Reconceptualizing Teaching in the Twenty-First Century: Teacher Attitudes and Perspectives on the Role of Multiple Intelligences Inside the Classroom

By

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Abstract

Traditionally, teacher-centred approaches in education have been dominated by verbal-linguistic and logical-mathematical intelligences, and as a result, have only been beneficial for certain learners and ineffective for others (Sulaiman & Sulaiman, 2010). Understanding that students bring with them diversity in their life experiences and learning abilities and needs, it is only feasible to assume that students learn best when multiple instructional interventions are implemented (Standford, 2003). The present qualitative study examined the question: How do elementary teachers’ knowledge and understanding of the theory of Multiple Intelligences influence their instruction? Data obtained from the interviews with two elementary teachers from the Greater Toronto Area revealed three overarching themes: (1) teacher opinions and attitudes towards Multiple Intelligences, (2) teaching pedagogy and instructional approaches to student learning, and (3) challenges in planning instruction to meet student diversity. Findings revealed the need for teachers to take on active roles in helping to facilitate students’ identification of their intelligences and use the intelligences of their students as the focal point for planning and implementing learning tasks. Participants recommended that teachers help to facilitate students’ awareness and understanding of their intelligences through differentiating the content, tasks, materials, and methods of assessment in any given learning experience.

Key Words: Multiple Intelligences, teacher attitudes/beliefs, student diversity, learner differences, intelligences, Howard Gardner
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Chapter 1: Introduction

1.0 Research Context

“The biggest mistake of past centuries in teaching has been to treat all children as if they were variants of the same individual and thus to feel justified in teaching them all the same subjects in the same way.”

Gardner, as cited in Siegel & Shaughnessy (1994, para 5)

Based on the nature and content of learning in the twenty-first century, the realm of education has been in a rapid period of transformation. Educators are faced with increasingly heightened pressures to establish and implement learning environments and experiences that are both appropriate and effective for all students (Bennett & Rolheiser, 2001). When planning instructional strategies and lessons, educators need not only to meet curriculum expectations, but they must also respond to the diverse factors that each student brings to the educational environment and experience (Bennett & Rolheiser, 2001). It is these diverse factors that play a crucial role in the manner in which instruction inside the classroom is planned and implemented.

In the field of education, there exists a consensus that learners, regardless of age or grade, are defined by a vast amount of individual differences; as a result of these individual needs and differences, educators must adapt and implement instructional strategies accordingly (Alavinia & Farhady, 2012; Bennett & Rolheiser, 2001). Traditionally, curricula has focused mainly on logical-mathematical and linguistic intelligences, thus, schools have traditionally taught “…more effectively for learners who have strong language and logical thinking skills” (Sulaiman & Sulaiman, 2010, p. 135). Although this linguistic and logical-mathematical dominance in curriculum and teaching practices benefit some students, students with different learning needs
and abilities are not receiving optimal learning opportunities and experiences (Sulaiman & Sulaiman, 2010).

In an attempt to challenge the commonly held belief about intelligence in the twentieth century, a psychologist from Harvard University, Howard Gardner, proposed the theory of Multiple Intelligences, which completely redefined intelligence (Armstrong, 2009). According to Gardner (1983), humans do not possess a single isolated intelligence; rather, humans have a set of intelligences that are interrelated and interconnected. In his intelligence theory, Gardner proposed that intelligence is concerned with, “solving problems” and “fashioning products in a context-rich and naturalistic setting” (Gardner, 1983). In the release of his theory, Gardner first proposed seven human intelligences. Since then, research on the human intelligences has prompted Gardner to add two more intelligences to his theory (Gardner, 1999). Currently the intelligences outlined in Gardner’s theory include, linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, naturalistic, and existential intelligences. Although Howard Gardner was the first to propose the theory of Multiple Intelligences, upon its release, it increasingly gained attention and popularity in the field of education. Although the theory of MI was not intended as an educational theory, many educators and professionals in the field of education were drawn to the applicability that the theory had to the field (Gardner, 2011). Since its release in 1983, additional researchers and educators have further contributed and expanded research pertaining to the theory. Thus, the following research study will contextualize and understand the theory of MI not only through Gardner’s initial theory proposal, but will also use additional researchers interpretations surrounding the theory of MI in the field of education.
One of the main ideas behind the theory of Multiple Intelligences is that individuals have varied abilities and intelligences, and therefore, teachers should respond to these differences and plan instruction accordingly (Sulaiman & Sulaiman, 2010). Gardner (1983) proposed that “educational methods should be created and adjusted to be more flexible for learners who have different intellectual capacities, and should be re-designed and rearranged to use the Multiple Intelligences effectively so that those changes would benefit learners, teachers, and society” (as cited in Sulaiman & Sulaiman, 2010, p. 135). Although Gardner’s theory was not initially created and intended to be an educational intervention, Gardner believed that his theory was a useful resource that could be utilized to “achieve educational goals more effectively” (Gardner, 2011; Hopper and Hurry, 2000, p. 26).

