Preparing Introverted Learners in Elementary Classrooms for a World that Privileges Extroversion

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Abstract

Social interaction makes up a large part of society; people are constantly required to communicate with others whether that is through face-to-face conversations, phone or e-mail (Dow, 2013). Shockingly nearly half of society identify as introverts, a personality type which views social interactions as intimidating, overwhelming, scary and less preferred (Dow, 2013). It is important to consider ways in which educators can effectively prepare introverted students to be successful in an extroverted world. The purpose of this study is to learn how teachers meet the needs of introverted learners while sufficiently preparing them for the world that privileges extroversion. I explored literature and interviewed teachers finding that flexibility in teaching and encouragement are important in introverted students school success. Further, the use of differentiated instruction and assessment best supports introverted students’ learning styles. Differentiated instruction allows introvert students to build confidence in their abilities. Students can access information and demonstrate their learning in ways they are most comfortable with, leading to confidence in verbally sharing ideas. This study is important to the education community because introverted students are misunderstood in the classroom, leading teachers to ineffectively prepare them for an extroverted world.

Key Words: Introversion, Inclusive Classrooms, Differentiated Instruction
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Chapter 1: Introduction

1.0 Introduction - Research Context and Research Problem

In today’s society, social interactions are a large part of what makes up our world (Dow, 2013). Our day to day expectations often require us to either attend school or go to work; both demanding social relations. Social interactions can take up a large amount of our time, whether it is through face to face conversations, emails, over the phone or by media (Nussbaum, 2002). As members of society we are often required to engage in these social interactions regardless of our own choosing. With this overwhelming amount of social interaction, we encounter it is surprising that nearly half of society are considered to have an introverted personality (Dow, 2013). A personality type which views social interactions and encounters as: intimidating, overwhelming, scary and less preferred (Dow, 2013).

Introverts are those individuals who prefer and function better when there is quiet and little stimulus (Nussbaum, 2002). For a typical school environment, this is not ideal. Schools are loud, high stimulus environments that never stop. Whether it is in the classroom, out at recess or during lunch, the school day never stops (Dow, 2013). The social aspect of school is an important part of students’ communication skills development; however, can it be too much for introverted students? Are teachers supporting these students in a way that effectively prepares them to succeed in an extroverted world or are these students being burnt out?

Schools are building blocks for students to develop and practice skills such as, academic, emotional and social (Nussbaum, 2002). Each of these skills is required for students to succeed in the future and teachers must be able to prepare all, especially introverted students, for these skills. It is important to consider the pressures teachers place on students in the everyday
classroom and how adding constant stimulus and social interactions may negatively, or positively affect introverted students.

For the purpose of this paper, I examined elementary aged students with introverted personalities and how teachers can best support these students in leading successful futures in a high communicative world. I conducted research on introverted students and the way in which their body, mind and spirit responds to the overstimulating social environments. Further I looked at how being overstimulated affects their ability to succeed in school. Additionally, the ways in which teachers can effectively meet the needs of introverted students such as using differentiated instruction, allowing for independent work time and providing more choice in assignments was examined.

In classrooms, teachers are often able to quickly identify their students as either more introverted or more extroverted (Nussbaum, 2002). Nussbaum (2002), identified extroverted students as those who appear to be more outgoing and engaging in classroom discussions whereas, those individuals who are more introverted tend to shy away from these situations. Introverted students are typically quieter in class and prefer individual work over small group work or large group discussions (Nussbaum, 2002).

Naturally, teachers tend to focus more of their attention toward extroverted students during class time as well as during the lesson planning stages (Nussbaum, 2002). The more outgoing personality of extroverts, often brings more energy to the classroom and a higher need for classroom management from the teacher (Nussbaum, 2002). Introverted students tend to be quieter and more independent in the classroom when completing their work, requiring less management from the teacher. Whereas extroverts often require more guidance to stay focused and demand more teacher attention (Nussbaum, 2002). The demand extroverts often place on
teachers cause teachers to guide their lesson plans around these needs to ensure management in the classroom and reasonable levels of volume. A teacher’s management plan may focus more towards the extroverted personality students because of extroverted students’ higher need for stimulation through social interactions. In contrast, the introverted personality students are more likely to find a quiet activity to do independently.

In current society, extroversion is considered the ideal personality type (Cain, 2013). The world around us favours the extroverts, almost everything we encounter requires extrovert preferred behaviours (Zelenski, Whelan, Nealis, Besner, Santoro & Wynn, 2013). As teachers, how do we meet the needs of introverted students? This paper researched teaching practices through current literature and teacher interviews. The goal was to find successful ways in which introverted students are learning in comfortable and inclusive environments, while preparing for an extroverted society. As educators, it is important to consider the needs of all students and understand that being able to survive in society is a mutual end goal. It becomes difficult to understand how to best prepare introverted students for an extrovert society when acting social creates uncomfortable feelings. School is a place where students practice and develop skills, but is this creating uncomfortable learning environments? Creating a safe, comfortable and inclusive classroom is often the first thing a teacher wants to brings to the classroom environment to enhance student learning. Should educators encourage and required introverted students to engage in social activities and act extroverted to prepare them for their future in an extroverted world? As teachers, are we able to balance these opposite personalities in a single classroom while effectively preparing both for successful futures? All students can and will learn, but how effective students are taught increases their ability to be successful.
1.1 Purpose of the Study

The purpose of my research was to learn how a sample of elementary teachers are differentiating their instruction to meet the needs of introverted learners while sufficiently preparing them for a world that privileges extroversion. These findings helped to inform my practice as a beginning teacher, and contributed a range of strategies to further support teacher education and development around differentiating instruction.

In addition, a further research purpose was to learn about the misconceptions aimed towards introverted learners and the impact this has had on students. In chapter two, literature review, I present research that supports the importance of focusing on student strengths rather than challenges of that personality type. The literature review provides a better understanding of these misconceptions and how this understanding can inform my own practice as well as others’ teaching practices. Through this I hoped that teachers would understand their introverted students better and view these learners in a more positive light; while still maintaining a level of confidence in preparing introverted students for a future in an extroverted favoured society.

1.2 Research Questions

The primary question that guided this study was: How is a small sample of elementary teachers differentiating their instruction to meet the needs of introverted learners while sufficiently preparing them for the world that privileges extroversion? Sub-questions that further guided this inquiry include:

- What factors do these teachers take into consideration when differentiating their instruction to meet the needs of introverted learners, and what challenges do they encounter in their practice?
• How do these teachers determine a student’s learning style? What indicators of introversion do they look for?
• What outcomes do they observe from students?
• How, if at all, do these teachers differentiate their assessment practices to meet the needs of introverted students?

1.3 Background of the Researcher

The topic of introverted students in the classroom particularly, interested me as throughout my elementary school years I considered myself an introverted learner. As an individual who was studying for a Masters of Teaching Degree, I often found myself reflecting on my own experiences in school and how this affected me. I found that reflecting on my own experiences helped me to further develop as an educator. I could assess the benefits and struggles of my experiences to better support me in deciding how I could either use or change those experiences to benefit my own future students.

As an introverted learner in elementary school, I found school too often be an anxious and overwhelming place. I felt forced to talk and engage with others, when I would rather independently complete my work. During presentations, group discussions and often small group work, I remember feeling anxious. I was more focused on getting out of the situation rather than understanding the work. I would offer to complete parts of the assignment for homework to avoid longer group discussions. During discussions, I was easily embarrassed and when any attention was on me, my face would turn bright red. This consequently made me more embarrassed creating a never-ending cycle.

Everything in elementary school seemed to revolve around the importance of social and communication skills. I always asked my teachers if there were alternative assignments, hoping
for individual work, but this was infrequently made possible. I remember when working in groups that the work was unevenly divided; I was regularly left to complete much of the work. I never told my teachers, as I was scared the students in my group would become angry with me. As a student, marks were also very important to me, I would strive for the best marks and I believed this was increasingly difficult, if not impossible, in groups. Not everyone cared about being successful and I would ultimately want to complete most of the assignment myself to ensure a good grade.

As I progressed through the educational system where the extrovert ideal continued, I gradually became more comfortable in social environments. My face wouldn’t turn red every time I spoke. I found myself socializing more by choice and eventually becoming more comfortable in the extrovert ideal. I began enjoying being in situations where, at times, I was required to lead groups of people. I found a love for learning. I began working with younger students and enjoyed learning and leading children to new discoveries and teaching them new skills.

It was during my college experience, prior to my undergraduate degree, when I finalized my decision to teach and for the first time I was confident in my abilities to be committed to the extroverted world. Prior to this, being a quiet and shy person I led myself to believe that I would never be able to be a teacher, as I did not have enough courage to be in front of a group of people.

As a student studying to be a teacher, I reflected on these experiences of being required to work in groups, or having to communicate with others and how it has benefitted me years later. Have these pressures as a young learner prepared me for the future or impacted my future? For me, I believe being pushed outside of my comfort zone or preferred way of learning and
interacting with others has better prepared me for my future. Throughout those learning experiences as a young student I have learned how to work with others, enjoy being social and manage conflict while still being able to take time to my introverted self. I no longer allowed my quiet, inner-self to influence my dreams. We live in an ideal world for extroverts and I believe that part of the educational system should be geared towards preparing introverted students to be successful in this ideal. I believe; however, it is also important to understand the power of the introverted personality and what they too can bring to the classrooms. Our world favours the outgoing and social personalities, but that should not mean that it is the only personality. As an educator, I want to meet the needs of all my students by providing them with effective skills and knowledge to better their future.

1.4 Preview of the Whole MTRP

For this research study, I conducted a qualitative research study. First, I researched and reported on current literature, then I interviewed two elementary school teachers. Finally, I coded my interviews and reported on the themes found. This paper is organized into five chapters, Chapter Two reviews the literature around introverted learners and how teachers can differentiate, if necessary, their instruction to prepare introverts for an extroverted world. In Chapter Three, the research methodology used in this study is outlined and includes information about the participants, data collection methods and limitations of the study. Chapter Four discusses and reports on the research findings in accordance to participant’s interviews. To conclude, Chapter Five reviews the implications of the findings and makes recommendations for future directions in this field of study. Following Chapter Five I provide my reference pages and appendices.
Chapter 2: Literature Review

2.0 Introduction

In this chapter I report and engage in the research of introversion and extroversion while breaking down the common misconceptions. The terms introversion and extroversion are commonly used within society to reflect the way people are perceived by others or think of themselves (Fonseca, 2014, p 1). Extroversion is more often referred to as a positive and powerful personality trait such as; popular, outgoing, happy, active, and confident. Unfortunately, introversion is often associated with negative thoughts and feelings such as; shy, lonely, depressed and self-centered (Fonseca, 2014, p 1).

To begin, this chapter discusses research relating to introversion and extroversion; specifically, whether being one or the other is a personality trait, or rather a personal preference. Next, the positive and negative stereotypes related to introverts are reported on. Examples of stereotypes are broken down and discussed as I engaged in how they first became connected to introverts. Following that section, I engage in literature on types of learning styles. In accordance to the learning styles in the literature, I compare the preferred learning styles of introverted and extroverted students. Following, I look at research to determine if the use of differentiated instruction can be a benefit to student learning meeting the needs to multiple learning styles. To conclude, I briefly discuss research on assessment practices to understand if introvert and extrovert students’ learning styles impacted their successful rate or not.

The introverted personality trait makes up one third to one half of the current population (Dow, 2013). As educators, we have both introverted and extroverted learners in our classrooms and we must be informed on how to effectively teach and assess both types of students. This
chapter informs, reports and engages on common misconceptions to assist in bettering teaching practices.

2.1 Extrovert and Introvert: a Personality Trait or a Preference?

Over the years, history has seen major shifts in how people see themselves and others, how they act; and how they want to be perceived. Prior to the twentieth century people lived in a “culture of character” where being disciplined, serious and honourable to one’s self was the ideal (Cain, 2012). The ideal character in history was reflected not on the impression one made in public but rather; their behaviour in private. The books and guides from the nineteenth and twentieth centuries emphasized on individual’s inner qualities such as their morals, citizenship, manners, integrity and reputation. There was a high emphasis on building character (Cain, 2012).

The “culture of character” began shifting to a “culture of personality” in the early twentieth century. Prior to this shift, the idea of a personality trait was non-existent (Cain, 2012). During this time, people began focusing on how others perceived them, rather than how they perceived themselves. Personality traits became powerful. Dominance of power shifted to those bold, outgoing and social individuals. Those individuals whom could publicly speak became admirable leaders (Cain, 2012). Cain explains in her book “Quiet,” how the shift to a culture of personality was “Every American was to become a performing self” (Cain, 2012, p 21). People were acting and presenting themselves in a certain way to appear more appealing to others.

Advertisements began influencing this idea of dominant personality traits and the importance of presenting yourself to others. Performance and appearance became the influence of individual’s behaviour and thoughts towards others. Cain (2012), again quotes an ad from her book, “Let your face reflect confidence, not worry! It’s the ‘look’ of you by which you are
judged most often” (p 24). As the quote explains, culture of personality is about the importance of how people are perceived. During this time, the focus became more about what was seen on the outside of a person rather than what was on the inside (Cain, 2012). Ultimately, this encouraged and influenced the power dominance between introverted and extroverted personalities. Introverts are inward thinkers and often struggle with their ability or desire to focus on presenting their outer self (Cain, 2012).

