the literature, they are still valuable in the sense that they provide information about resources teachers may find beneficial in supporting students with ADHD and their early literacy acquisition. For example, these findings demonstrate the importance of looking beyond the typical school environment when exploring possible resources to support students.
4.2.2 Teachers identified having a supportive staff and school environment as a significant resource in supporting students’ needs.

Both teachers spoke to the importance of having a staff and school environment working together as a team. Margaret stated that her ability to support students with ADHD is directly influenced by the support she receives from the “team” of other staff members, special education teachers and the principal. She described this team as being “super supportive” and all parties “working together for the kids” in order to support their learning. Susan spoke about the “community effort” shared by the school and the mindsight that when a problem arises, “it’s a community effort” to search for a resolution. Similarly, sharing resources and expertise within the school community was also helpful in supporting students learning. Working with a staff that shares a growth mindset was also mentioned as a valuable resource by both participants. As stated by Susan: “I think that one of the resources that has really been helpful has been literally working together with a staff of people who have a growth mindset.” Participants spoke to the importance of staff having a growth mindset in relation to being open to the idea that educators are constantly learning and going through a process of trial and error where it is healthy to make mistakes. For instance, Susan mentioned how teachers at the school recognize that if they want to properly support students with ADHD, change is necessary and “trying to stick with an old way of doing something just does not jive.” This finding points to teacher’s recognition that they cannot fully support the development of these students’ early literacy practices on their own. Additionally, this claim is supported in the literature through studies which found that in today’s schools, teachers recognize the likelihood of having a student with ADHD in their classroom due to the high prevalence rate of the disorder. As a result, these teachers realize that they must be
open to learning new ways of supporting these students so that students can experience academic success (Centre for ADHD Awareness Canada, 2014).

Teachers also identified having a supportive principal as a crucial resource in supporting these students. As Margaret stated, “our principal is great for getting books for us,” and other resources needed to fully support students. Furthermore, both participants believed that the school was “doing a pretty good job” with providing resources and staying up to date in order to support these students and their learning. Barriers to resources were not a challenge experienced by either participant, demonstrated through Margaret’s statement that the school does not have “any barriers to resources.” Again, this abundance of resources was due to a principal whom was open to supporting students’ needs and placed high emphasis on literacy in particular. As stated by Margaret: “Our principal has always been ‘If you want it, you got it.’ Obviously within some guidelines, but literacy has always been number one for our school.” This emphasis on literacy is a result of the principal’s beliefs and values. These findings are consistent with Tannock (2007) who found that school boards are becoming increasingly more concerned with providing students with learning difficulties, including ADHD, the necessary support. This concern is a reflection of schools’ recognition that a large percentage of the school population experience ADHD and other learning difficulties. Tannock (2007) identified different ways in which schools ensure that they are providing the proper support to these students. These included school-wide initiatives, implementation of appropriate teacher training and education as well as the use of resources. This is reflected in my findings through the principal’s emphasis on supporting these students which is demonstrated through her provision of resources as well as the general approach and mindset of staff.
4.2.3 Teachers identified a variety of kinesthetic resources as well as the use of technology as being particularly beneficial to supporting students.

In addition to agencies, programs, occupational therapists and a supportive staff environment, teachers also identified a variety of different kinesthetic resources and the use of technology as being particularly beneficial to supporting these students and their early literacy acquisition. To begin with, bouncy chairs were mentioned by both teachers as being effective resources to help students focus while learning and were often used as an alternative to regular classroom chairs. As described by Susan, a bouncy chair is beneficial to the student because the student’s energy is redirected “if they’re able to go up and down” and teachers are then “able to help [students] focus.” Fidget items, such as squeeze balls, were another kinesthetic resource mentioned by both teachers as beneficial in supporting students. Susan described her practice of using fidget items to address the movement needs of these students, stating that she “would make sure [student] has access to some sort of fidget item,” such as a “special cushion or a special chair they can use on the carpet, to address some of the larger motor movements that seem necessary.” Fidget items were also used to help the student feel calm and organized. For instance, according to Susan, if students “have a fidget item in their hands that they can twist and turn it helps them to remain calm and focused.” Margaret addressed the possibility of fidget items being used incorrectly by students. Issues may arise when students have access to fidget items if they view the item as a toy, rather than a tool to help them learn. However, Margaret did not observe fidget items being improperly used, stating that “[students] know how to use them, they’re not toys, they’re used for tools.” Both teachers noted a positive outcome to the use of fidget items. For example, Margaret noted that their use is beneficial for “anything where [students] are going to have to sit for a longer period,” such as during lessons.
The use of technology was also noted by participants as a valuable resource to support student learning. Both participants spoke about Chrome Books in the classroom and how all students enjoyed using them. However, the use of Chrome Books was especially beneficial for students with ADHD who used the Chrome Books as a form of assistive technology to aid them in their literacy. As stated by Susan, “[Students] are using Google Chrome Books in the class these days. For students with ADHD and kids that have difficulty getting things down in writing, they’re being trained in the use of assistive technology.” Technology was also mentioned as a valuable resource for teachers. For instance, Susan felt that technology, such as the Internet, provided her with a “flood of resources” to help support her students. Although participants identified kinesthetic resources as well as the use of technology as beneficial in supporting students, these claims need to be established by further research. The literature did not touch on specific kinesthetic resources such as those mentioned above, or discuss technology. The findings from this research thus provide a deeper insight into what specific strategies these particular teachers are enacting and why they find them to be beneficial. Strength would be added to the findings of my research if these claims were affirmed in the literature.