1.1 Articulation of the Research Problem

Taking a look inside a traditional elementary school classroom, one will find the teacher located at the front of the room, lecturing students, writing concepts and questions on the board, passing out handouts, and waiting for students to complete the assigned work (Standford, 2003). This teacher-centred approach in education has been traditionally dominated by verbal-linguistic and logical-mathematical intelligences (Sulaiman & Sulaiman, 2010). As a result of this dominance, classroom content and instruction has been traditionally set up in a manner that is most beneficial for learners possessing strong language and logical thinking abilities and skills and thus is effective for certain learners and ineffective for others (Sulaiman & Sulaiman, 2010). For this reason, it appears that this traditional, one-sided method of teaching has implications for student learning and success. It has been documented that children previously unsuccessful and unmotivated in their learning that were exposed to multiple instructional interventions inside the classroom experienced growth in their academics (Standford, 2003). Based on this then, it is
assumed that students learn best when multiple instructional interventions are implemented. The implementation of multiple instructional interventions then becomes a way for educators to be responsive to and aware of the diverse factors and intelligences that students bring to the learning environment. Students’ learning, however, is comprised, when classrooms continue to be set up in traditional ways and when educators assume and maintain traditional methods of teaching. Thus, based on this information, in order for children to be successful in their learning, it is crucial for educators to respond to diversity in children’s learning abilities and intelligences. As an educator, it is important to assess the way in which each individual student learns and be responsive to students’ learning needs and abilities when planning and implementing instruction.

1.2 Purpose of the Study

The purpose of this research study was to critically explore and analyze how elementary teacher’s knowledge and understanding on Multiple Intelligences influences and impacts their instruction. Furthermore, the research sought to address and investigate how teachers use the Multiple Intelligences of their students to plan instruction accordingly. This study was informed by Gardner’s (1983) theory of Multiple Intelligences and more recent research on Gardner’s theory (Adcock, 2014; Armstrong, 2009; Bennett & Rolheiser, 2001; Gardner, 1983; Ghamrawi, 2014; Hopper & Hurry, 2000; Haley, 2004; Jing, 2013; McFarlane, 2011; Mettetal, Jordan & Harper, 1997; Oprescu, Craciun & Banaduc, 2011; Pienaar, Nieman & Kamper, 2011; Shearer, 2004; Stanford, 2003; Sulaiman & Sulaiman, 2010). I believe that the theory of Multiple Intelligences can inform the ways in which teachers respond to student’s intelligences and varied ability levels. This theory can be utilized by teachers as a guiding framework that has the ability to expand one’s teaching repertoire to include a larger range of instructional methods and materials (Standford, 2003).
1.3 Research Questions

This research study explored how teachers’ knowledge and understanding of the theory of Multiple Intelligences influenced their instruction, as well as how teachers’ ability to identify the specific Multiple Intelligences of students impacted the ways in which students were taught. The study addressed and analyzed how teachers’ beliefs and attitudes about the theory of Multiple Intelligences influenced their pedagogy and instructional strategies. The main research question of this study was as follows: How do elementary teachers’ knowledge and understanding on the theory of Multiple Intelligences influence and impact their instruction? To further explore and investigate the knowledge and understanding that teachers have about the theory of Multiple Intelligences, the research also addressed teacher knowledge of and attitudes toward Multiple Intelligences by answering the sub-questions: What are teachers’ knowledge and attitudes on Multiple Intelligences?, the manner in which teachers identify their students’ Multiple Intelligences (How do teachers identify the multiple intelligences of their students?), and how teachers use the Multiple Intelligences of their students to plan instruction (How do teachers respond to the Multiple Intelligences of their students? How do teachers use the Multiple Intelligences of their students to plan classroom instruction?).