Over the last century, the “culture of personality” period has become known as the “extrovert ideal.” (Cain, 2012). As the years progressed there became distinct differences in personality types. People were either outgoing, happy and sociable or they were shy, timid and lonely. Sociable people were the ideal; they were the extroverts (Cain, 2012; Fonseca, 2014). Shy and timid individuals were different; they were introverts. Research often portrays introverts in a negative light because of the shift seen in the early twentieth century where outgoing and social people became dominant. The extrovert ideal was dominating and preferred personality type in society. Unfortunately, this shift to a dominant extroverted world created misconceptions around introverted individuals (Cain, 2012). Introverts were perceived as less: desirable, social and friendly; for this reason, extroverts dominated society (Cain, 2012; Fonseca, 2014). Many believe people are either introverted or not; however, through research there have been studies that differ in beliefs. Is introversion a trait or simply a personal preference? Discussing introversion as either a trait or preference will be the focus of the next section of this literature review.

2.1.1 Personality traits

The brain is a key organ in the human body and ultimately affects the way we behave (Tran, Craig & McIsaac, 2004). In the 1800’s, a construction worker by the name of Phines Gage
experienced a traumatic head injury where an iron rod impaled his skill leading to damage of the frontal lobe. As a result of his injury, Gage went from being a friendly, social and well-liked individual to a rude, impatient and uninhibited person (Tran et al., 2004). This drastic change in personality struck interest in the research of personalities (Tran et al., 2004). During the incident, the iron rod was impaled into Gage’s frontal lobe, somehow, only affecting his personality. Gage did not experience any changes to speech or cognitive abilities (Tran et al., 2004). As spiked interest in research, alpha rhythm studies were used to further connect one’s personality to the frontal lobe of the brain (Tran et al., 2004).

These studies used electroencephalograms (EEG) to measure the electrical activity of the brain. Researchers found that there were differences in the level of brain activity between both personality types (Tran et al., 2004). The frequency ranges of an EEG, range from 0 HZ- 50 HZ, the lower frequencies trend to be in relation to tiredness, where the higher frequency rates are related to excitement (Tran et al., 2004). In comparison to expected levels of frequencies when connected to an EEG, introverts are more likely to have lower frequency rates than extroverts. This study found this to be true, extroverts typically had three times the frequency rate of an introvert (Tran et al., 2004). Comparable to Eysenck’s arousal theory, it was found that there is a connection between low levels of cortical arousal and high frequency rates on an EEG and again, introverts were more likely to have lower frequency rates and higher cortical arousal (Tran et al., 2004). This hypothesis, held true for the extroverted personality as they were found to have lower cortical arousal and higher frequency rates (Tran et al., 2004). This study completed by Tran, Craig and Melsaac found results that correlated with Eysenck’s arousal theory that believes personalities are results of our brain activity and arousal levels (Tran et al., 2004).
According to these studies, individuals have little to no control over their personalities. Rather it is in relation to the cortical levels and frequency rates (Tran et al., 2004). These studies, however, fail to recognize or test cortical and frequently levels over time, during different situations or at various times of the day. The human brain is a powerful organ and these levels may vary depending on the situation or time of the day changing responses and behaviours. The levels may be closer to equal or complete opposite at times, thus ultimately affecting the expected introvert or extrovert behaviours at that specific time.

2.1.2 Preference

How much control do we have over our behaviour and actions, are we stuck with one personality over the other? Social psychologist, Amy Cuddy shared a study on the role we play in society; whether it is introverted or extroverted, can in fact change (Cuddy, 2012). A TEDtalk podcast followed a research study, revealing that people can vary their actions to match either introvert or extrovert behaviours (Cuddy, 2012). Research was completed, exploring testosterone and cortisol levels, discovering that higher levels of testosterone and lower levels of cortisol are linked to feeling more powerful and acting extrovert. Introvert behaviours are seen when a person’s testosterone levels are lower and their cortisol levels are higher (Cuddy, 2012). A TEDtalk podcast, looked at how the testosterone level and cortisol levels of different participants changed when told to “act” in a certain way. When acting in an introverted or extroverted way using non-verbal behaviours for as little as two minutes, can influence testosterone and cortisol levels (Cuddy, 2012). Using strictly non-verbal behaviours, participants were instructed to sit or stand in either a powerful (extroverted) pose or non-powerful (introverted) pose for two minutes. For those who posed in: powerful, extroverted ways their non-verbal behaviours such as sitting tall or open body language, made them feel more powerful, confident and self-worthy after two
minutes. Whereas for those asked to sit in: less powerful, introverted, non-verbal ways such as; hunched over, holding body or touching their neck, resulted in feeling down and lacked confidence (Cuddy, 2012). Those participants that acted extroverted had a 20% raise in their testosterone levels and a 25% decrease of cortisol levels (Cuddy, 2012). The study found that the “fake it ‘till you make it” phrase held true for ways in which participants in the study choose to act. If we act a certain way long enough it becomes more natural feeling (Cuddy, 2012). In a classroom, exposing students to various activities; aimed for extroverted and introverted students, the students could adjust to the demand and can succeed (Cuddy, 2012). Similar to trying something new, it is normal to feel nervous or intimidated in the beginning, but once the individual has tried it, they realize it is not as bad as they imagined. According to the brain activity, this process may appear that the individual acts introverted first; however, as they become more aware and comfortable the brain activity can shift making that person appearing more extroverted (Cuddy, 2012).

New or unknown activities and demands can appear as overstimulating for an introvert, resulting in overwhelming and exhausting feelings (Kuofie, Stephens-Craig & Dool, 2015). Often this makes them less likely to engage in such activities, unless required to do so. This does not mean that an introvert is incapable of acting extrovert, it means, depending on the situation they may choose to act more introvert, as it is less tiring (Zelenski et al., 2013; Robinson, Meier, Wilkowski & Ode, 2007). In contrast, many extroverted introverts can engage in similar behaviours. There are times in which a sociable and outgoing individual will decide they would rather stay home and watch a movie for the night instead of going out. In this case, an extrovert is engaging in typical introvert behaviours. This becomes a preference outside their typical personality trait (Zelenski et al., 2013).
Many of the great leaders in the world consider themselves introverts; these are individuals who by definition are quiet, shy and lack communication skills. Leaders such as: Martin Luther King Jr., Barack Obama and Mother Teresa describe themselves as introverts (Kuofie et al., 2015). This often leaves to misconceptions as these leaders have demonstrated repeatedly, that they can act extroverted (Kuofie et al., 2015). These individuals who were in powerful leadership roles, can act either introverted or extroverted based on the situations. These leaders can interact with large groups of people and make important decisions; they acted in extroverted ways when the situation required it (Kuofie et al., 2015). Some of the positive leadership qualities that introverted leaders can possess are traits such as; cautious, organized and detail oriented (Kuofie et al., 2015). When referring to elementary classrooms introverted students can lead groups and work in teams. As teachers, it is important to ensure that introverted students are given opportunities to work in leadership roles to gain skills that can be transferable to their futures (Dovros & Makrakis, 2012).

Further, research has found little to no long-term effects for introverts when forced or encouraged to act extrovert (Dovros & Makrakis, 2012). It was found to have no long-term effects on their mind, body and spirit. Short term effects; however, included; tiredness, and exhaustion from the over stimulation of acting extroverted (Zelenski et al., 2013). Most commonly, introverts will weigh the pros and cons before attending or participating in social situations. Typically, introverts find more enjoyment in quiet activities such as: reading a book, watching a movie or other quiet less social activities (Zelenski et al., 2013). Research shares; however, that both introverted and extroverted personalities when engaging in social activities, find enjoyment. Introverts; unfortunately, can feel physically and psychologically fatigued after these social situation, thus participating in these activities less often (Zelenski et al., 2013).
Research fails to find long term consequences for introverts who challenge their inward personality.

Research suggests that personality traits such as introverted and extroverted, are on continuums (Kuofie et al., 2015). There are extreme introverts and extroverts; however, most people fall somewhere in between, where they present both introvert and extrovert traits (Kuofie et al., 2015). Some people are more introverted than extroverted and vice versa, but most people possess personality traits of both. People will often prefer one trait over the other ultimately influencing their typical behaviours and thoughts towards social situations (Kuofie et al., 2015). If a person presents more introverted behaviours this does not mean typical extroverted behaviours are non-existent, these behaviours are simply less preferred. Many people can act extroverted or introverted and will depending on the situation they are faced with. As educators, it is our responsibility to challenge our students and provide a healthy learning environment to prepare them for their future.

2.2 Powerful versus Powerless: Stereotyping

The way in which people act, whether introverted or extroverted puts a label on individuals. As an introvert, common stereotypes include; self-centred, quiet, narcissist, and handicap (Johnson, 2012). In accordance to the Diagnostic and Statistical Manual of behavioural disorders, individuals who possess introverted traits tend to also be classified as having social anxiety, avoidant personality or anti-social personality disorders (Kuofie et al., 2015).

As discussed previously, the shift to the extroverted ideal that occurred during the twentieth century created many of these negative misconceptions (Cain, 2012). This shift in history came at a very demographically changing time where more families were moving from
small rural areas to large, busy urban cities. The natural flowing change to society had a major influence on how members of society perceived themselves, but more importantly how other perceived them (Cain, 2012, p 23). To be liked by others; being social, friendly and outgoing became seemingly more important. Unfortunately, for nearly half the population this was a much more difficult act.

In the small familiar rural areas, most of the population who lived there, had been there for many years. Members of that area were family and neighbours, which everyone knew and grew up with (Cain, 2012). The shift to an urban life; however, changed that atmosphere to an area surrounded by new experiences and strangers. For the introvert population, who were now faced with a constant overstimulation from their new urban life, began to struggle (Cain, 2012). The divide between introverted and extroverted individuals became clearer now. Extroverted people were the ideal personality trait to live in a busy overstimulating world; they were better able to manage these demands (Cain, 2012; Johnston 2012). The introverts; however, needed alone time more frequently to rejuvenate and release stress, thus leaving others to believe introverted people were self-centered, arrogant and odd (Zelenski et al., 2013; Robinson et al., 2007). This happened not because of an exchange of words but only as the exchange of actions. To many extroverted people, enjoying their social life, was difficult to understand why introverted people would choose to stay home, rather than socialize with others. Due to misconceptions about how exhausting a stimulating environment can be to an introvert, extroverted people began believing introverted people thought they were “too good, or better than the others” (Hills & Argyle, 2001; Robinson et al., 2007). This leading to introverts being seen as arrogant and self-centred.
It was unclear why introverted people chose to be alone at times, a study by Hills and Argyle (2001) looked deeper into the idea of solitude. Introverts would often use isolation to re-coup and relax their minds after an overstimulating experience (Hills & Argyle, 2001). A similar comparison was made to the reasons religious groups, at times, require members to pray and spend time in solitude. Solitude has been found to be an essential tool to calm the mind and body allowing their mind to focus on something outside of the demanding and stimulating world around them (Hills & Argyle, 2001). Religious groups believe that regular isolation from others can enhance individual happiness and wellbeing (Hills & Argyle, 2001). Introverted individuals also benefit from the use of isolation after overstimulating and overwhelming experiences to re-focus their minds (Cain, 2012; Hills & Argyle, 2001).

Many people, not just those who practice religion or are considered introverts can benefit from solitude or independent time (Hills & Argyle, 2001). This becomes time that individuals take for themselves providing time to understand their purpose and reflect (Hills & Argyle, 2001). As a key part of development for individuals and students is to take time for the inner self (Hills & Argyle, 2001; Robinson et al., 2007). Learning about your inner self can be encouraging for ones’ self-motivation and self-regulation (Robinson et al., 2007). Solitude does not have to look like a person sitting in a room alone, it can be as simple as working independently where others are not pressuring or expressing their opinions. In a busy classroom setting this could be meditating or silent reading for a short period after outdoor activities, gym class or group work to allow students to re-gain focus in the classroom (Robinson et al., 2007).

2.2.1 Living a double life

Research indicates that negative thoughts and feelings geared toward introverts have created and continue to create a power divide amongst introverts and extroverts (Hills & Argyle,
Introverts are compared to their social counterparts that consistently re-enforce the negative stereotypes. For those individuals who are labelled as introverts they continue to be the less desirable and odd personality type (Hills & Argyle, 2001; Robinson et al., 2007).

For an extrovert, it is typically easier to navigate through society because of their natural outgoing personalities (Robinson et al., 2007). This makes a natural connection between their personal and public lives. In comparison, introverts struggle with the connection from their personal lives to public lives (Robinson et al., 2007). At home, they are comfortable and are easily able to remain in an under stimulating environment. Unfortunately, once outside they are pushed into an overstimulating extrovert world, they are uncomfortable and feel like someone they are not (Robinson et al., 2007). Fonseca, describes the idea of introverted kids as having two masks on their face (Fonseca, 2014). The first mask is put on for everyone to see, the other one is a mask of the true person inside (Fonseca, 2014, p 96). Fonseca explains that the outer mask works as a block from the constant stimulations around them. This is true for students in classrooms as the noise level and vibrant visuals around the room create very stimulating environments (Fonseca, 2014). The mask works as it allows the overstimulated introvert to disengage from the world around them. Unfortunately, to teachers this can appear like unmotivated and disengaged students (Fonseca, 2014, p 96).