### 4.2.4 Teachers spoke to the importance of having the support of parents and families as a valuable resource.

Teachers also mentioned having the support of parents and families as a valuable resource to help support students with ADHD. Susan spoke about the overall supportiveness of parents and caregivers and their willingness to do “anything they can do to help” their child succeed. Additionally, Susan found that when asking for parents’ permission to withdraw their child to receive special services, such as partaking in Empowering Reading, the response is
“overwhelmingly positive,” thereby demonstrating the parents’ inclination to support their child. Parents were also very concerned with their child’s education and the impact ADHD could have on their learning. Margaret discussed parents’ willingness stay “on top of it” in terms of learning about ADHD and that parents were “definitely aware” about the potential affect ADHD was having on their child’s ability to acquire early literacy skills and their learning in general. This finding demonstrates teachers’ recognition of the value potential support of parents can provide. These claims are further affirmed by Riccio and Jemison (199) in their study which acknowledged the importance of parents having an “understanding of the interactive effects of ADHD” on early literacy acquisition, such as reading skills and linguistic factors (p. 44). Kaiser and Pfiffner (2011) also discuss educating parents about how to structure the child’s home environment to meet their needs which can help the child succeed. The literature also discusses the importance of parental involvement in supporting their children’s learning. For instance, Kaiser and Pfiffner (2011) recognize the importance of including parents in strategies such as behavioural intervention as well as having a parent provide scaffolding of a specific skill for the child. Thus, it is clear that having the support of parents and caregivers is a beneficial resource for teachers. When families are committed to helping their child with ADHD learn, both student and teacher benefit and teachers are able to better support the student in their early literacy acquisition.

Overall, teachers identified a variety of resources which helped them support these students. These resources derived from a variety of sources and were not limited to the school environment. For instance, outside agencies, programs and the use of occupational therapists as well as families were identified as beneficial resources. Kinesthetic resources, such as bouncy chairs and fidget items, as well as technological resources like the Internet were also mentioned.
Teachers also identified having a supportive staff and principal as crucial in helping them best support students with ADHD and their early literacy acquisition.

4.3 There are a variety of instructional strategies teachers enact to help students with early literacy acquisition.

Through an analysis of the data, numerous instructional strategies were revealed by teachers as being useful in helping students with their early literacy acquisition. In relation to students’ difficulty with attention, participants recognized that the amount of time teachers can expect to work with these students is less. As stated by Susan, “the window has to be smaller of expected time.” In order to address this issue, participants spoke to the strategy of “chunking” work into specified amounts of time. For instance, Margaret described “chunking anything into 15 minutes blocks” because students would not be able to focus for longer than this amount of time. Similarly, Margaret described her strategy of having the student complete work in “shorter blocks of time” so as not to have the student’s attention focused for a long period.

Another instructional strategy employed by teachers to support students in their literacy acquisition is the use of visual aids. Susan spoke about the use of visuals as providing a reminder for students, stating that “visual reminders are very helpful” in supporting the student’s learning. An example of visuals aids was Susan’s use of a First Then Board as a strategy to help students with their literacy acquisition. The First Then Board was used to help students in their learning and understanding of a particular literary concept. This claim is consistent with McInnes et al. (2002) who found that visuals are helpful in ensuring that the student understands the task at hand. McInnes et al. (2002) also found that visuals, such as diagrams, graphic organizers and illustrations as being very important for students with ADHD, thereby further supporting the finding of visual aids as a strategy to support students’ literacy acquisition.
Shaping behaviour through positive reinforcement was another strategy teachers identified as useful in supporting students’ literacy acquisition. This was demonstrated through Susan’s recognition that “positive reinforcement situations can be useful for all kinds of different things” such as in the learning of literacy concepts. Susan described an example of a positive reinforcement situation as a student being rewarded for accomplishing a task or behaving in a desired way: “Positive reinforcement situations can be all kinds of different things. Like a little chart on a student’s desk a where, if for from the time they come till morning recess they accomplish a certain amount of tasks they get a sticker for each one, they are afforded something. Susan also spoke to the importance of rewarding behaviour for accomplishing a learning goal, stating that if the student accomplishes a learning goal “you need to reward them for the accomplishment in some way or other.” Teachers observed an overall positive change in behaviour. For instance, Susan acknowledged that shaping behaviour through the use of positive reinforcement “does improve things” and it “does shape [students’] behaviour so that [students] are in the practice of, the habit of doing it” This finding is affirmed by Biedman and Faraone (2005) when they state that “strategies which use reward and response to change behaviour has been useful against symptoms and associated features of ADHD,” thus illustrating the effectiveness of this particular strategy (p. 243). The effectiveness of behaviour management is additionally affirmed by Kaiser and Pfiffner (2011) when they state that “there is a substantial evidence base to support the feasibility and efficacy of behavioural classroom management strategies” (p. 11). Thus, it is clear that shaping behaviour through the use of behavioural management strategies has been affirmed by the literature as having positive outcomes, similar to those observed by participants.
Similarly, providing a student with praise and encouragement is also an effective strategy, as noted by Margaret who spoke to the importance of acknowledging and celebrating student successes. Margaret recognized the importance of “pumping up and celebrating” when a student is successful in their learning. Wood and Beattie (2004) affirm this claim through their findings that students with ADHD respond particularly positively to praise and encouragement. The above instructional strategies enacted by teachers were all identified as helping these teachers support the early literacy acquisition of students.