1.4 Introduction to Research Methods

The following research study was qualitative in nature, and thus was followed in accordance with common qualitative research characteristics and protocols. Specifically, the research conducted for this study was done in a natural setting, in which I first hand collected the data. Data was collected through semi-structured interviews, whereby all participants were asked identical questions. Such questions were designed and worded as so elicit open-ended responses from participants (Turner, 2010). The interviews conducted were individual interviews, and
lasted for approximately forty-five minutes. Participants of the study were chosen via the researcher’s networks, including practica schools, and family and friends.

1.5 Background/Positionality of the Researcher

It was my educational experiences as a young student, particularly in elementary school, that prompted my interest in this dimension in education. It is important to point out that my educational experience, particularly my elementary school experience, was dominated by a traditional teacher-centred approach to teaching; curriculum was taught in a standard ‘one size fits all’ manner. As a student journeying through elementary school, I had difficulty understanding concepts and ideas, and often found myself requiring extra assistance. While my peers understood concepts and ideas, I was left feeling anxious and unable to understand concepts that were being taught. At the time, I remember feeling like I was not the slightest bit intelligent and was always wondering why it was that I could not understand and grasp what was being taught. I always wondered why the ‘smart kids’ got it, but I could not. I felt like something was wrong with me. There was the odd teacher in my educational experience that took the extra time to help me understand concepts and ideas, but unfortunately this experience was seldom. From a young age I knew something could be done so that students, like myself, would not need to feel this way, and instead, could feel like they had the ability to be successful in all aspects of their schooling.

I used my educational experiences as my motivation and inspiration to pursue a career in education. I firmly believe that each child has the potential to succeed at anything they do. That being said, I believe that the way in which children can succeed in their learning lays in the manner in which classroom instruction is built in accordance to student’s varied ability levels and learning needs. As I first began my post-secondary education in the field of Early Childhood
Studies, I brought with me the belief that children learn and understand in multiple ways. When I was first introduced to Howard Gardner’s (1983) theory of Multiple Intelligences in my undergraduate degree, I was immediately drawn to it based on the fact that it coincided quite closely with what I already believed about student learning. My first exposure to Gardner’s theory marked the starting point of my philosophy on education and learning. As I learned more about Gardner’s theory, I came to understand his theory as one way of conceptualizing and understanding education and student learning. It was Gardner’s theory that prompted me to think more deeply and critically about the current pedagogies and instructional approaches that are so commonly adopted by teachers in the twenty-first century.

1.6 Preview of the Whole MTRP

The following research study is divided into five separate chapters. Chapter One provides an introduction to the research study as a whole, a general overview of the study, the research problem and purpose of the study. The key and sub-questions of this research study have been discussed. Furthermore, the background and positionality of the researcher have also been explored and discussed.

Chapter Two reviews and analyzes relevant literature to the proposed area of study. In this chapter, the theory of Multiple Intelligences is discussed and explored. Key themes found through the review of literature, including the use of MI as an instructional approach, teacher and student beliefs and attitudes toward Multiple Intelligences, and the impact of the Multiple Intelligences theory on student academic performance are presented and explored. Furthermore, chapter two highlights gaps in the present research sought and how my research study aimed to address these gaps.
Chapter Three provides an overview of the research methodology that was sought and employed for the purposes of the present study. In this chapter, I discuss the context and content of the research study as it relates to qualitative research. I present the instruments of data collection, the sampling criteria, recruitment procedures and biographies of participants, data analysis, ethical review procedures, and methodological strengths and limitations of the study.

Chapter Four of the research study reports the findings from my research conducted. Findings are organized and discussed thematically.