Misconceptions of introvert students have led to common labels such as being uninterested in learning, when in fact this is most often the opposite (Fonseca, 2014). Introvert students regularly enjoy learning and will engage in discussions. Many teachers do not realize that with time to process information, these students can be engaged at a higher rate (Fonseca, 2014). Introverts are deep thinkers and after inner thought, many can feel comfortable sharing in discussions (Fonseca, 2014, p 97). When the stereotypes of introvert individuals and students are
better understood, educators can help them to succeed comfortably in an extroverted world. Stereotypes and misconceptions can be broken down as teachers become more comfortable and familiar with the learning style of preference for our introverted students.

2.3 Learning Styles

The way in which individuals take in and process information is referred to as a “learning style” (Dovros & Makrakis, 2012). In classrooms, there are several diverse learners. When specifically exploring learning styles, researchers have found that as educators it is imperative that multiple types of learning styles are being incorporated into each lesson (Dovros & Makrakis, 2012). While incorporating more than one learning style in lessons, research has proven that more students gain a better understanding of the new material (Dovros & Makrakis, 2012).

In 1983, Dr. Howard Garden developed the multiple intelligences theory (Eisner, 2004). This theory aimed to prove that students learn in a variety of ways. The eight learning styles that Garden describes are: visual spatial, intrapersonal, interpersonal, logical, linguistic, naturalistic, musical and kinaesthetic (Eisner, 2004; Roesdiyanto, 2014). Current research found that no two minds are alike and each student has different ways of learning (Eisner, 2004). Most individuals have some skills in each of the intelligences; however, most will excel with instruction in one or two styles (Armstrong, 2010).

Learning styles are students’ preferred ways of learning, or the way in which they learn best from (Roesdiyanto, 2014). Research indicates that when students’ preferred learning styles are used the likelihood of them engaging in learning and attaining new information greatly increases (Hatami, 2013). When discussing a persons’ preference to something whether that is in
social or learning settings, leads to higher levels of comfort (Eisner, 2004). When a person is in a comfortable state, they are often content and able to think clearer. In a preferred learning setting students are more likely to do well on their assignment because they are in a comfortable state of mind and confident in their abilities. (Hatami, 2013; Nussbaum, 2002). As educators, it is difficult to accommodate this with each student for every assignment, but for students to succeed there should be opportunities for all students to learn in their preferred learning style whenever possible and appropriate (Nussbaum, 2002). Having a balance of learning styles in the classroom can greatly increase student success and engagement (Hatami, 2013).

Learning styles are like the idea of introversion in how they use continuums to show individual preferences (Nussbaum, 2002). A student may prefer visual learning and fall closest to that side of the continuum, but might also, in some situations prefer auditory learning. Students placement on the continuum can shift based on the required task (Nussbaum, 2002). This creates and shows flexibility in student’s learning styles based on the situations, while still having students maintain a reasonable level of comfort (Nussbaum, 2002).

Prior to students being able to know and show their preferred learning style and excel in it, they must first be exposed to them (Roesdiyanto, 2014). Erickson believes for students between the ages of three and five there must be opportunity for them to use all multiple intelligences. According to Erikson’s theory this is the age in which children are more sensitive to the world around them and are able to absorb the most amount of information (Roesdiyanto, 2014). As students grow and develop they become more dominate in one or more intelligences, or rather their preference becomes known (Roesdiyanto, 2014). Students need to learn how to learn, and this can be done through using multiple learning styles. Students can identify where they feel most comfortable and begin to build on that strength (Roesdiyanto, 2014).
Educators will often be able to determine a student’s preferred learning style through the grades received in subject areas (Eisner, 2004). For example, a student who excels in music, but struggles in language may be more of a musical learner rather than linguistic. Research has found that the idea of teachers knowing students’ preferred learning style or strengths is most beneficial to use to build up their weaknesses (Eisner, 2004). When students’ learning needs are being met in the classroom, research has proven that students will understand the material faster and continue through the curriculum as expected (Eisner, 2004).

2.3.1 Intrapersonal learning style

For the introverted personality, the most commonly preferred learning style is known as intrapersonal (Roesdiyanto, 2014). The intrapersonal learning style refers to those individuals in the classroom who excel when given the opportunity to work alone rather than required to engage in group work (Roesdiyanto, 2014). For these students, it is also important to give enough time to allow them to process the information (Eisner, 2004). At times these students may appear to be “day dreaming” or disengaged from a class discussion, when they are processing the information. Allowing for processing time allows students to make sense of the material as well as personal connections (Eisner, 2004). The students who excel in the intrapersonal learning style require quiet spaces where they are better able to engage in inner thoughts and reflect on their learning. The intrapersonal learning style are most often preferred by independent learners where they can set goals and allow enough time to reflect on the information being taught. These are learners that like to investigate problems and develop solutions independently rather than with help or others input (Roesdiyanto, 2014).

Intrapersonal learners are often misunderstood in the classroom, research found labels such as; disengaged, unmotivated and withdrawn from classroom learning to be common for
these types of learners (Laney, 2002). These are similar negative labels that introverted individuals are given, this often why the introverted personality trait is associated with this learning style. Research has found differences in brain function between introverted and extroverted people, which helps to explain misconceptions about these learners (Laney, 2002). Extroverted people have shorter pathways for neurotransmitters to pass through to the brain, than introverted people (Laney, 2002). The difference is clear when researching processing times from each personality trait. Introverts, who have longer pathways for neurotransmitters to pass through the brain, explains why in a classroom they may appear withdrawn, when they are deep in thought (Laney, 2002, p 74). Introverts tend to engage in classroom discussions later in the class as they need time to process the information, think about what they can add to the conversation and then be confident in sharing their opinions and ideas (Eve-Cahoon, 2003; Laney, 2002). This can often “shock” an educator as many misunderstand the different brain functions and did not realize the introvert student was deep in thought and reflection prior to sharing. In contrast, extrovert’s neurotransmitters have a shorter path to flow through explaining their quick response time in classroom discussions (Eve-Cahoon, 2003). A classroom discussion is a typical overstimulating environment for an introverted learner, however, understanding the difference in brain functions can better help educators to understand their diverse learning community. Rushing classroom discussions can result in nearly half a classroom of students to be unable to share their thought and questions (Eve-Cahoon, 2003; Laney, 2002).

The intrapersonal learning style can pose many challenges in current times as the education system is aimed at preparing students for an extroverted world in which students will be forced to interact with others and work collaboratively (Laney, 2002). This can be challenging for an intrapersonal learner and their teacher to balance the use of multiple intelligences to
ensure students are effectively prepared (Fonseca, 2014). The use or misuse of multiple intelligences can influence students’ development through the curriculum and ability to navigate through society. The current school system is turning its approach to a more collaborative setting where students use each other to work through problems, believing that the; “two heads are better than one” (Fonseca, 2014, p 97). This is; however, the opposite preference of up to half of the student population and can influence a student’s development. This creates challenges for teachers whom are expected to teach to all their student needs, while preparing them for an extroverted world.

Understanding the brain function of an interpersonal learner, I believe makes it is easier to meet the needs of those students. It is not that these students are unable to participate in collaborative learning, but rather they may need a few extra minutes to first reflect on what is expected of them (Fonseca, 2014). Minor adjustments to classroom expectations can assist these learners in being able to succeed and be challenged. Providing balance is important to ensure that overstimulated minds have time to re-gain focus and proceed to the next activity with ease.

2.4 Differentiated Instruction

The idea of differentiated instruction within the classroom is a rather new phenomenon. In the past, western culture placed a heavy emphasis on traditional teaching practices. Traditional teaching was referred to as the teacher-centred approach (Walker, 2007). An approach in which teachers were lecturers at the front of the classroom “pouring knowledge” into student brains (Walker, 2007). Discussions would happen between teacher and students, rather than student to student and teacher (Walker, 2007). Students are unique individuals whom have different values, interests, abilities and learning styles. Each brain differs in the way and speed in which
information is processed, placing more emphasis on the need for differentiated instruction (Walker, 2007; Gibbs, 2014; Cox, 2008).

Teachers can differentiate their instructions through modifying content, process or the product. Content refers to what is being taught, the process is how the content is taught and the product is how a student demonstrates their learning. Differentiating instruction can occur during any or all these stages (Cox, 2008; Gibbs, 2007). Having differentiated instruction in the classroom can significantly change the learning environment and learning outcomes that occur for students (Cox, 2008; Gibbs, 2007). This creates a shift from a teacher-centred approach to a more student-centred approach where students can guide their own learning (Walker, 2007; Gibbs, 2014). Differentiated instruction focuses on all the students’ differences, interests and abilities and incorporates learning around these. Learning starts where the student is, rather than where the curriculum is (Cox, 2008).

Differentiated instruction allows each student to be taught new materials per their current level of understanding (Cox, 2008; Gibbs, 2007). Through this method, teachers can vary their instruction in how students learn curriculum content, rather than what the students are learning (Walker, 2007). A teacher may differentiate their method of instruction through small group discussions, whole class instructions or individual reflections. Differentiated instruction can also be the way in which the classroom is set up; whether in rows, groups or pairs (Cox, 2008; Walker, 2007). When planning differentiated instructions, teacher must have a purpose for their lesson to develop the best delivery of instruction, including how the delivery will look (Cox, 2008; Gibbs, 2007).
2.4.1 Differentiated instruction for introverted learning styles

As learned previously, introversion is often overlooked in the classroom as unmotivated learners (Walker, 2007). These students’ preferred way to learn content, process information and demonstrate their learning falls outside the traditional instruction of the teacher (Walker, 2007; Cox, 2008). Lessons and activities are more often geared to group work, and collaborative problem solving in preparation for the outside extroverted world. For an introverted learner, this can often be difficult to engage in as teachers are ineffectively delivering their instructions. Thus, leaving these learners to appear unmotivated and disengaged (Walker, 2007; Cox, 2008).

Research has indicated that introvert students process information differently than extroverted students (Walker, 2007; Cox, 2008). These students learn differently and at different paces; thus, benefitting from differentiated instruction. Research has found that differentiated instruction specifically for introverted personality students might look like; providing students with one-minute reflection time, goal setting opportunities, choice or real-life connections (Martin, 2014). Each of these strategies give introverted students’ purpose in completing the assigned work. These strategies may be implemented during group work, independent work or in whole group discussions. Introverted students are known to dislike group work and large group discussions as it is often outside of their comfort zones (Martin, 2014). With these strategies and knowledge of introverted students’ preference a teacher may, in a small group assignment, have the students independently reflect for one minute prior to sharing. This gives an introverted student time to engage in their inner thoughts and make reflections prior to having to share with their group (Martin, 20014). Allowing this can give an introverted student more confidence in engaging in the work (Martin, 2014).
Next, allowing the students choice of activities within the group can encourage an introverted student to engage in an area of interest (Martin, 2014). Giving students individual responsibilities in groups allows an introverted student the opportunity to set small goals for themselves, such as completing their one part and then sharing it with the group (Martin, 2014). For introverted students one of the most important methods a teacher needs to provide is reflection time. Reflection time can be for short periods, but it critical to allow processing time and confidence to contribute to discussions (Martin, 2014).

Providing differentiated instruction in classrooms, is about the balance of meeting each students’ needs and preferences (Martin, 2014). For introverts, whom live in an extroverted world, the need to be able to work in group and social settings is important. For this reason, group work should not be eliminated from the classroom as a way of meeting that student’s needs. Rather there should be a balance between group and independent work (Martin, 2014). Working independently is simply a preferred way to learn for introverted students, but it is not the only way.

2.4.2 Differentiated assessment

Similar to differentiated instruction, differentiating assessment has been found to be critical in elementary classrooms (Bittel & Hernandez, 2006; Walker, 2007). Often, standardized testing fails to reach multiple learning styles and can inaccurately measures students’ understanding. Standardized testing, such as multiple choice tests are simply checking the students’ factual knowledge, rather than the understanding of “big ideas” (Bittel & Hernandez, 2006). The goal of differentiated is to allow students to demonstrate their knowledge and critical thinking abilities in various ways (Bittel & Hernandez, 2006). This allows students to make connections and find purpose in their learning. Demonstrations of learning may look like; skits,
written reflections, or visual demonstrations. These types of assessments have been found to be more accurate, as a wider range of student abilities and expressions are displayed (Bittel & Hernandez, 2006).

Many factual knowledge assessments fail to allow students the opportunity to express the big ideas of the content they are being tested on (Bittel & Hernandez, 2006). When the big ideas are not clear to students, they lose meaning and purpose in the content. Research found that students are much more engaged in their learning when the purpose is clear (Bittel & Hernandez, 2006). For introvert students, this is essential as they are deep thinkers, and look for connections. The introverted personality and inward thinkers and when these students are given factual knowledge assessments they are unable to find meaning and purpose; therefore, struggling to produce accurate assessments. Ineffective assessment practices ultimately harm students’ views of school (Bittel & Hernandez, 2006).