**4.3.1 Teachers identified a range of attitudinal and pedagogical strategies that help support and inform their work in meeting students’ literacy needs.**

In addition to strategies teachers enacted to help students with early literacy acquisition, teachers also identified a range of attitudinal and pedagogical strategies that both supported and informed their work in meeting students’ literacy needs. For instance, Susan spoke about the importance of teacher preparation and being “organized to receive the [student] and thinking ahead,” as being helpful in supporting students. Susan also stressed the benefit of undergoing teacher training before using a literacy program, such as Empowering Reading, stating that “[the program] is intensive so I am very happy to have the training because it’s effective.” Teachers also spoke about being open to asking for advice and receiving help when necessary. Margaret acknowledged her habit of asking for help, reflecting “I’m the first one to say ‘I need help! I don’t know what I’m doing!’” Similarly, Margaret also spoke about the constant “learning experience” and the “trial and error” process of which strategies support students and which do not. This tied into her recognition of her own “willingness to try multiple strategies” and “always learning” new ways to support students with ADHD. Although the literature did not touch on attitudinal and pedagogical strategies enacted by teachers, these findings are
nonetheless valuable. All of these attitudinal and pedagogical strategies helped inform the teachers’ practice and supported them in their work of meeting students’ literacy needs. However, even though these findings provide insight into teacher attitude and practice, these claims would still be elevated from further research on this topic.

4.3.2 Teachers identified an important aspect of creating an inclusive classroom environment was generating a sense of belonging for the student in order to support the student.

Another strategy teachers enacted to support the student’s early literacy acquisition was creating an inclusive classroom environment. For Susan, the creation of this inclusive space was of high importance. For Susan “the very first thing is creating a warm and accepting environment,” thereby demonstrating her priority of creating an inclusive atmosphere for the student. Tannock (2007) supports these claims, stating that “students with ADHD benefit from an inclusive educational model” (p. 2). Kaiser and Pfiffner (2011) also affirm these claims when they discuss the importance of structuring a student’s environment to meet their needs.

An important aspect of an inclusive classroom environment teachers spoke to was generating a sense of belonging for the student which in turn supported the student’s literacy acquisition. Through her perspective as a classroom teacher, Margaret explained that one way this can be achieved is by “taking the time to get to know the student,” such as their likes and dislikes as well as their home life. For Margaret, creating a “family environment” within the classroom “so that [the student] feels safe and not threatened” was one way to generate a sense of belonging for the student. A family environment was achieved through discussing what “families do at home” and how everyone in the class is going to act like a family by taking care of and helping each other. Another strategy for generating a sense of belonging was ensuring
that the student felt included in the classroom. This was achieved by focusing on “little things,” such as asking the student to “share information about his weekend” in order to “make him feel welcomes and belongs,” all of which contributed to the student feeling like a valued member of the classroom. Creating a sense of belonging as an important aspect of an inclusive environment was identified by teachers as a strategy to support students with ADHD in their early literacy acquisition. These findings are affirmed by Tannock’s (2007) research which concluded that strategies enacted by teachers in which the classroom environment was modified in such a way to meet the student’s needs were found to have a positive effect on literacy acquisition. It is therefore clear that creating an inclusive environment in which the student feels a sense of belonging is a crucial strategy teachers must enact in able to support students with ADHD.

4.3.3 Teachers reported positive outcomes to the instructional strategies in terms of both assessment and student self-confidence.

Both teachers identified positive outcomes of the enacted instructional strategies. Margaret noted that although overall growth was slow, there was a positive impact on a student’s academic achievement. She stated that overall, the outcomes “have definitely been positive” and that growth has occurred, although it is “obviously going to be slower than what you would like.” One measure teachers used to determine whether the outcomes to the strategies were positive or negative was through assessment. There were a variety of different forms of assessment described by Susan, including reading records and balanced literacy assessments as well as writing tasks and tests focused on “word patterns and word families and endings, like suffixes.” These assessments were used in “measuring the reading fluency of the students,” which was a “way of seeing if [the strategies] are actually working.” The balanced literacy assessments were used as a way to “check in” and ensure that students “still have their sounds,
their letters and their sight words.” Teachers also spoke about positive outcomes in terms of student self-confidence. For instance, Susan described a student’s willingness to participate in shared reading as an indicator of a positive impact on a student’s self-confidence:

Also, you can look at student’s willingness to participate in a group at all or willingness and confidence to read to you out loud. Because some students in the past, they would be too embarrassed to even try to read. So I would measure the success by considering their own confidence in themselves and their willingness to do the work.