The last and final chapter of the research study, Chapter Five, provides an overview of the key findings of the study and their significance, broad and narrow implications that the findings have for the educational community and personal practice, recommendations for pre- and in-service teachers in Bachelor of Education courses and professionally-related development workshops and courses, areas for further research, and concluding comments.
Chapter 2: Literature Review

2.0 Introduction to the Chapter

When children enter formal schooling they bring with them a multitude of diverse factors that play a large role in their educational career and experience (Bennett & Rolheiser-Bennett, 2001). Given such diversity, it is understood that each student is their own unique individual who brings a number of different strengths and abilities to their learning (Bennett & Rolheiser-Bennett, 2001). For decades, students in both elementary and high school were taught the curriculum with a traditional teaching pedagogy, wherein the teacher stood up at the front of the classroom and talked at students, lecturing for long periods of the day. In such traditional classrooms, the role of the teacher was identified as authoritative, wherein a direct instruction approach to teaching was employed (Finlayson, 2014). As a result of this instruction, students then assumed the role of passive recipients of their learning; they worked individually to find correct solutions to questions and problems posed (Finlayson, 2014). Being the receivers of this traditional, one-side approach to teaching then, the reality for many students was that their learning needs and abilities did not coincide with this traditional method of teaching (Standford, 2003). However, based on the understanding that students bring many diverse factors to the learning environment, the need for educators to adapt and implement instructional strategies and learning tasks that are responsive to students and their learning become increasingly necessary (Alavinia & Farhady, 2012).

This chapter investigates and analyzes research on how elementary teachers’ knowledge and understanding of Multiple Intelligences influences and impacts their instruction. This analysis provides the foundation upon which my study is based. My study aimed to explore, address, and discuss teachers’ attitudes and perspectives on the theory of Multiple Intelligences
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(Adcock, 2014; Armstrong, 2009; Bennett & Rolheiser, 2001; Gardner, 1983; Ghamrawi, 2014; Haley, 2004; Hopper & Hurry, 2000; Jing, 2013; McFarlane, 2011; Mettetal, Jordan & Harper, 1997; Oprescu, Craciun & Banaduc, 2011; Pienaar, Nieman & Kamper, 2011; Shearer, 2004; Stanford, 2003; Sulaiman & Sulaiman, 2010), and the ways in which teachers respond to the Multiple Intelligences of their students. The review of the literature will explore the use of Multiple Intelligences theory (MI) as an instructional approach/pedagogy, teacher and student beliefs and attitudes towards MI, and the impact of MI on student academic achievement.

2.1 The Theory of Multiple Intelligences

For decades, teaching approaches adopted by many educators have been greatly influenced and dominated by linguistics (i.e. verbal-linguistic intelligence) and mathematics (i.e. logical-mathematical intelligence (Bennett & Rolheiser-Bennett, 2001; Sulaiman & Sulaiman, 2010). Based upon curriculum demands and daily classroom challenges, it has been the default for educators to be unresponsive to the individuality and strengths of students’ ability to learn and process knowledge and information (Bennett & Rolheiser-Bennett, 2001). The traditional way of conceptualizing and understanding learning in the educational system was then shifted when a psychologist from Harvard University, Howard Gardner, proposed the theory of Multiple Intelligences in 1983. Gardner (1983) published a book titled *Frames of Mind*, in which he proposed and argued that humans do not possess a single intelligence. Rather, humans have a set of intelligences that are interconnected (Gardner, 1983). Alike, all human beings possess the intelligences, however, individuals differ in their intellectual abilities and capacities (Gardner, 1983). Since the publication of this book and the release of the theory, Gardner’s work has expanded and has gained much popularity within the field of education.

In *Frames of Mind*, Gardner first proposed that seven human intelligences exist. Research
and knowledge on this has since expanded to include nine Multiple Intelligences (Gardner, 1983, 1999, 2011). These distinctive types of intelligences include the following: linguistic intelligence, logical-mathematical intelligence, musical-rhythmic intelligence, bodily-kinesthetic intelligence, spatial intelligence, naturalistic intelligence, interpersonal intelligence, intrapersonal intelligence, and existential intelligence (Gardner, 1983, 1999, 2011). According to Gardner, these intelligences of the human mind function in a somewhat independent manner of one another (Gardner, 2011). Not only do these nine intelligences exist, but also, each of the different intelligences allow varied opportunity to be intelligent within themselves (Gardner, 1983, 1999, 2011).