2.5 Conclusion

In conclusion, as research continues to study the differences of introversion and extroversion misconceptions are being broken down. It is important to understand that there are strengths and weaknesses to each personality, rather than introversion as a weakness and extroversion as a strength. As current Western Culture looks highly of the extroversion ideas, extroverts remain the “ideal” personality as they are referred to more positive and powerful traits such as; popular, outgoing, happy, active, and confident. Introversion is often associated with negative thoughts and feelings such as; shy, lonely, depressed and self-centered; however, the more studies that look at the power of introversion the better chance introverts can be seen in positive light. Introverts are independent, deep thinkers and goal-oriented. These are positive and powerful traits that introverts are becoming known for.
This chapter discussed the idea of introvert and extrovert personalities as personal preference, rather than a personality trait they can only function by. Both introverts and extroverts can act in the opposite’s trait, but simply prefer one trait over the other. Next, the research on stereotypes pertaining to introvert such as unmotivated learners were challenged. It was found that due to the brain processing information slower these students are viewed as unmotivated, when in fact they are deep in thought. Using differentiated instruction, multiple learning styles can be met having a positive impact on engagement and success in the classroom for introverted learners. When misconceptions are understood by teacher, introverted students are better able to succeed within the classroom. Introversion is a powerful and strong personality trait that should not be misjudged or subjected to negative stereotypes. Through the review of the literature it became clear that introverted learners are often misunderstood both inside and outside of the classroom. This research study makes a unique contribution to the understanding of introverts by exploring ways in which educators have taught, challenged and successfully prepared their introverted students for the extroverted world. Introverted students will then be seen for their positive and unique qualities in the future.
Chapter 3: Research Methodology

3.0 Introduction

In the following chapter, I describe the research methodology. First, I review the general approach, procedures, and data collection instruments, before elaborating more specifically on participant sampling and recruitment. I then, explain the data analysis procedures and review the ethical considerations relevant to my study. I identify a range of methodological limitations, but I also speak to the strengths of the methodology. Finally, I conclude this chapter with a summary of key methodological decisions and my rationale for these decisions, given the research purpose and questions.

3.1 Research Approach and Procedures

This research study was conducted using a qualitative research approach that included reviewing relevant literature and existing research relevant to the research questions and purpose of the study. Further, for this research study I conducted semi-structured, face-to-face interviews with two elementary school teachers. This type of research focused more on understanding human beings as an informative approach of gathering data, allowing for more open-ended and in-depth participant responses (Jackson, Drummond & Camara, 2007). Carr (1994) found many negative implications against qualitative research historically because of its use of human questioning and interactions rather than measurable data. Qualitative research was questioned for its accuracy and subjectivity as a result. Over the years as research continued to develop, Carr (1994) claimed that both types are research can be valuable and individually can serve their purpose.
Both qualitative and quantitative research approaches have their places in research and both can be effective research methods based on the researcher’s purpose of study (Carr, 1994). Qualitative research, unlike quantitative see humans as “instruments” who have experiences and reflections of those. This type of research focuses on communication; it is a collection of stories and experiences. The reflection of experiences become useful and key ingredients while conducting a qualitative research study and answering the research question at hand. Qualitative research approaches often use face-to-face interviews with participants where their open-ended responses allow for descriptive and detailed responses. These often lead researchers to much more information. A quantitative research approach; though, is often more structured in possible participant responses, allowing for little free-choice in deeper explanation. Quantitative research focuses more on trends, generalizations and categorizing using measurable data (Campbell, 2014).

For the purpose of my research and the questions that I have developed for participants, a qualitative research study was the most appropriate approach. It allowed opportunity to inquire about the lived experiences of a small sample of elementary school teachers. Unlike quantitative research, which is best for answering “what” questions, qualitative research is best for exploring “how” and “why” questions (Campbell, 2014). Through this research approach I was better able to look at how a small sample of teachers are experiencing and responding to the needs of introverted students in their class, and what approaches they use that are preparing students for the extroverted world.

3.2 Instruments of Data Collection

There are a variety of ways when using a qualitative research method, to collect data. Ways to collect the data include observations, documents and interviews (Gill, Stewart, Treasure,
& Chadwick, 2008). The primary instrument for data collection used in this study was the semi-structured interview protocol. This protocol was chosen as these interviews provided the opportunity to hear about participants lived experiences (Creswell, 2007). A semi-structured interview is one of three types of interviews that researchers can use during their studies. The semi-structured interview format is often preferred by researchers as it allows them a predesigned and planned interview that attends to their research focus and questions, while leaving room for participants to elaborate and even direct attention to areas previously unforeseen by the interviewer (Gill et. al., 2008).

Using a semi-structured interview as a means of collecting data may be conducted individually or in a group; for this study, I conducted individual face-to-face interviews. Conducting individual interviews allowed me the ability to explore deeper into each participant’s experiences, views and motivations (Gill et. al., 2008). My interview protocol (located in Appendix B) is organized into five categories. The first category are questions about the participants’ background of teaching, followed by questions about the teacher’s perspectives and beliefs in regards to teaching introverted students. The third section asked questions about the teachers’ practices and how they have or have not met the needs of introverted students, next challenges that the participant may have faced, followed by the next steps for supporting these students.

3.3 Participants

For this section I review the sampling criteria I established for the participant recruitment in this study. I review various ways in which opportunities for possible teacher recruitment may occur, and followed by a section in which introduces the participants. I introduce the participants
individually to provide a brief background for each. The following sub-sections address the methodological decisions that relate to the participants in this research study.

3.3.1 Sampling criteria

The following criteria are required for each teacher participant:

- Must have a minimum of five years teaching experience
- Is teaching at the elementary level (Kindergarten-Grade 8)
- Uses differentiated instruction in everyday practice
- Is well informed with their personality types and preferences.
- Identifies themselves as introverted learners previously but now identify as extroverts

First, I required teachers with a minimum of five years’ experience. I wanted to ensure the teachers I interviewed had the opportunity to use a variety of inclusion activities and differentiated instruction. With more experience these teachers would have noticed if there was a difference in the participation of their introverted students or not. Teachers who have this opportunity can better speak to ways they are preparing introverted students for an extroverted world.

Next, I recruited specifically elementary level teachers. I chose the elementary level as criteria for this study as it is the level of teaching I am interested in pursuing. Elementary schools are often seen as the building block for the rest of students’ lives and research has found that student engagement in academics and social activities result in higher levels of school success (Kwon, Kim & Sheridan, 2014). Willingness and enjoyment in school engagement through academics and social activities can become the first step in preparing students for an extroverted world (Kwon, Kim & Sheridan, 2014).
Another sampling criteria used for this study was interviewing teachers who, in their everyday teaching use differentiated instruction. Teachers using differentiated instruction are meeting the needs of all or most of their students, including introverted students. These teachers can then speak to different types of instruction that may or may not be effective for an introverted student.

The final sampling criteria for this study looked at teachers who were well informed with their personality types and preferences. They identified themselves as introverted learners previously but now identify as an extrovert. These teachers have experience learning in a non-preferred learning environment and can speak to their level of comfort. These teachers can use their experience to describe how they differentiate their instruction to ensure that all students, including their introverted students, feel comfortable in their learning environment.

3.3.2 Recruitment

Appropriate sampling for qualitative research can be as imperative as the outcome. This is especially important for qualitative research studies as they are completed on a small sample size (Marshall, 199). There are three types of sampling: judgement, convenience and theoretical. Marshall (1996) claims the judgement sampling technique to be the most common and purposeful. The researcher in these types of samples has more control over who is a participant, helping to ensure appropriateness of their knowledge about the study. A convenience sample is often more difficult for researchers to use as participants may not meet all the requirements of recruitment; thus, not supporting the research study’s purpose (Marshall, 1996).

For the recruitment of this study I relied on a purposeful and convenient sampling. Using each of these sampling methods allowed me to find participants that could speak to their
thoughts, views and experiences of teaching introverted learners. Convenient sampling refers to samples that are “easily assessable and willing to participate” (Teddlie & Yu, 2007). Being immersed in a community of teacher colleagues and mentor teachers allowed me to use convenience sampling, relying on my existing contacts and networks for the recruitment of this study. Relying on my existing network of teacher colleagues gave me a large sample size and a possibility of participants with little knowledge of introverted learners. For this reason, I used purposeful sampling to limit my sample size and ensure my chosen participants effectively fit the recruitment criteria. With purposeful sampling, I created a list of recruitment sampling criteria that participants in this study would meet (Teddlie & Yu, 2007). This ensured that those participating in the study would be able to speak to their thoughts, views and experiences in regards to teaching introvert students.

3.3.3 Participant bios

Annie has been teaching in Ontario for twenty-one years, she has taught at multiple grade levels and within various positions in schools. Annie has taught all grades from Kindergarten to Grade Six, she has taught English as a Second Language, Special Education Resource Teacher and administration. Annie is currently a Grade One teacher and is also a member on the school’s Primary Cooperative Inquiry, and School Improvement Teams. Annie continues to welcome students and student teachers from various schools to support their learning in the field of teaching. She participates in ongoing professional development and integrates these new learnings into her classroom.

Annie considers herself an introvert, she enjoys her quiet space and independent interests. She does; however, recognise that because of the profession she is in, she is forced to be an extrovert at times. As an introverted student doing through school, Annie felt that her needs were
not being met. She felt her teachers often forgot about her and that overall school was an overwhelming experience. Annie recognises this and had carried this experience into her classroom. She has multiple strategies to ensure she notices each of her students daily; she uses differentiated instruction to provide choice and create balance in her classroom to support introverted and extroverted learners.

Jessica has been teaching for nine years: she taught English in England for three years then moved to Ontario where she has been for the past six years. Jessica has taught all grades from Kindergarten to Grade Eleven in one capacity or another over her nine years of teaching. Jessica is currently teaching a Grade Six/Seven split class and has taken the lead on her school’s mental health committee, equity club and hopes to support her school in getting to a healthy school status.

Jessica identified herself as mostly introverted, but in situations, an extrovert. As a teacher, she feels she is forced to be an extrovert, but also in situation where she is comfortable, Jessica identified herself as an extrovert. As a younger learner, Jessica identified herself as an introvert and believes herself to be one in most situations. Jessica explained some struggles she faced as a young introvert learner. She found that due to her quiet tendencies, teachers often failed to see her or support her. Jessica shared that as a student she would often change schools, which she believed to be extremely difficult for an introvert. She was amazed at the difference she saw in her grades within one year. She went from failing grades to well above standard grades. Jessica strongly believed that the way she was taught and the way the teacher saw her is what supported her learning journey. Jessica now looks back on her struggles and realizations as an introverted learner and brings her positive experiences to her classroom.
3.4 Data Analysis

Gläsel and Laude (2013) refer to data analysis in a qualitative research study as “cleaning and organizing of data to generate findings” (p. 75). Data analysis is a demanding and complex phase for researchers of a qualitative research study. Qualitative research does not aim to quantify data as it may create misleading results, rather it uses a process to develop categories and theoretical explanations (Pope, Ziebland & Mays, 2000). Analytical categories and theoretical explanations are used to answer the research study questions.

When conducting qualitative research, data analysis can begin during the collection of data or immediately after, unlike quantitative data in which data analysis cannot begin until all the data has been collected (Burnard, Gill, Stewart, Treasure & Chadwick, 2008). Being able to begin analysing data after conducting the first interview allowed me to identify areas in the interview that I could have further questioned and that I could address in the next interview. After all the data was collected, the data analysis process continued to develop by first transcribing each interview. After each interview was transcribed I began reading and interpreting my raw data. Raw data in a qualitative study can come in various forms including, but not limited to, interview transcripts, recorded observations, photographs or policy manuals (Thorne, 2015). These are used for qualitative and quantitative research studies; however, Thorne (2015) clarifies that the difference is the assumptions, principles and values about truth and reality. A qualitative researcher wants to learn about the thoughts and feelings of their participants in relation to the research question; whereas a quantitative researcher focuses on science as the means to discover the world and understand reality (Thorne, 2015). For the purpose of this research study my raw data was in the form of interview transcripts.
Once a researcher has their raw data and are ready to begin interpretation their data there are two options, one is to use a computer software program or to complete the analysis by hand (Burnard et al., 2008). Due to the complexity of analysing data and choosing to do data analysis by hand, I read one interview at a time to ensure accuracy of interpretations. First, I coded the data in accordance to the research questions. To code data, I first read and made notes or short phrases that where written in the margins. These words and phrases were used to summarize what was said in that section on the interview (Burnard et al., 2008). These words and phrases then became codes, which summarized each section of the interview and were then used in the next step of analyzing. Through the development of codes, patterns were noticed and used for the development of categories. Before beginning to put the codes from the first interview into categories, I coded the second interview. After all the data was coded, the codes where placed onto a blank paper and sorted into multiple categories. Completing this analysis eliminated duplicate codes. As the list of categories is developed, I searched for overlapping or similar categories to further refine the data (Burnard et al., 2008). After completing this step of analysing the data I had twelve categories. The final step of analysing data is the development of themes. From the twelve categories, I sorted them into five sections, ultimately becoming the themes found from the data collected. These themes are later explained in Chapter Four. Finally, I recognized null data found in the research and speak to the significance of it within the study.