Although the specific strategies enacted by the participants of this study were not explicitly discussed in the literature, the literature does support the findings of positive outcomes to the use of instructional strategies in general. These findings are affirmed in Bokor and Anderson (2014) and their study of basic skills training as a strategy enacted by teachers which has a positive impact on students’ self-confidence. These claims are further supported by Kaiser and Pfiffner (2011) in their findings that the strategy of organizational skills training in particular has an especially positive outcome on older students’ self-confidence due to the independence students gain from the training. Overall, teachers reported positive outcomes to the use of instructional strategies, which was measured in terms of both assessment and student self-confidence. These positive outcomes are affirmed by the literature in relation to strategies enacted by teachers to support students with ADHD in general.

4.4 Because teachers believed that one-on-one support was a critical component of supporting these students, they felt limited in terms of instructional support they received and the time they had to meet the student’s needs.

All participants spoke to the importance of one-on-one support in their work of supporting students with ADHD in their early literacy acquisition. This signified their belief that being able to provide one-on-one support was crucial to supporting these students. This belief
was demonstrated through teachers’ discussion of the changing role of Educational Assistants (EAs) in the classroom and how this change directly impacted the support students with ADHD received. This belief was further iterated by teachers’ focus on the necessity of one-on-one support and the challenge classroom teachers now face in relation to ensuring that these students continue to receive the one-on-one support they desperately need. Thus, teachers believed that regardless of a lack of support, it was still necessary to provide these students with the one-on-one instructional support that they needed.

4.4.1 The changing role of Educational Assistants makes it difficult for students with ADHD to receive the instructional support they need.

To begin with, the changing role of EAs was a topic discussed by both participants. Susan reflected upon this change, stating “…in the past, even ten years ago, children with ADHD and learning disabilities were provided with one-to-one support of an Educational Assistant.” In today’s educational system, both teachers noted how EAs are now placed with students who are assessed as having the highest needs. As stated by Susan, “the role of an EA has changed so now these people are placed with the highest need,” such as students with “Down syndrome, a physical disability that impairs them, those with toileting needs or feeding tubes,” and similar situations. Margaret further restated the changing role by noting how this year the Educational Assistants are “now” helping the student with Down syndrome. Margaret identified the different role an EA plays in her classroom than what occurred in the past when an EA would be placed with students who have ADHD.

Participants discussed how the changing role of an EA in the classroom has a direct impact on students with ADHD. As noted by Susan, the main impact on these students is that they are afforded “less direct one-to-one support than there was in the past.” The importance of
one-on-one support was discussed by both teachers in their describing of direct instruction as a strategy used to support these students. For example, Margaret spoke to direct instruction as one of the “key things” when supporting these students in their literacy acquisition.

The changing role of EAs in relation to supporting students with ADHD was not discussed in the literature. However, this could be due to the fact the change in role has occurred more recently within the past ten years. Furthermore, this change is applicable to certain school boards only and is not something that has occurred in the wider educational community in general, meaning that research on this topic would be more limited. It will be interesting to see if future research focuses on this issue and how it has impacted students who no longer are assessed as needing the support of an EA because they are not deemed as students with the highest needs.

4.4.2 Participants felt it was difficult for classroom teachers to respond to the increased responsibility of providing one-on-one support for students with ADHD.

Due to the changing nature of EAs in the classroom and the importance of one-on-one instruction in supporting these students in their learning of early literacy, both participants stated that the responsibility of ensuring these students’ needs continue to be met falls on the classroom teacher. Margaret summed up the responsibility placed on classroom teachers stating, “it’s basically just on us.” Margaret also spoke to the difficulty she had in responding to this increased responsibility of meeting students’ needs, stating that it’s “definitely a challenge to make sure that they are getting what they need every day.” Furthermore, teachers found it difficult to provide these students with the needed one-on-one instruction while still attending to the needs of the rest of the class. For instance, Susan spoke about the difficulty classroom teachers face when realizing that a “one-size-fits-all model does not work” anymore and that
they therefore “need to get creative with the way [they] are trying to reach each student in [their] class,” which can be a challenging task. Margaret identified time as her “biggest challenge” in supporting these students, stating that “Time definitely is a problem because I feel like [students] need more time and they need more one-on-one which I cannot give all the time.” Margaret recognized that one-on-one instruction was necessary for these students’ success but that it was challenging to ensure that this instruction was provided because of “the rest of the [students]” in the classroom who also need support and attention. This finding is interesting when considering participants’ previous comments that they felt fully supported in their work with these students.

The challenges teachers spoke to in supporting these students are affirmed by Shaughnessy and Waggoner (2015) when they discuss the difficulties teachers often experience with having these students in their classroom. These difficulties include having to spend more time with the student in relation to other students as well as having to set aside additional time for remediation. Likewise, Margaret noted how she struggles with the decision of whether or not to keep students with ADHD in at recess for remediation “because they need that time,” or allowing them “to go and run around and get fresh air” outside which is also important for these students. Similarly, teachers’ discussion about the challenge of providing a student with ADHD the necessary one-on-one instruction while still attending to the needs of the rest of the class is also confirmed by Shaughnessy and Waggoner (2015) when they state that in these situations, “the teacher’s attention is being taken away from the education of other students” and how this can be a major struggle for classroom teachers (p. 217). Overall, the participants’ identified a lack of instructional support through the changing role of EAs and the subsequent responsibility placed on classroom teachers as a major challenge in supporting these students, which seems to contradict their previous feelings of being fully supported in their work. However, their
perseverance to provide one-on-one instruction regardless of these challenges is a reflection of these teachers’ held belief that one-on-one support is a critical component of supporting these students in their early literacy acquisition.