For Gardner, intelligence is a human dimension that can be defined in three ways: all human beings possess intelligence; intelligence is one human dimension in which individuals differ from one another; and the manner in which an individual performs an action, task, or goal (Gardner, 1983). Gardner believed that all human beings could develop all nine intelligences, however, typically an individual has one or two dominant intelligences (Gardner, 1983). Gardner (1983) believed that is through the course of an individual’s life, wherein interaction amongst the intelligences allows each of the separate intelligences to be built upon. It is important to note that upon its initial release, Gardner did not propose the theory of Multiple Intelligences with educational implications in mind. However, Gardner (2011) asserts that because the intellectual profiles of individuals vary from one another, then it is feasible to consider such information when planning and implementing educational experiences. That being said, when *Frames of Mind* was re-released in 2011, Gardner spoke about his beliefs on the educational implications that can be derived from his theory of MI. In this regard, Gardner (2011) believed that when considering his theory in education, educators must individualize and pluralize. Gardner’s (2011)
assertion for the need to individualize involves educators having a comprehensive understanding of the intelligence profiles of students and thus teaching and assessing in ways that provide students to demonstrate their intellectual capacities. On the other hand, Gardner’s (2011) assertion for the need for educators to pluralize, involves educators responsibility to present ideas and concepts in a multitude of different ways.

Since the release of Gardner’s theory of Multiple Intelligences, many other researchers and authors have conducted research on the theory and have explored and discussed the varied interpretations of the theory as they pertain to the field of education. Alike, a number of different researchers have explored both the applicability of the theory of MI and its benefits for teaching and learning. In discussing Gardner’s theory of Multiple Intelligences, McFarlane (2011) maintains that the theory provides a positive and effective platform for countering the challenges in the educational system. For this reason, the theory provides an opportunity for schools and educators to widen and expand curriculum and assessments as so to address the needs of all students (McFarlane, 2011). When an educator brings MI theory into the classroom, he moves beyond the surface and provides students different opportunities to learn and succeed in a multitude of ways (Standford, 2003). Similarly, when students are given the “appropriate encouragement, enrichment, and instruction” they have the capacity to develop all the intelligences to a high degree (Armstrong, 2009, p. 15). The theory of MI asserts that not one set of instructional and educational strategies will work for all students at all times, and thus, educators must expand their teaching repertoire to reach the diversity of all learners (Standford, 2003). According to McFarlane (2011), the theory of Multiple Intelligences is a specific intelligence theory, which directly addresses the diversity of individuals, and as a result, leads to a more appropriate teaching method for all students. The theory of MI also has implications for
assessment, in which the theory provides students varied opportunities to show their comprehension and the different ways one can utilize information and knowledge (Stanford, 2003). Furthermore, Bennett and Rolheiser (2001) assert how the theory of Multiple Intelligences awakens a teacher’s awareness to the different strengths that each individual brings to the classroom environment and learning.