3.5 Ethical Review Procedures

According to Clark (2003), ethical issues and dilemmas can occur in any stage of a qualitative research study. This type of research is unique and requires a mutual understanding, acceptance and standpoint between researcher and participant (Eide & Kahn, 2008). Though the focus of the study has an expected process, Eide & Kahn (2008) explain inquiry as being
unpredictable, non-replicable and uncertain at times. Participants are responding to research questions through previous thoughts, feelings and experiences which may trigger emotional responses. With an in-depth understanding of issues and literature on introverted students, there are no known risks for participation in this study.

Participants were informed prior to the semi-structured interview of the ethical issues relating to confidentiality and consent. Participants were provided these documents either in person and/or through electronic mail, at which time a summary outlining the purpose of the study was provided. The ethical implications, participant expectations and consent form (located in Appendix A), permitting audio recording during the interview were provided to each participant.

Participants’ identities remain confidential and any identifying markers related to their schools or students were excluded. All participants were assigned a pseudonym and were given the opportunity review the transcripts and clarify or retract any statements before the data was analysed. Data remains confidential to the researcher by storing media files on a password protected laptop and will be erased after five years. Prior to the interview and throughout the interview participants were notified and reminded of their right to withdraw from participation or pass on a question at any stage of the interview.

3.6 Methodological Limitations

The largest drawback of this study was due to the limited number of participants being interviewed, the data was not able to be generalized to the large population (Crouch & McKenzie, 2006). The broader research community often provide limited acceptability to small sampled studies due to the validity of the study. Due to the ethical parameters of approval for this
study, only teachers could be interviewed. This failed to allow students, parents or school community members to be interviewed. It also disallowed the ability to conduct surveys or observe classrooms.

Crouch and McKenzie (2006) emphasised the importance of researchers immersing themselves in the field as a way of conducting in-depth, focused but free-flowing interviews. These types of studies seek to investigate subjective thoughts, feeling, reactions and experiences of the participants. Marshall, Cardon, Poddar, & Fontenot (2013) found that when sample sizes were too large, researchers were unable to devote sufficient amounts of time to analysing the data. Using a small sample size allowed me to generate further insight into the data collection while providing authentic findings (Crouch & McKenzie, 2006).

The ethical parameters of this study only allowed for teachers to be interviewed. This parameter allowed teacher voices and experiences within the teaching profession, to be validated. Teachers could reflect on their practices while having a free space to speak to what matters most about meeting the needs of all their students.

3.7 Conclusion

In this chapter I explained the research methodology I used to conduct my research study. First, I discussed the research approach and procedures. I used and highlighted the definition of a qualitative research study throughout this chapter. Further, I clarified and explained the reasoning for why I chose this form of research such as its openness to participants’ thoughts, feelings, beliefs and personal experiences. This chapter further discussed my recruitment criteria and the biographies of each participant in my research study. Each participant had a personal connection to the topic of introversion as well as teaching experiences with introverted students.
creating a purposeful sample. This chapter described the process in which I developed the data, finding five major themes. Following, in Chapter 4, I report these research findings.
Chapter 4: Research Findings

4.0 Introduction to the Chapter

This chapter presents and reports on the findings that arose during the research interviews with two teachers who are committed to meeting the needs of their introvert students. Throughout the data analysis process, I carefully and frequently reviewed my research question: How is a small sample of elementary teachers differentiating their instruction to meet the needs of introverted learners while sufficiently preparing them for the world that privileges extroversion? While examining my participants’ experiences and teachings practices. In the discussions participants’ views and opinions are shared and connected to my chapter two literature review. Findings are organized into five findings:

1. Participants explained how their own previous negative experiences of not being understood as introverted learners are major factors they consider when meeting the needs of their introverted students

2. Participants indicated similar social and behavioural factors that help to identify students preferred learning styles and possibility of being introverted

3. Participants indicated that assessments that were both flexible and encouraging of student responsibility were important practices for the success of introverted students

4. Participants observed that introverted students had an overall increase in their schooling experience and success when differentiated instruction was used

5. Participants struggle with reaching introverted students due to classroom management and administrative constraints
Further, sub-headings are connected to each of these themes to further describe how each, influence teacher practices and introverted students within the classroom. Each theme begins with participants’ voices, then examples are shared. Finally, these participants’ voices are connected to the existing literature. At the end of this chapter, I summarize my findings and make recommendations for the next steps in supporting introverted students in the classroom.

4.1 Participants Explained How Their Own Previous Negative Experiences of not Being Understood as Introverted Learners are Major Factors They Consider When Meeting the Needs of Their Introverted Students

This theme focuses on participants’ own experiences and belief systems when it comes to meeting the needs of their introverted students. The participants’ difficult experiences as introverted students in school play key roles in the importance they place on how they teach to their introverted students’ needs, now. Both participants emphasize how meeting these students’ needs can greatly support introverted students’ ability to succeed in their education.

4.1.1 Participants explained how their own negative prior experiences as introverted learners influence the importance they place on ensuring the needs of their introverted students are being met

Although both participants acknowledge the importance of reaching all their students’ academic and social needs, they emphasised the importance of attending to their introverted students’ needs. Both participants spoke about their positions on the introvert and extrovert spectrum, both of which identified as introverts. Each participant, Annie and Jessica, shared their negative experiences as introverted students in classrooms and how they suffered academically and socially, as a result. Participants emphasised how their own experiences as introverted
students and their years of teaching, have positively impacted the level of importance they place on understanding their introverted students’ needs.

Annie, who identifies as an introvert, first commented on her personal experience in school as an introverted learner, “More often than not I felt uncomfortable, or that I wasn’t able to articulate or express my understanding in a way that I was comfortable with. We were forced to present or learn in a specific fashion.” As a teacher now for twenty-one years, Annie acknowledges that the school system expects each student to learn in the same way. From her experience however, Annie knows this is not effective. As a student, she was unable to learn in this expected way and rarely performed to her level of proximate development. Annie was often not comfortable enough to share her understandings resulting in lower grades on her report card.

Jessica further suffered in school when it came to her grades. She shared that in addition to being an introverted learner in school, she also had a difficult upbringing. She moved from school to school, attending thirteen different elementary schools. Through this experience Jessica learned the true impact teachers can have on their introverted students, “I could have been in two different schools in one year, as I moved a lot, and my grades could change from being failures to ‘As’ depending on the teacher.” She found that when teachers recognized that she learned differently and they offered differentiated instruction and assessment options, she was successful.

The participants confirmed in their interviews what was found within the research in the literature review, held true. The research found that students learn and process information differently; thus, emphasizing the importance of teachers using differentiated instruction, to meet the needs of all students, in particular introverted students (Walker, 2007; Gibbs, 2014; Cox, 2008). The idea of differentiated instruction is a relatively new phenomenon in the education
field. Years ago, educators taught in one way and expected all students to learn that way. This teaching method was successful for some students however, not for many. This held true for both Jessica and Annie, they were expected to learn in this fashion, regardless of the difficulties it caused each of them. Each participant experienced failure and school difficulties when they were experienced to learn by the traditional approach. Jessica experienced various teaching methods, good and bad. She experienced the use of differentiated instruction as the most beneficial, she could go from failing grades to above standard grades. Currently, there is more of a push for differentiated instruction allowing for educators to reach all students (Walker, 2007; Gibbs, 2014). These participants address how their negative and difficult experiences in school has given them the motivation to differentiate their instruction to allow their introverted students to thrive in their learning journeys.

4.1.2 Participants hold a belief in the importance of knowing one’s introverted students’ learning preferences and current level of understanding to effectively meet their needs

Participants voiced their beliefs that getting to know their introverted students has supported them in teaching to their needs. Each participant emphasized different ways of meeting their introverted students needs and how this supports student learning and success in the classroom.

Annie teaches primary level students and found over the years that many of her introverted students simply did not have enough background schema to demonstrate their understanding effectively. Annie expressed the importance of “considering their personal schema and understanding, their level of abilities, their readiness and their interests in order to promote student engagement.” When these factors are not considered, Annie explained, introverted students tend to withdrawal from the lesson or be unable to express their understanding.
Jessica is a junior and intermediate level teacher, who gave insight into meeting introverted students’ needs and their learning preferences while still developing their necessary social skills. In the education field, there often is a push for group collaboration and team work; however, Jessica expressed that this is often the opposite learning preference for her introverted students. Having taken the time to get to know her students, Jessica believes that when imposing group work on her introverted students she should “[group] them with others students they are comfortable with and with those who bring out their abilities in a way. Sometimes when you are with the right person you are more open and willing to talk.” She learned from her students that having just one person in a group that an introverted student is comfortable with can give them the confidence and ability to complete the task.

The participants confirmed what the research also identified the importance of knowing introverted students’ preferred learning style and their current level of understanding. The research confirmed that students can be successful learning in multiple learning styles; however, the level of comfort they feel in the environment determines the overall positive or negative outcome (Fonseca, 2014; Hatami, 2013; Nussbaum, 2002). As Jessica found, if her introverted students were asked to work in a group, they could be successful when comfortable in the situation. Comfort was often provided by one or two familiar classmates. Jessica identified this accommodation as a positive way to providing comfort to her introverted students, allowing them to be successful in a social situation. This accommodation has not yet been identified by research; however, through experience, Jessica spoke to the positive benefits this has brought to herself and her introverted students and the classroom. The research and participants provided insight into the importance of understanding introverted students to effectively meet their needs in various situations.
4.2 Participants Indicated Similar Social and Behavioural Factors that Help to Identify Students’ Preferred Learning Styles and Possibility of Being Introverted

This theme centres on how participants identify introverted students within their classrooms. Participants indicate several similarities between observed social and behavioural characteristics of their introverted students such as: volunteering less, preferring independent work and avoiding eye contact.

4.2.1 Participants indicated that students’ preference of a quiet classroom environment was a strong indicator of their learning style and the possibility of being introverted learners

While both participants expressed similar indications of introversion, Annie placed more emphases on the students’ environmental preference. Both participants spoke directly about the importance of a quiet learning environment for introverted students’ mental health and wellbeing.

Annie indicated that introverted students prefer a quiet classroom and more control of their learning environment. She found that introverted students tend to sit towards the back of the classroom, alone or with one close friend. Often classrooms can be loud, social places where students and teachers are discussing, sharing and learning. This environment was explained as overwhelming to an introverted student. Introverts often do not have control over the classroom environment therefore, they will compensate in other areas such as “choosing very carefully where they sit, who they sit with, who they speak to and what they say.”

Jessica focused more on why introverted students require a quiet space. Jessica described group situations and loud learning environments as, “mentally draining. Group activities should be spaced out throughout the day so they [introverted students] have a rest in between to re-
charge. If it is group after group eventually it is too much, they are over-stimulated.” Introverted students require a quiet break from a busy classroom environment as group work is exhausting. For introverted students, a quiet less stimulating environment is both preferred and required.

Research explained the idea of solitude to re-focus and calm an overstimulated brain (Hills & Argyle, 2001). Research is suggesting that the participants are supporting introverted students when they allow these students to choose their own seating. As participants emphasized, introverted students feel most in control of their environment when they are calm and focused. This ultimately influences an introverted student to want to sit towards the back of the classroom, away from the stimulation of the other students.

4.2.2 Participants indicated that students’ preference of independent work habits in the classroom was a strong indicator of their learning style and possibility of being introverted learners

While participants expressed that various student can, at times, prefer to work independently, introverted students will repeatedly choose independent work over group. Although both participants agree that introverted students prefer to work independently, Jessica further explained how introverted students may act when forced into group work. Jessica experienced her introverted students in group settings to either complete the whole group task independently, or disengaged and avoid all participation in the group. In each of these group situations, the introverted student has removed themselves from needing to collaborate or interact with others.
Jessica recognized that introverted students will do what they need to, to avoid working in a group. Group work is outside their comfort zone, and naturally they will try to do what they can to remain comfortable:

They [introverted students] tend to work by themselves or with one other person. They are not as social as other students, that does not mean that they don’t have friends. Sometimes they come across frustrated in large group situations and in groups they will often, either take on the entire job or not participate at all.

Jessica recognized the difficulty introverted students have at times with group work, and would, at times, allow for variations of the task to meet the needs of all students. Jessica found that delegating smaller tasks within the group first, allowed the group to complete their parts of the task independently before working together to combine and finalize the entire task.