4.5 When describing instructional strategies, teachers did not speak to the student’s mental health or identify co-occurrences of ADHD with other learning disorders.

Through an analysis of the data, it was revealed that teachers did not address the mental health of students with ADHD or identify any co-occurrences of ADHD with other learning disorders. This was surprising because mental health and co-occurrence with other learning disorders in relation to ADHD are both topics which are highly prevalent in the literature (Riccio & Jemison, 1998, Rowe & Rowe, 1999, Carroll et al., 2005, Pennington et al., 1993). For instance, as Pennington et al. (1993) discuss, mental health issues such as anxiety and depression are commonly experienced among individuals who have ADHD. It is also common for children with ADHD to have some type of learning disorder. Corkum et al. (2010) and Rowe and Rowe (1999) both found that around 80% of children with ADHD also have at least one learning disorder and that these disorders were most commonly related to reading or writing. Thus, it is clear that there is a high possibility that students with ADHD also experience some form of learning disorder or mental health issue. Furthermore, reading and writing disorders are the most common disorders experienced by these students, which would have a further impact on their early literacy acquisition.

Although mental health issues and co-occurrence of ADHD with other learning disorders is common throughout literature discussing ADHD, there are reasons why participants did not speak to these topics when describing instructional strategies. To begin with, this study is focused specifically on ADHD and early literacy acquisition. As such, questions were targeted
towards early literacy practices and instructional strategies and were not focused on mental health and co-occurrence. For instance, I did not explicitly ask participants if their students with ADHD experienced mental health issues, such as anxiety or depression, or if they also had additional learning disorders. Furthermore, because explicit questions about students’ mental health and other learning disorders students may have were not asked, participants may have felt hesitant to bring up these topics on their own because of the sensitive nature of mental health and learning disorders in our society. Overall, teachers did not speak to students’ mental health or co-occurrence of other learning disorders when describing instructional strategies regardless of the prevalence of these topics in the literature, which could have been due to the specific focus of this study as well as a hesitation to bring up these delicate topics on their own.

4.6 Conclusion

In this chapter I have discussed the themes I found within my transcribed interviews. In chapter 5, I will discuss the significance of my findings. My findings provide new insight into ADHD and early literacy acquisition and the strategies teachers are currently implementing in their work with students with ADHD. These insights are significant for myself personally as well as educators in general. I will therefore focus on the implications of my findings for my own practice as a future educator as well as the implications for the larger educational and research community. Based on my findings, I will also identify areas of future research. I will also provide recommendations in terms of teacher education and professional development as well as school boards as a whole.
Chapter 5: Implications

5.0 Introduction

This chapter focuses on the significance of my research findings. I speak to both the broad and narrow implications of my research in relation to the educational community in general and to myself as an educator and researcher more specifically. I also provide recommendations for teachers, school boards, administrators and professional development based on what I have learned through my research. Areas of future research are all discussed. I close this chapter with some concluding remarks and provide a brief summary about the importance of my findings.
5.1 Overview of Key Findings and their Significance

Through an analysis of the data, it was revealed that teachers held the belief that the certain characteristics associated with ADHD made it particularly difficult for students with ADHD to acquire their early literacy skills. Teachers also identified a variety of resources which helped their work in supporting these students. These resources originated from a variety of sources, both within the school environment and the larger community. A number of instructional strategies were identified by teachers, as well as attitudinal and pedagogical strategies which all helped teachers support the early literacy acquisition of these students. Teachers identified positive outcomes to the use of these strategies, in relation to both academics and student self-confidence. Participants also held the belief that providing students with ADHD one-on-one support was crucial and spoke about the challenge they faced in continuing to ensure this direct support was achieved regardless of the changing role of Educational Assistants in the classroom. Through an analysis of the data, it was revealed that teachers did not speak to the co-occurrence of ADHD with other learning disabilities or student mental health, which were both topics identified in the literature as being highly prevalent with students with ADHD.

The themes which emerged in my research are consistent with the existing literature on the issue of ADHD and early literacy acquisition. To begin with, teachers’ belief that characteristics associated with ADHD do impact a student’s early literacy acquisition is a finding confirmed in existing literature. Teachers also identified a variety of resources as well as instructional strategies which are useful in supporting students with ADHD that are echoed in the literature. Additionally, teachers noted how ADHD affects all areas of a student’s life in addition to their academic achievement, which is also noted in the literature.
Although my findings are consistent with claims from the literature, my research nonetheless contributes to the existing literature. For instance, my findings provide deeper insight into why teachers enacted the use of these particular strategies and why they found them to be particularly beneficial in supporting these students. Additionally, my findings provide valuable insight into the attitudinal and pedagogical strategies these teachers use to inform their practice. My findings also provide depth into the importance of supporting students with ADHD and the challenges teachers may face. For instance, teachers believed providing one-on-one support was crucial in their work with these students and spoke about the changing role of EAs in the classroom and the effect this change is having on both students with ADHD and teachers who feel responsible to ensure students continue to receive this support. My findings also contribute to the existing literature by highlighting areas in which teachers may not be fully educated about in relation to students with ADHD. For instance, it was found that teachers did not address the co-occurrence of ADHD with other mental disorders or learning difficulties.