The findings from the participants’ interviews aligned with the research as introverted students’ shyness and inward personality causes them to prefer independent work over group work. The way in which participants believed in addressing the preference of their introverted students was, however, slightly challenged by the research. Research found that when introverted students where given opportunities to be in leadership roles, they were able to act extroverted (Kuofie, Stephen-Craig & Dool, 2015). As participants found in their classrooms, when students are given specific jobs while working in a group, they are more likely to participate. Participants, however, did not find this to lead introverted students to a level of comfort in which they took on leadership roles. Research thus, suggests introverts can act introvert or extrovert in various situations. Introversion and extroversion appear to be on a continuum where students can adjust from side to side in various situation. Students often do not go to the extreme of either side, and even when on the extroverted side, they may not take on the leadership role. Giving introverted
students opportunities to explore outside their comfort zones and act more extrovert can support their level of comfort and willingness to be a leader in their future.

4.3 Participants Indicated that Assessments that were both Flexible and Encouraging of Student Responsibility were Important Practices for the Success of Introverted Students

Participants each emphasized the importance of empowering students to take responsibility for their learning, while further allowing students multiple options in how to demonstrate their understanding. Participants felt students were more successful when they were comfortable and confident in their learning environment. Each of these are direct results of students being and feeling successful in their classroom environment.

4.3.1 Assessment practices that encourage students' individual accountability are important to the success of introverted student

While each participant discussed students’ individual accountability, each placed different emphasis on its importance in the success of introverted students. The varying levels of importance stemmed from the age differences each participant teaches.

For Annie, a Grade One teacher, she is focused on giving her students the tools they need to be successful learners. These students often require more guidance and encouragement through their learning journeys. Annie expressed the importance of introverted student success, as it makes them first feel confident then successful. As students learn they can accomplish tasks, there is an increase in their willingness to want to learn. As a Grade One teacher, Annie tries to empower her introverted students with individual accountability by showing them they can be successful:
The goal remains the same; you are trying to get a student to demonstrate their understanding and be successful in the learning environment. Building in incentives, setting small goals initially then building on those and scaffolding their understanding so they feel successful.

These are important practices for primary level students to build their confidence and accountability to support them in wanting to continue learning.

Jessica similarly agreed that confidence in a learning environment gives introverted students individual accountability in their learning. Jessica identified, however, that at the junior level students need to become more accountable to their learning in all subject areas. She suggested providing introverted students more accountability using rewards and accountable talks. Ultimately, these do not force an introvert to participate; rather it encourages them to take ownership of their learning. Jessica shared how during discussions she uses accountable talks to encourage introverted students to share their thoughts and understandings.

In a discussion, if there is accountable talk, majority of students participating are still extroverts; however, introverts are bright and want to share their thoughts. They are typically more anxious about sharing, but when accountable talk is used they are more likely to share.

This both aligns and challenges the research as introverted students are willing to participate in classroom activities and discussions. Research found that often, introverted students will remain quiet in the classroom (Laney, 2002). Introverted students, however, when encouraged to participate by using accountable talk strategies, will engage in classroom activities (Laney, 2002).
The research further considered introverted students’ willingness to participate in classroom activities. Often introverted students are willing to participate, however, only once they are confident and comfortable with their answers. Research studies believe that the brain function of introverted students and variance in response time, compared to extroverted students, are very different (Eve-Cahoon, 2003). Extroverts’ neurotransmitters have a shorter path to flow through explaining their quick response time in classroom discussions. In contrast, introverted students’ neurotransmitters have a much longer path to flow through requiring a longer response time (Eve-Cahoon, 2003). This indicated that when introverted students are given the opportunity to think before being required to participate, they are more likely to confidently provide answers. Participants found in their own classrooms that strategies such as think, pair, share or a one-minute self-reflection, helps to supported introverts’ ability to process their answers. When considering the research, even when accountable talk is used to encourage individual accountability, a processing time limit may continue challenges an introverted students’ ability to process the question.

4.3.2 Assessment practices that allow for student choice and variety in how they demonstrate their understanding is important to the success of introverted students

Both participants acknowledge the importance of allowing students to have choice and variety in how they demonstrate their understanding. Allowing this flexibility gives students confidence. When introverted students are confident in a subject area they are more willing to accurately demonstrate their understanding.

Jessica highlighted the importance of social acceptance for introverted students and their fear of being seen as “dumb,” as a strong reason to refuse classroom participation. She explained
that allowing choice in how an introverted student demonstrates their understanding, gives the student the ability to confidently use a familiar strategy.

Give students choice in showing you what they know. If you are not assessing for a specific writing style, then it does not matter how they communicate what they know. They can do it as a play, as a presentation or a comic book, if they can communicate their learning.

Annie further emphasized the benefits, particularly in the primary grades, of teaching students’ multiple strategies to use when demonstrating their learning. She believes it gives them a broader schema to choose from:

The expectation that they need to demonstrate their understanding or their learning, needs to be clear. But there needs to be some choice in how they choose to do that. That could be flexibility in many ways: forms, timeline, amount of support. They must demonstrate their understanding, but they need to be able to do it in a way that they feel confident and comfortable doing it.

As they become familiar with a variety of ways to demonstrate their learning, they can confidently use different strategies in different situations depending on their comfort level. An example of this Annie used with her grade one students was in math, she asked the students to demonstrate that $4+3=7$, “they could show me with cubes, or draw a picture or tell a story to demonstrate that $4+3=7$.” Students can use which ever strategy they feel most confident in using to demonstrate their understanding.

Each participant claimed the importance of providing introverted students choice in how they demonstrate their learning as underlined in Bittel & Hernandez’s (2006) research. Many
standardized tests fail to give meaning to students learning creating difficulties for students to make meaningful connections. Without purpose in learning introverted students struggle to accurately demonstrate their learning. Rather, when they can find purpose in their learning and demonstrate in creative ways such as skits, written reflections or drawings, they are much more successful (Bittel & Hernandez, 2006). Participants found that when they gave their introverted students various opportunities to show their understanding, their students were more successful. Each participant believed that when students can show their understanding in a way they are most comfortable using, whether that is through writing a story or acting out the math problem, the student was more successful.

4.4 Participants Observed that Introverted Students had an Overall Increase in their Schooling Experience and Success when Differentiated Instruction was Used

Both participants suggest that the use of differentiated instruction has an overall positive impact on their introverted students’ school success. When differentiated instruction is used introverted students are more comfortable in their learning environments. This was demonstrated through students’ positivity towards learning and their academic success. Participants found that while introverted students continue to prefer independent work, when the environment is made to feel safe and judgement free, they will interact socially with other students.

4.4.1 Participants observed that introverted students had increased feelings and attitudes about attending school and the learning environment when differentiated instruction was used

Through the interviews, participants shared their experiences using differentiated instructions and how this strategy created an inclusive classroom environment where introverted
students felt safe. Introverted students where able to approach school as a positive part of their lives, rather than an overwhelming and stressful place. Participants explained ways in which they created this type of environment to support introverted students’ feelings towards school and learning.

While each participant shared the importance of using differentiated instruction in the classroom, Annie explained how she effectively implements it into her classroom to avoid problems. Annie explained how when she first introduces differentiated instruction to her primary students, some find it unfair. She has experienced students complaining of having to do more work than others or how other students have “easier” work. When things appear unfair, rather than benefitting students learning, it created more negative feelings. Annie introduces students to the idea of differentiated instruction using a story called “Mukluks.”

Using a story called “Mukluks,” and personal connections, Annie taught her students the difference between equal and fair. These examples were clear and meaningful to her students. They understood the importance of differentiated instruction, “They love it, they had a personal connection to the story and understanding that fair doesn’t necessarily mean we all have the same, it means that we have what we need to be successful.” Annie was then able to use differentiated instruction in her class to meet the needs of all students. Each student felt their needs were being met fairly. Annie found that as her students’ individual needs were being met and students where not questioning the different activities or strategies being used, her introverted students felt included, heard, understood and safe while at school.

Jessica also integrated differentiated instruction in her classroom practices and found her introverted students to have more positive outlooks towards school. Jessica focused more on the social fear introverts face in large groups. She explained how introverted students see school as a
social environment where other students often judge each other. For this reason, school is overwhelming and uncomfortable, particularly to introverted students. Jessica explained the importance of first creating an inclusive classroom where students feel part of a team and safe. The use of differentiated instruction can support students in being able to access and share new information comfortably. “Introverted students often worry what other people think of their answers, this is often why they refuse to participate however, if there is a level of confidence in the topic then the fear of participation is eliminated.” While creating a welcoming and safe classroom increases students’ desire to be at school, the use of differentiated instruction increased her introverted students’ confidence in demonstrating their learning.

Introversion is often overlooked in the classroom as unmotivated learners (Cox, 2008). These students’ preferred way to learn content, process information and demonstrate their learning falls outside the traditional instruction of the teacher. Lessons and activities are more often geared to group work, and collaborative problem solving in preparation for the outside extroverted world (Walker, 2007; Cox, 2008). Jessica stated that in her experience she will find her introverted students quietly reading a book, or sitting at their desk appearing like they are not doing anything. She believed that although they look disengaged and uninterested in learning the material, they are motivated to learn. Her introverted students were uncomfortable in that environment or needed more time to think before participating. Without the use of differentiated instruction methods, participants believe that introverted students will not feel comfortable in their learning environment. Research explains this to appear as introverted students are unmotivated and disengaged (Walker, 2007; Cox, 2008).
4.4.2 Participants observed that introverted students had increased academic success when differentiated instruction was used

Differentiated instruction is a strategy used to give students various ways to access information and demonstrate their learning. Each participant agreed that when differentiated instruction was used, more learning styles were being addressed, resulting in more students experiencing academic success. This is especially true for introverted students’.

Annie claimed that differentiated instruction gives students control of their learning. Students can decide what strategy is best for them to access the information then they can confidently demonstrate how they understand it. When students have this control, they can confidently share with others what they have learned:

Every child needs to have control over their learning environment to be successful in demonstrating their learning and understanding. When you are more comfortable, you become more confident and when you are more confident you are better able to demonstrate your understanding.

As a teacher, Annie pointed to the importance of students being able to demonstrate their learning, if students are not able to accurately demonstrating their learning it impacts a teacher’s ability to accurately assess them. As students become confident in demonstrating their learning, teachers are better able to assess and address concerns immediately. Ultimately this supports students’ academic success.

Jessica used differentiated instruction in her classroom, also noticing an increase in academic success from her introverted. She however, focused on the difference in student processing times. “At times it may appear they are not doing anything, but really they are just
processing. When given a chance to think before sharing, introverted students were more involved in whole class discussions.” Jessica found that allowing for longer processing times, supported her introverted students’ ability to participate and demonstrate their learning. A strategy for whole group discussion Jessica explained, was having students first write down their answers to the discussion question. This allowed for introverted students to process and think about their answers before sharing them.

Research aligns with each participants’ interviews, as it found that introvert students are known to dislike group work and large group discussions. This is often outside of their comfort zones creating uncomfortable feelings (Fonseca, 2014; Martin, 2014). Research offers strategies, like Jessica’s method, allowing additional processing or thinking time. Using strategies such as having students independently reflect for one minute prior to sharing, gives an introverted student time to engage in their inner thoughts and make reflections prior to having to sharing with the group (Fonseca, 2014; Martin, 2014). This gives the control of learning back to the introverted student and allows them to first become comfortable, before demonstrating their learning.

4.4.3 Participants observed that introverted students had increased levels of social inclusion when differentiated instruction was used

Participants described introverted students as students who tend to be quieter, shy and prefer to be alone. Introverts are often referred to as “ideal” students as they typically listen well and can work independently with little teacher direction. Participants acknowledged that introverted students prefer to work independently, but are required to work in groups. It was recognized that working in groups is often difficult and uncomfortable for introverted students. Introverted students are often observed as the student sitting outside the group. These students
often try to avoid the group interaction and will either contribute little or take on the whole task independently.

Jessica emphasized the importance of being able to work in a group as it is an important skill necessary for the future. She recognized the challenges this causes to introverted students thus, she uses differentiated instruction to support them. She provides flexibility and choice within the group, such as choice in specific tasks for each student or mixture of independent and group parts. Jessica also uses strategies such as a buddy in the group to provide a level of comfort.

In a group of people, introverted students are likely to remain quiet; however, often if there is at least one other person in the group that the introverted student is comfortable with they will contribute. I believe that when they [introverted students] have one person in the group they are familiar or comfortable with, they feel safe, and are less worried about people judging them.

Introvert students are social beings; they may not be as loud and outgoing as some extroverts, but that does not mean they do not have friends. Often introverted students have less friends, but closer relationships than other students.

When using these strategies to manage group work with introverted students, they are often more engaged in the group. When introverted students are comfortable in the environment and are given specific expectations in the group, they are often able to participate like their extroverted classmates. Introverted students will share their views, opinions and thoughts about the topic and complete their share of the work.
In align with what participants expressed, research suggests that introverted students can act in extroverted ways. When supports, encouragements and opportunities are given, introverted students can engage in social activities such as group work. Research suggests that personality traits, such as introverted and extroverted, are on continuums. There are extreme introverts and extroverts; however, most people fall somewhere in-between where they present both introvert and extrovert traits. Some people are more introverted than extroverted and vice versa, but most people possess personality traits of both. People will often prefer one trait over the other ultimately influencing their behaviours and thoughts towards most social situations (Kuofie, Stephens-Craig & Dool, 2015).

4.5 Participants Struggle with Reaching Introverted Students due to Classroom Management and Administrative Constraints

Participants each emphasized how, in the teaching field, there are things outside the control of teachers that they must accept. No matter how much time and effort is put into developing the most detailed differentiated program, things happen that cannot be controlled. Some students will refuse to work; some students’ behaviours will hinder the effectiveness of the program and some class sizes may make it difficult to attend to each student. Additionally, administrative constraints such as not having enough classroom resources, volunteers or educational assistants to support the running of a differentiated program create challenges. Regardless of how prepared teachers are, there are things outside their control in which they must learn to be flexible with and adapt to.
4.5.1 Participants acknowledged that students with complex individual needs create challenges for teachers when meeting the needs of introverted students

While participants each discussed the challenges that various student can bring to a classroom, they each shared different causes of these challenges. They indicated the importance of teachers considering the “whole student,” which participants described as the students’ learning that happens in the classroom as well outside the classroom. Students are influenced by family, friends and outside sources all the time, each of this influences can directly impact the students needs in the classroom creating challenges for teachers.

Jessica shared an example of one student in her class who had complex needs. When first seeing this student in the class, he was observed refusing to complete work, distracting others and defiant. Jessica tried various strategies in attempt to meet the needs of this student; however, nothing seemed to be working. When preparing different strategies, Jessica spent time outside of school planning a new way to support this student, then more time trying it in the classroom with the student, adjusting and failing, repeatedly. It took weeks at a time to effectively record any changes to determine if there were positive changings in the student’s behaviour. Jessica shared how each of her strategies were only considering the student while inside the classroom. When she took time to learn about the student’s home life, she found that many of the difficulties she was seeing in class stemmed from the student’s difficult home life. The student had a difficult home life where his emotional needs were not attended to, he had inconsistent caregivers and little to no routine and structure. Jessica explained how this is a reality for some students that raises challenging behaviours in the classroom, but as a teacher this is out of their control. Teacher must be able to find ways to address the student’s needs within the classroom.
Annie acknowledged the “whole student” when considering their needs within the classroom environment, but focused on how this effects all the students, not just those with complex individual needs:

It is more challenging to have a highly differentiated program in a classroom where you have students who have strong needs. For example, if you have students that have extreme behavioural issues or other physical issues, then its very time consuming. The more time you must give to those students takes away from the time you should spend with the rest.

Meeting the needs of all students with in the classroom is especially difficult when there are students who require additional support. It means that attention will be taken from the other students. Annie explained how this can be difficult when trying to differentiate instruction as this is already a timely approach. As it requires student-teacher conferencing, small guided group activities and whole class discussions. Each of these become increasingly difficult to accomplish when teachers are attending to some students more than others.

It was surprising to learn about the challenges of using differentiated instruction from the interviews, as much of the research only focuses on the benefits. Research focused on how using differentiated instruction can support introverted students and students with more complex needs by providing various ways to access information and demonstrate their learning (Walker, 2007; Cox, 2008). The research failed to recognize challenges that students with complex needs can bring to classrooms, when students continue to refuse to complete work or require more teacher guidance. When preparing lessons using differentiated instruction, teachers should consider all the students, not necessarily just their introverted students, in the class and any possible
behaviours or issues that may arise. Teachers should plan for these possibilities to ensure they are prepared to address the issues should they occur.

4.5.2 Participants acknowledged that effectively preparing introverted students for the future creates challenges for teachers when meeting the needs of introverted students

Participants each addressed the importance of preparing students, specifically introverted students, for a future in an extroverted world. They expressed the challenges this creates for teachers in classrooms as they try to balance the use of students’ preferred learning styles with less preferred. In an extroverted world, students must be able to communicate whether that be their needs, opinions or views.

Jessica shared her experiences and views on introverted students being prepared, able to communicate and advocate for themselves. She noticed in her class, during group work that her introverted students failed to have the skills or confidence to stand up for themselves. “They become very open to bullying or being taken advantage of, especially in groups” This was very worrisome for her as a teacher because preparing students for their future is part of the job of educators. However, she said, giving them these skills by forcing introverted students to constantly work in a group is not the answer, it is exhausting for introverted students to act in extroverted ways, such as working in a group setting for extended periods of time. Jessica believes that to prepare students for an extroverted world they must be encouraged to work in groups, but also given downtime to refocus and return to a calm, comfortable state. She explained, “Everyone needs balance, if there is balance of activities that are going to challenge them to move out of their comfort zone, but also give them independent time to recuperate from that.”
Similarly, Annie felt that teachers need to find a balance in the classroom to effectively prepare introverted students for a future in an extroverted world:

We live in a society that favours extroversion and when they [introverted students] leave school and go off in the work environment there is a need for interpersonal communication. As educators that is our job, it is our goal to ensure students are equipped with the skills they need to be successful in anything they choose to do.

In her classroom, Annie uses differentiated instruction practices to meet the needs of all students while also challenging students to try tasks outside their comfort zone. Annie teaches her students that:

You don’t always have choice over what you’re going to do or how you’re going to do it. There will always be times when you are put in a situation where you feel uncomfortable, but the goals still need to be met.

By giving her students choice in most tasks, while challenging them with others, Annie believes she is teaching them to be resilient and prepared for their futures.

Research suggests the extroverted demands and activities of the classroom are overstimulating for an introvert, resulting in overwhelming and exhausting feelings. Often this makes them less likely to engage in such activities unless required to do so. This does not mean that an introvert is incapable of acting extroverted; rather, it means, depending on the situation they may choose to act more introverted as it is less tiring (Zelenski et al., 2013; Robinson, Meier, Wilkowski & Ode, 2007). Each participant found this to be true in their classroom. They understand that the classroom is at times an overwhelming learning environment where
introverted students may require more support to get through it, these situations are ways of preparing them for the future.

4.5.3 Participants acknowledged that administrative constraints create challenges for teachers when meeting the needs of introverted students

Participants share similar challenges that many teachers face from administration while trying to meet the needs of their introverted students. These are typical challenges that are out of the control of classroom teachers. Each participant spoke to the challenges of accessing resources and how large class sizes increase the difficulty of meeting the needs of all students, specifically introverted students. Introverted students tend to be quieter in classroom environments and when there are more students in the class taking the teacher’s attention, introverted students tend to be left to work independently.

Annie explained the importance of being able to conference with every student and to be able to spend time with small groups to read. She is a Grade One teacher and teaching her students to read is her number one goal. At times, it can be difficult to differentiate her instruction while still meeting with each student daily. Annie indicated she had limited access to volunteers, educational assistants and teachers. Annie believes, “The more help in the classroom you have the more people there are to assist students and differentiate. It provides more resources for individual learners and time. Reducing the ratio of students to teacher in the classroom.” Unfortunately, without the use of volunteers often the administration is unable to provide additional resources in classrooms.

Similarly, Jessica spoke about the challenges of accessing new resources to support her in differentiating instruction. As the times changes, the needs of students also change. Jessica
indicated how she finds it challenging to find new ways of teaching that meets the needs of various students.

Research focuses on the benefits of using differentiated instruction in the classroom to meet the needs of students; however, it does not address the challenges teacher face when requesting additional support. Differentiated instruction can be timely, both in the classroom teaching the students and outside the classroom preparing. Research has found that having differentiated instruction in the classroom can significantly change the learning environment and learning outcomes that occur for students. Without administration supports, such as having educational assistance for higher needs students, teachers struggle to teach the whole curriculum. Both participants spoke about how teachers are spending an increased amount of time managing student behaviours, rather than providing engaging lessons and differentiating instruction for all students. Teachers often see an increase in student engagement and academic success when differentiated instruction is used (Cox, 2008; Gibbs, 2007). Participants believed that with additional administrative supports teachers would better be able to use differentiated instruction in their classrooms. Research, however, fails to address the challenges that come with using differentiated instruction. There is limited research in the challenges that teachers encounter when using differentiated instruction and ways in which they can overcome the challenges.

4.6 Conclusion

In this chapter I reported on the research findings using participants’ voices supported by direct quotes from interviews. Both teachers had an informed understanding of introversion personality traits and ways to use differentiated instruction to meet their students’ learning styles. Through this process five main themes arose.
Participants’ own negative experiences as introverted students were factors that strongly influence their use of differentiated instruction to ensure their introverted students needs are met. The use of differentiated instruction in the classroom supported student academic success. Further, common social and behavioural factors that are commonly associated with introverted students were challenged and found that these behaviours are decreased when students are in a comfortable environment. A comfortable environment was defined as having a close friend or classmate within the group of an introverted student. Next, this chapter explained the positive benefits of encouraging students to take responsibility in their learning. Providing choice and flexibility in student assessments gives students confidence in demonstrating their learning, leading to an increased interest in learning. Finally, using differentiated instruction in the classroom to meet the needs of introverted students can create challenges when there are negative behaviours in the classroom. Additional planning and preparation such as having alternative plans can best support teachers in reducing these challenges.

Using differentiated instruction in the classroom has been supportive in providing a positive learning experience for introverted students. To further meet the needs of introverted students, teachers use students preferred and less preferred learning styles to ensure there is a balanced approach in the classroom. This ultimately, setting up student success in the classroom while encouraging growth for success in the future extroverted world.

Next in Chapter 5, I discuss various implications for the previous findings, while also providing recommendations and suggestions for further research.
Chapter 5: Implications

5.0 Introduction to the Chapter

In this chapter, I discuss the implications and significance of my research study. First, I review the key findings found in Chapter Four supporting how teachers are effectively preparing their introverted students for a world that privileges extroversion. Then I present the implications for both the educational research community and my own professional development and practices as a new teacher. Next, with these implications in mind, I make recommendations for policy and practice, which may be utilized by the educational community. Following, I present areas that would benefit from future research. Finally, I conclude this chapter with a summary of my findings and their significance.

5.1 Overview of Key Findings and their Significance

As discussed in the previous chapter, five main themes were developed in accordance to the key findings. The first theme focused on how participants’ personal and negative experiences as introverted students influence their current teaching practices. As students, their needs were not always met, creating difficulties in their ability to effectively demonstrate their learnings. When their needs were met however, the participants experienced significant improvements in their ability to demonstrate their learning and receive higher grades. Participants’ reflection on their poor experience in school has led them to focus more on their introverted students’ needs to ensure they have successful and positive looks towards school. Knowing the students and their learning preferences allows teachers to effectively use differentiated instruction to better meet the needs of their introverted students. Participants emphasised how differentiated instruction
allows introverts to confidently demonstrate their understanding in ways that are comfortable to them, leading to increased success in school.

Further, my findings disclosed that introverted students often share common social and behavioural factors that participants use to identify students within their classrooms. Participants use these commonalities as ways to support their introverted students. Introverted students tend to prefer independent work and sitting towards the back of the classroom. These preferences provide a level of comfort to introverted students, allowing them to focus more on their work and less on the stimulus around. Participants use these factors in their classroom to ensure they are considering the needs of their introverted students. When these needs are considered and are being met, students’ grades often increase and their feelings towards school become more positive.

The importance of encouraging introverted students to take responsibility in their learning, while additionally being flexible in assessment practices was another finding from participants’ interviews. Participants spoke to the importance and positive benefits, flexible assessment practices can bring to introverted students. Assessing students in a variety of ways, such as in written form, through demonstrations, and dialogue etc., giving introverted students the opportunity to demonstrate their learning effectively in a way that they are most comfortable with. When students demonstrate their learning in a confident and comfortable way, participants explained that they see an increase in introverted students’ academic success.

Furthermore, the use of differentiated instruction within the classroom provides introverted students an increased overall positive schooling experience. Like giving students flexibility in assessment, introverted students are more comfortable in the classroom when their learning styles are being met. Students are then better able to participate, understand and show
their learning. Participants emphasized the benefits they see in their introverted students when their grades began to improve. An increase in grades lead introverted students to feel more comfortable at school resulting in a more positive experience.

Finally, the last theme that was found stemmed from the challenges within the classroom. Differentiated instruction is a positive strategy to use in the classroom to meet the needs of all, specifically introverted, students. It can however, create challenges for teachers. Participants discussed how the behaviours of some students can create others to lose out on teacher one-on-one attention. This study’s findings are significant as it provides multiple strategies to support teachers in meeting the needs of their introverted students, while still preparing them for an extroverted world.

5.2 Implications

In this section, I discuss the implications found in my research for those in the educational research community such as; schools and school boards and my practice and development as a beginning teacher.

5.2.1 Implications for the educational research community

The unique strategies that participants and the literature emphasized provide valuable benefits to introverted students in classrooms. Introverted students could experience an increased level of comfort at school, thus leading to improved participation in group activities, higher grades and an overall positive school experience. This ultimately better prepares introverts for the future. Given this, both participants acknowledged the challenges that students face when coming to school, whether that is socially or academically. Teachers and school boards need to
work together to create safe and inclusive learning environments where all students, including introverts, feel comfortable in the learning environment.