5.2 Implications

In this section I will discuss the implications of my research findings. Through an analysis of the data, it was revealed that participants did hold the belief that ADHD and the characteristics associated with the disorder negatively impact a student’s early literacy acquisition. They identified resources valuable in their work of supporting these students as well as strategies they observed as responsive to the early literacy acquisition of students with ADHD. They also spoke about challenges they face. These findings are significant and therefore have implications for both the broader educational community as well as my own future practice as a teacher and researcher.
5.2.1 Broad

There are many implications of my findings in terms of the broader educational community. To begin with, teachers identified characteristics associated with ADHD as having a negative impact on a student’s ability to read and write at grade level. The constant need for movement as well as inattentiveness both led to challenges in students’ early literacy acquisition and learning in general. Due to the high prevalence of ADHD in our society, it is more than likely that teachers will have a student with ADHD in their classroom. As such, it is imperative that teachers are aware of the effects ADHD are expected to have on the development of early literacy. Furthermore, the educational community should be aware of the additional impacts ADHD has on a student’s life. As noted by participants, students with ADHD often suffered from lower self-esteem and confidence, which can occur through labelling. As such, teachers and the wider educational community should be aware of the many ways in which ADHD can affect a student’s life beyond academics. They should be mindful of the adverse effects of ADHD on a student’s self-esteem and consider ways in which to limit any potential for labelling. This awareness can be achieved through continuous teacher education in on these issues so that educators are knowledgeable about how the characteristics of ADHD effect these students in their school and classroom.

The resources identified by participants are another implication of my research for the broader educational community. For instance, one participant spoke about the value of having an occupational therapist provide recommendations for these students to help improve their learning. This finding is significant because it represents a potential resource for schools. An occupational therapist can provide general as well as special education teachers with valuable
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insight about the needs of students with ADHD which can then be shared with the wider school community.

Similarly, the strategies identified by teachers represent an additional implication of my research. These findings are significant because they represent strategies which are currently being enacted as instructional approaches that are specifically responsive to supporting the early literacy practices of students with ADHD. Teachers and the wider educational community should be aware of these strategies due to the positive response of students participants observed to their use. For instance, classroom teachers in particular should be informed about “chunking” as a successful instructional strategy identified by participants to address students’ challenge of staying focused for longer periods of time. Overall, the implications of my research extend throughout the broader educational community. It is necessary that the educational community as a whole has an understanding of the impacts ADHD has on the early literacy acquisition of students with ADHD as well as the resources and strategies which are responsive to these students’ literacy needs.

5.2.2 Narrow

The findings of my research also have implications for my own personal practice as an educator and researcher. To begin with, the results of my study greatly improve my understanding of students with ADHD and their daily challenges in relation to early literacy acquisition. As previously mentioned in my Reflexive Statement, I did not struggle with acquiring literacy skills as a child. Through conducting this research, I believe I have a fuller appreciation of students who do struggle with early literacy and the development of reading, writing and oral comprehension. The findings of my study provide me with important information about how I can support these students in my own classroom. By making use of the
resources and strategies discussed by my participants, I feel I am more equipped to help these students in their early literacy acquisition as well as their overall academic achievement. For instance, participants spoke about generating a safe environment in which students with ADHD feel included in the classroom. I personally believe that creating a safe classroom environment is beneficial for all students. However, based on my findings, I now know this to be extremely applicable for students with ADHD. For example, one participant identified a strategy in which the student’s own interests and lived experiences were incorporated into daily classroom activities, thus creating a sense of belonging which the student responded positively to.

My findings are also significant in terms of myself as a researcher. To begin with, being able to experience the process of conducting research has been an opportunity for growth and reflection. Reflecting back on the research process is a critical component of work as a researcher, as well as a teacher. Being able to be reflective in relation to myself as a researcher is an essential skill to improve the quality of research I produce. Through this reflective process I am able to experience myself in a new role beyond practice teacher and have been able to assume the role of researcher and the associated roles of interviewer, analyzer and learner. Through this research process I have expanded my knowledge and skill set in regards to effective strategies for teaching literacy to students with ADHD. Through this experience I am reminded to continue to have a “research infused practice” throughout my teaching career.

The implications of my research are thus significant in terms of both my personal practice as an educator as well as a researcher. I have been provided with a fuller understanding and appreciation of these students’ challenges with early literacy acquisition. Due to the fact that I did not struggle with learning how to read or write as a child, I feel more sensitive to these particular students’ experiences. I will use the knowledge I have learned from my findings and
take into consideration the instructional strategies provided by participants in my future practice. As a researcher, the implications of my findings relate to my overall experience as a researcher and the importance of critical reflection for the research process.

### 5.3 Recommendations

Based on what I have learned through my research, I am able to provide recommendations for all levels of the educational community, including teachers, administrators, school boards and Ministries of Education. I also have recommendations in terms of teacher professional development and education. To begin with, one of my findings points to a possible discrepancy in relation to barriers participants faced in their work. Both of my participants spoke about having no barriers to resources and feeling fully supported in their work with these students by their school community. However, both participants also noted that time represented a definite barrier to being able to fully support these students and their literacy acquisition.

Teachers spoke about how a lack of time can impact the level of support they are able to provide to these students. Building off of this thought, a challenge both teachers spoke about was providing students with ADHD one-on-one support. This was especially challenging due to the changing nature of the role of EAs, whom are no longer placed with students with ADHD. As a result of this change, participants spoke about the struggle to provide support while meeting the needs of the rest of the class at the same time.

Thus we can see lack of time and lack of instructional support as challenges faced by teachers. As such, I would recommend that administrators and schools are aware of and sensitive to the challenges faced by these teachers. School boards and administrators need to be aware of how the changing role of EAs is impacting both students and teachers. If students with ADHD are to receive the proper one-on-one instruction they require in order to succeed
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academically, then school boards need to provide the necessary resources teachers need to support their students. If EAs are now placed with students assessed as having the highest needs, then another avenue needs to be investigated. The Ministry of Education, school boards and administrators need to be recognizant of the fact that instructional changes, such as the role of EAs in the classroom, directly impacts classroom teachers. Instead of classroom teachers solely taking on the responsibility of ensuring students with ADHD continue to receive the same level of support, school boards and administrators need to bear the weight equally.

Based on my findings, I would also recommend that administrators and school boards provide educators with professional development related to students with ADHD and the difficulty of literacy acquisition. Due to the fact that ADHD is a prevalent disorder amongst children, it is necessary that educators are familiar with the disorder and how it can impact a student’s learning. Continuing professional development would help to ensure that the entire school community is on the same page in terms of helping these students experience literacy acquisition and academic success. For example, teacher training in programs which are specifically designed for early literacy acquisition, such as the Empowering Reading program mentioned by Susan, would be beneficial to students. Additionally, teachers could also receive professional development in the area of creating an inclusive classroom environment. The importance of creating a classroom environment in which a student with ADHD feels safe was found to be beneficial in my research. Ways in which to create an inclusive classroom environment, such as ensuring the student feels included, would be a valuable focus for teacher professional development. Teachers could also receive training on the issue of co-occurrence of ADHD with other mental and learning disorders to ensure that they are fully educated on the possibility of ADHD co-occurring with other disorders. I believe that professional development...
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in these areas would help in the creation of a supportive school environment, which is another resource teachers identified as being valuable in their work with these students. Accordingly, I also recommend that schools work to develop a community in which all levels including administration have the same goal. Creating a culture in which the entire school community possess the same values and beliefs about students with ADHD and their achievements is a valuable resource for teachers supporting students with ADHD.

5.4 Areas for Further Research

After analyzing my data, certain questions arose. These questions resulted from gaps in the findings and represent areas for further research. Based on my findings, I believe educational research scholars should direct their attention on the changing role of EAs in the classroom. As previously mentioned, participants noted how EAs are no longer placed with students with ADHD and are instead focused on students with more limiting disorders such as physical disabilities. This change has occurred more recently in the educational community. As such, future research could focus on how the changing role of EAs in the classroom has affected students with ADHD and what impact this change has had on both general and special education teachers.

Another area of future research could be related to ADHD and its co-occurrence with other mental health issues and learning disorders. I believe this should be an area for further research because it represents null data in my findings as participants did not speak to the student’s mental health or identify co-occurrences of ADHD with other learning disorders. Future research could focus on instructional strategies specifically enacted by teachers for students with ADHD and a co-occurring learning disorder or mental health issue such as depression or anxiety. I am personally interested in learning more about situations in which
ADHD is the cause of a student’s difficulty in early literacy acquisition or if the challenge is due to a co-occurring learning disorder. Future studies could focus on research questions centred on this scenario.

A final topic of further research is in relation to ADHD and oral language specifically. In my study, difficulty with language acquisition was not fully discussed by participants. For instance, participants did discuss the effects of ADHD on a student’s ability to read and write but I discovered that teachers only addressed oral comprehension as a challenge faced by students with ADHD in relation to technology. Participants discussed how students’ oral skills have seemed to decrease due to an overexposure to technology, such as iPads and video games. Even while completing my literature review, I noticed how there seems to be a lack of research focused on oral skills in comparison to reading and writing. As such, further research could focus on how ADHD affects the oral component of a child’s literacy acquisition.

5.5 Concluding Comments

The prevalence of ADHD in society today has led to schools experiencing a rise of students with ADHD in their classrooms. The findings that the characteristics associated with ADHD make it particularly difficult for students diagnosed with this disorder to acquire their early literacy skills have been upheld by my own research. My research also contributes to the existing literature by providing a greater depth of understanding into strategies enacted by these teachers. As such, it is imperative that teachers are educated on issues related to this problem.

Through my research, I have discovered how a small sample of elementary school teachers are enacting instructional strategies that are specifically responsive to supporting the early literacy practices of students with ADHD and the perceived impact of these strategies on student literacy achievement. I found that teachers implemented these strategies because they
found them to be particularly responsive to meeting the unique literacy learnings needs of these students. This was determined through an overall positive response to the use of these strategies, which was observed through assessment as well as increased student confidence. Teachers also identified a variety of resources as being particularly beneficial to supporting their work with these students. One of the main challenges teachers acknowledged in their work was a perceived lack of time available in supporting these students. This challenge was largely a result of the changing role of EAs in the classroom and the absence of critical one-on-one support that resulted.