Participants acknowledged the benefits differentiated instruction and differentiated assessment can have on introverted students. When differentiated instruction and assessment are used, introverted students have more opportunity to grasp concepts and demonstrate their new learnings. Differentiated instruction is an effective way to meet diverse learning needs and participants have noticed their introverted students become more confident in their learning and willingness to participate. Additionally, with differentiated assessment, introverted students are better able to demonstrate their learning. Unfortunately, not all teachers know the benefits or how to implement these strategies leading to inconsistencies for students each year. The inconsistency amongst teachers in using differentiated practices hinders students’ ability to become life long learners. Students may be successful one year in school, only to return to difficulties the next. When all teachers fail to provide differentiated practices in their classrooms then all students’ diverse learning needs are not being met. Introverts need to feel confident and successful in their learning environment, thus requiring schools and school boards to focus on the use of differentiated instruction and assessment practices.

For quality differentiation teachers feel they need added support from the administration. Having differentiation within classrooms can be challenging and time consuming for teachers. Teachers often feel there are no supports available and they are alone with their classes. Participants stress the importance of inquiring about volunteer support in the classroom. Many teachers are unaware of volunteer opportunities or policies. As a research community, it is important to consider and further research these implications to better meet the needs of introverted learners.
5.2.2 Implications for myself as an educator and researcher

As a new teacher, I identify and discuss the implications I have learned in this study and how they can support my practice and future research. I have gained a better understanding of my own experiences struggling through elementary school and the impact it has had on me as I learn how to teach and support my own students. I know that school does not have to be an uncomfortable place. When I have my own classroom I will challenge myself to ensure each of my students feel comfortable and welcomed. All students regardless of their personalities, introverted or not, can be comfortable in a busy learning environment. When there is teacher support, balance and variety in learning opportunities, introverted students can effectively learn and demonstrate their learning within a regular classroom environment.

I have gained a deeper understanding of how the mind of introverted students work and how to meet their needs. Introverted students need opportunity to demonstrate their learning in a variety of ways. They need to be able to demonstrate their learning in a way they feel comfortable and confident in. When introverted students are comfortable, they become confident in their abilities leading to an increase in school success. I have learned the importance of teaching my students various ways to show their learning and give them opportunities to try each strategy. Students can then self determine which they are most comfortable with. Often, students are only aware of some strategies to demonstrate their learning and these strategies may not be the traditional methods. Pencil and paper test or presentations can be intimidating, but a written story may give an introvert a better chance to clearly articulate their thinking and understanding.

Further, I have learned that when using differentiated instruction and trying to meet the needs of all my students, including my introverts, there will always be obstacles. Firstly, differentiating instructions can be timely. I have gained the understanding that to effectively
implement differentiated instruction I may have to go to work early, leave later and use lunch hours to prepare. Next, I have learned the benefits to reaching out to the community and welcoming volunteers into the classroom. Taking initiative and asking for volunteers can provide added support in the classroom where students’ needs are attended to. Finally, I understand that even when a differentiated program is developed and perfected, issues in the classroom will arise. Student behaviours can create challenges when teaching small groups and other groups are expected to work independently. Being prepared for behaviours and changes to lesson plans can better support me as a teacher in being able to change activities when needed while ensuring the changes continue to make the lesson meaningful and purposeful.

5.3 Recommendations

Based on my research and learning, I make recommendations to the research community and educators to alter the education system for the better of all students, specifically introverted. First, further research on the brain and behaviours of introverted students in various environments should be considered. This research could support educators in the classroom in understanding how different environments affect students’ minds. Introverted students should be challenged outside of their comfort zone; it allows them to grow and develop as learners. Further research educators, could understand how far they can challenge an introverted student where the results are beneficial rather than detrimental. The world we live in favours the extroverted personality and requires to use of communication. For introverted students to be successful in their futures they must be able to communicate and they must be able to do it at times when they are not comfortable. In the future, just like working adults, introverted students will not have choice in everything they do. They will be required to complete work or speak to a group of
people, even if they do not want to. As educators, we must balance the needs of introverted students needs now with their needs for the future.

Next, I recommend that teachers provide introverted students opportunity to first complete easier and smaller tasks, then increase to difficult levels. When introverted students complete small, easier tasks first, they can feel successful in their abilities. From there students are more likely to feel confident and willing to try more complex work. When introverted students are given the opportunity to become confident in themselves, they are less likely to shy away from challenges. As educators, we want our students to be willing to take on challenges as it is challenges that cause learning.

To further support introverted students in wanting to take on challenges, there needs to be a balance between independent and group work. Group work is exhausting for introverted students because of the over stimulus environment. For introverted students to be able to effectively work within a group setting, they require breaks. A break to work independently, allows them to re-cope and re-focus after an exhausting experience. Without the balance of independent and group work, introverted students will become either; overstimulated and exhausted or will fail to gain necessary skills for their futures. Further, as participants experienced in their classrooms, introverted students are willing to participate in group work when the students know they have opportunities to work independently after.

Providing accommodations for introverted students’ learning environments can greatly benefit their academic success. Accommodating an introverted students seating preference can allow them to self monitor their stimulus level. Often introverted students prefer to sit towards the back of the classroom, away from the main action within the classroom. When these students are sitting in their preferred spot, they are in control of the environment. They can choose when
they feel comfortable enough to participate or when they need to step back from the busyness of the classroom and take a break. In addition, when introverted students are required to work in a group, allowing one or two friends within the group can help to create a more comfortable learning environment. When the environment is comfortable, introverted students are more willing to participate and complete their part of the work.

Lastly, as educators further develop their classroom programs to better meet the needs of their introverted students they are forced to work long hours. Educators responsibility for teaching to each student needs can be challenging when there is only one educator in the classroom and there are twenty to thirty students. Educators and students benefit significantly when there are more supports in the classroom. School administrators need to be open and encourage more volunteer support within the schools. Opening the classrooms to volunteers, brings the school and the community together to better support students in their academic journeys. These recommendations are positive ways to support introverted students within the classroom environment, while still preparing them for success in the future.

5.4 Areas for Further Research

In this section, I outline the areas for further research in accordance to the gaps I have found through my research findings and new learnings. One area for further research is a focus on the challenges of using differentiated instruction in the classrooms and how to overcome them. Through my research I found that there was a lack of information on the challenges teachers may face in their classrooms when developing and implementing a differentiated program. Much of the current literature focuses only on the benefits of differentiating instruction. I believe the lack of the literature on these challenges sets teachers up for failure. When challenges arise in the classroom teachers may believe that differentiated instruction simply does
not work for their class. I believe that if there are further research studies in this area more teachers can become aware of challenges and ways on overcoming them.

Another area that could benefit from additional research is strategies teachers are using to differentiate their instruction for introverted students. I feel completing this research study a second time, with a larger sample size could provide more variety within effective teaching strategies. With a larger sample size, some teacher may speak to the use of technology while differentiating their instruction or more specific assessment types. Each of these areas for further research could benefit students and teachers within the classroom.

5.5 Concluding Comments

In this chapter, I provided a summary of the key findings found within Chapter 4, including strategies used to differentiate instruction to meet the diverse learning styles of all students, specially introverted students. Additionally, I shared implications for the research education community and my personal teaching practice. It is important for the success of introverted students to feel comfortable in their learning environment, as research has found that introverted students are more likely to participate then the environment is welcoming. Teachers have found differentiated instruction and being in the same group as a friend to be useful strategies to support their level of comfort. As a result, I have made recommendations for the education community and other teachers to provide these supports to their students and be willing to teach to their desired learning style, while still encouraging social interactions. To conclude this chapter, I spoke to ideas for further research and suggested that the challenges teachers face when using differentiate instruction in the classroom may cause and how they can overcome it.
This study recognized the varying needs of introverted students and how a small sample of teachers are effectively meeting their needs. Through their observations and experiences, participants provided various strategies and challenges they have used and overcome. The use of differentiated instruction was emphasized as it is flexible and provides choice in how students learn and demonstrate their learning. Further, the encouragement of social interactions through group work were discussed in importance as a way of supporting introverted students in being successful in an extroverted world and in their future.
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Appendix A: Letter of Consent for Interviews

Date:

Dear _______________________________,

My Name is Kelly Kennedy and I am a student in the Master of Teaching program at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). A component of this degree program involves conducting a small-scale qualitative research study. My research will focus on how elementary teachers are differentiating their instruction to meet the needs of introverted learners while sufficiently preparing them for a world that privileges extroversion. I think that your knowledge and experience will provide insights into this topic.

Your participation in this research will involve one 45-60 minute interview, which will be transcribed and audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient for 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. I may also present my research findings via conference presentations and/or through publication. You will be assigned a pseudonym to maintain your anonymity and I will not use your name or any other content that might identify you in my written work, oral presentations, or publications. This information will remain confidential. Any information that identifies your school or students will also be excluded. The interview data will be stored on my password-protected computer and the only person who will have access to the research data will be my course instructor Dr. Angela MacDonald. You are free to change your mind about your participation at any time, and to withdraw even after you have consented to participate. You may also choose to decline to answer any specific question during the interview. I will destroy the audio recording after the paper has been presented and/or published, which may take up to a maximum of five years after the data has been collected. There are no known risks to participation, and I will share a copy of the transcript with you shortly after the interview to ensure accuracy.

Please sign this consent form, if you agree to be interviewed. The second copy is for your records. I am very grateful for your participation.

Sincerely,

Name: Kelly Kennedy

Email: Kelly.kennedy@mail.utoronto.ca
Course Instructor’s Name: Dr. Angela MacDonald

Contact Info: angela.macdonald@utoronto.ca

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 from this research study at any time without penalty.

I have read the letter provided to me by Kelly Kennedy 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 Protocol

Thank you for agreeing to participate in this research study, and for making time to be interviewed today. This research study aims to learn how a sample of teachers are creating opportunities to meet the needs of introverted learners while maintaining student engagement from extroverted learners. This interview will last approximately 45-60 minutes, and I will ask you a series of questions focused on your teaching background and experiences relating to the use of differentiating instruction. Specifically, for the purpose of meeting the needs of introverted learners while sufficiently preparing them for a world that privileges extroversion.

I want to remind you that you may refrain from answering any question, and you have the right to withdraw your participation from the study at any time. As I explained in the consent letter, this interview will be audio-recorded. Do you have any questions before we begin?

To begin can you please state your name for the recording?

Background Information

1) How long have you been teaching for?

2) What grades and subjects are you currently teaching? Which have you previously taught?

3) In addition to your role as a teacher, do you have any other roles within the school? (ie: coach, resource teacher, mentor ect.)

4) Can you tell me more about your school and students? (e.g. size, demographics, program priorities)

5) What educational and professional experiences contributed to developing your interest in, and preparation for, differentiating instruction to meet the needs of diverse learners? (re: specific courses in teachers’ college, particular experiences on practicum or in teaching, additional qualification courses, professional development)
6) As you know, this study focuses on the topic of introversion and the learning style preferences of introverted students. Would you describe yourself as an introvert or extrovert, and why?

7) What did this mean for your own experience of schooling and learning as a student? Did you feel that your learning style preference was regularly attended to? Why/why not?

**Teacher Perspectives/Beliefs**

1) What does it mean to you to ‘differentiate instruction’? How would you describe this approach to teaching to someone outside of the education field?

2) How would you describe an introverted learner?
   a. What are some of the key characteristics you ascribe to this type of learning?
   b. What indicators of introversion do you see in students? What are some observable behaviours you associate with introversion?

3) And what about extroversion? How would you describe an extroverted learner, and what are some indicators of this type of learner?

4) In your view, how are the needs of an introverted learner different from an extroverted learner?

5) In your view, are the needs of both introverted and extroverted learners commonly attended to in schools? What have you observed?

6) What, if any, barriers or challenges do you believe introverted learners commonly experience in schools?

7) What concerns, if any, do you have when it comes to introverted learners?

8) What is your perspective on how far introverted learners should be challenged to move away from their comfort zone to experience the benefits of interpersonal learning? Do you think this is important or potentially harmful? Why?
9) Do you believe there are any short or long term benefits or consequences for introverted learners to be principally taught to their learning style preference? How do you think may impact their experience in a world that privileges extroversion?

Teacher Practices

1) How do you differentiate your instruction to meet the needs of introverted learners? Can you provide me with some specific examples of how you have done this with specific students?

2) In your experience, what specific instructional practices are most beneficial for meeting the needs of introverted learners?

3) How do your students respond to your differentiated approach to meet their learning needs?

4) Are there strategies that have worked for some classes but not others? What was different? The Same?

5) In what ways, if any, do you differentiate your assessment practices for introverted students and why?

6) In what ways, do you differentiate your instruction for introverted learners, while also preparing them to thrive in a world that privileges and rewards extroversion? Can you please provide me with some examples?

7) What resources support you and your capacity to differentiate our instruction for diverse learning style preferences?

Challenges and Next Steps

1) What challenges have you experienced when differentiating instruction to meet the learning style preferences of your students?

2) What challenges have you experienced meeting the needs of introverted learners, specifically? How do you respond to these challenges?

3) What challenges specific to assessment of these learners have you experienced?
4) How might the education system further support you in meeting these kinds of challenges?

5) What advice, if any, do you have for beginning teachers who are committed to supporting their introverted students, but also committed to preparing them to thrive in a world that rewards extroversion?

Thank you for your participation in this research study.