Overall, the findings of my research have the potential to help students with ADHD receive the support they need in their early literacy acquisition through appropriate resources and instructional strategies that have been observed as being particularly responsive to the needs of these students. My findings also provide valuable knowledge for all members of the educational community, which can inform their practice of supporting these students with ADHD and their literacy acquisition. At a personal level, my findings are significant as they have deepened my own understanding of these students’ learning needs and have provided me with the knowledge to fully support these students in my future practice as an educator.
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Appendix A: Letter of Consent for Interview

Date: ___________________

Dear _______________,

I am a graduate student at OISE, University of Toronto, and am currently enrolled as a Master of Teaching student. I am studying early literacy teaching practices for students diagnosed with Attention Deficit Hyperactivity Disorder for the purposes of a graduate research paper. I think that your knowledge and experience will provide insights into this topic.

I am writing a report on this topic as a requirement of the Master of Teaching Program. My course instructor who is providing support for this assignment this year is _______________. The purpose of this requirement is to allow us to become familiar with a variety of ways to do research. My data collection consists of a 45-60 minute interview that will be audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient to you, outside of school time.
The contents of this interview will be used for my research project, which will include a final paper, as well as informal presentations to my classmates and/or potentially at a research conference or publication. I will not use your name or anything else that might identify you in my written work, oral presentations, or publications. This information remains confidential. The only people who will have access to my assignment work will be my course instructor. You are free to change your mind at any time, and to withdraw even after you have consented to participate. You may decline to answer any specific questions. I will destroy the audio recording after the paper has been presented and/or published which may take up to five years after the data has been collected. There are no known risks or benefits to you for assisting in the project, and I will share with you a copy of my notes to ensure accuracy.

Please sign the attached form, if you agree to be interviewed. The second copy is for your records. Thank you very much for your help.

Sincerely,

Jennifer Gingrich

Researcher name: Jennifer Gingrich
Phone number, email: (519)-807-7563, jenny.gingrich@mail.utoronto.ca

Instructor’s Name: __________________________
Phone number: ______________________________

Consent Form

I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw at any time without penalty.

I have read the letter provided to me by Jennifer Gingrich and agree to participate in an interview for the purposes described. I agree to have the interview audio-recorded.

Signature: __________________________________________

Name (printed): ______________________________________

Date: __________________________
Appendix B: Interview Questions

Thank you for agreeing to participate in this study. The aim of this research is to learn how teachers foster early literacy for students with ADHD. The interview should take approximately 45 to 60 minutes and will consist of a series of 16 questions focused on early literacy and ADHD and your experiences in relation to these areas. I want to remind you that you may choose to refrain from answering any question and may withdraw your participation from the study at any point. Do you have any questions before we begin?

Section 1: Background Information

1. a) How long have you been working in education and what is your current position?

   b) What grades and subject areas do you currently teach? Which have you taught in the past? Can you tell me more about the school you currently teach in? (e.g. size, demographics, program priorities etc.) Do you hold any other positions with the school? (e.g. coach, advisor, councillor, leader, support worker etc.)
c) As you are aware, I am interested in learning how teachers foster early literacy for students with ADHD. Can we start by you telling me more about what educational and professional experiences you have had to prepare you for this work? Do you have any specialities in the field of education? (e.g. graduate degrees, teachable subjects, AQ courses, professional development etc.)

2. Are there any personal experiences in your own educational journey that have led you to be passionate about supporting these students in their literacy achievement?

Section 2: Beliefs and Values (why)

3. In your view, what are some of the significant challenges and learning needs faced by students diagnosed with ADHD?

4. How do you feel the school system addresses these challenges and needs, generally speaking?

5. In your experience, what are some of the challenges and learning needs these students face in terms of their early literacy education, specifically?

Section 3: Teacher Practices (what and how)

6. Can you please describe some of the instructional strategies you use to support early literacy for students diagnosed with ADHD?

7. What are your learning goals when enacting these strategies? What opportunities for learning do you create? Generally speaking, how do your students respond to these strategies?
8. How, if at all, have these strategies impacted these students’ academic achievement in early literacy acquisition? How do you know? What indicators of learning have you observed?

9. Can you give me an example of how you have supported early literacy of a specific student diagnosed with ADHD?
   
i. Who was this student? How did their ADHD typically manifest in the classroom?
   
ii. What were your learning goals for this student?
   
iii. What opportunities for learning did you create? What did you do? What did the student do?
   
iv. How did this student respond to your approach? What indicators of learning did you observe?

10. Are there any other benefits that you have observed as a result of the approaches and strategies that you use that extend beyond academic performance? If so, what are they?
    *listen first and then probe as necessary re: social benefits, confidence, engagement, sense of efficacy etc.

11. What resources (i.e. websites, books, software etc.) have you used which have been helpful in supporting these students’ literacy acquisition?

Section 4: Influencing Factors (who)

12. What challenges have you faced trying to help these students acquire their early literacy practices? (i.e. barriers to resources, family, educational community etc.) How have you responded to these challenges?
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13. What response have you had from parents, principals, other teachers, administrators, school boards etc.? Have these individuals and organizations helped or hindered your support of these students?

Section 5: Next Steps

14. What more would you personally like to learn about students with ADHD and early literacy practices?

15. What resources do you feel you need to further help these students succeed?

16. What advice would you give to other educators working with students with ADHD to help them support these students’ early literacy practices?

Thank you for your time and participation.