**2.1.1 Defining the intelligences**

Gardner believed that humans possess a wide range of abilities and as a result of this belief, he grouped abilities in accordance to the different intelligences (Gardner, 1983). Linguistic intelligence is identified as one’s effective ability to use words either orally or in writing (Gardner, 1983). An individual who possesses a strong linguistic intelligence can be seen as having strengths in regards to semantics, phonology, and syntax (Gardner, 1983). Logical-mathematical intelligence is the enhanced ability to use numbers and reason well (Gardner, 1983). Likewise, logical-mathematical intelligence involves heightened awareness to abstraction, reasoning, as well as a heightened ability to recognize and solve problems (Gardner, 1983). Spatial intelligence involves the ability to perceive and enact transformations of the visual-spatial world (Gardner, 1983). As Gardner (1983) discussed, “central to spatial intelligence are the capacities to perceive the visual world accurately, to perform transformations and modifications upon one’s initial perceptions, and to be able to re-create aspects of one’s visual experience…” (p. 173). Bodily-kinesthetic intelligence involves heightened mastery over motions involving the body and the intricate ability to manipulate objects (Gardner, 1983). Individuals possessing a strong bodily-kinesthetic intelligence use their bodies as a means to manipulate objects and transform feelings and ideas (Gardner, 1983). Musical intelligence involves one’s enhanced sensitivity to musical elements and forms (e.g. rhythm, pitch, melody, etc) and the ability to
perceive and discriminate amongst such forms (Gardner, 1983). Interpersonal intelligence involves one’s heightened sensitivity to the moods, feelings, and temperaments of other individuals (Gardner, 1983). Contrary to this, intrapersonal intelligence involves one’s enhanced awareness of one’s own self-knowledge and feelings and the actions carried out based on such knowledge (Gardner, 1983). Years after the initial release of Gardner’s theory, he published a book called Intelligence Reframed (1999), in which he introduced and outlined another intelligence, which was the naturalistic intelligence. Naturalistic intelligence involves one’s enhanced sensitivity and ability to distinctions and relationships in nature (Gardner, 1999).

2.1.2 Criticisms of the theory of MI

It is important to point out that although MI theory has gained increasing popularity and has been applauded in the field of education, it also has been criticized for its validity and lack of empirical evidence (Armstrong, 2009; Ghamrawi, 2014). For one, learning style theories, such as the MI theory, have been criticized for potentially leading to the mislabeling of learners (Ghamrawi, 2014). The theory of MI has also been criticized for the lack of research and evidence that effectively portray the practical applications of MI inside the classroom (Armstrong, 2009). Critics of the MI theory have also addressed “an artificial feel-good attitude where every child is told that he or she is smart” (Armstrong, 2009, p. 196). Other criticisms of the theory include increasing the workload of educators, misapplication of the theory, potential for lowering school standards, and misnaming the theory when it should perhaps be called multiple talents (Ghamrawi, 2014). Despite criticism, the theory of Multiple Intelligences has proven effective as well. In what follows, a number of research studies will be discussed to show the effective applications and benefits of MI theory.
2.2 The Use of MI as an Instructional Approach

Since gaining popularity throughout the field of education, the theory of Multiple Intelligences has become part of many teachers’ pedagogical repertoires (Adcock, 2014; Jing, 2013). Adcock (2014) states that a teaching approach that uses MI theory is valuable not only to students but also teachers because it recognizes and highlights the diversity of all learners. When educators understand the theory of Multiple Intelligences and how it can be incorporated into the daily life of the classroom, it can improve both teaching and learning (Adcock, 2014).

Pearson Learning Solution (2016) notes that Gardner believed that there are two ideas that are of utmost importance for teachers, which guide the educational interventions of teachers. The first big idea proposed by Gardner, is the crucial need for educators to take into account student’s individual differences seriously, and differentiate their instruction accordingly (as cited in Pearson Learning Solutions, 2016). The second big idea proposed by Gardner is the crucial need for skills, ideas, and concepts to be taught in a multitude of ways (Pearson Learning Solutions, 2016). Jing (2013) further proposes that teaching that is based on the theory of MI should contain at least three different categories of courses. These categories surround the need for educators to teach for, with, and about Multiple Intelligences (Jing, 2013). In this sense, Multiple Intelligences are then viewed as a way in which an individual learns and gathers information and concepts, as well as a pathway for individuals to learn and understand their own intelligences and how one can utilize them (Jing, 2013).

Adcock (2014) conducted a study with kindergarten to grade twelve graduate student teachers that were enrolled in a ‘teaching using Multiple Intelligences’ course. The graduate student teachers completed a survey that assessed their background on MI theory, the knowledge and value gained from taking the course, and the application of MI theory in their practice of
teaching. Adcock found that 44% of teacher participants used MI to a certain degree in their teaching, and only 1% of participants revealed they strictly followed the MI theory or used it on a consistent basis. When asked how MI theory would help them as teachers, 75% of participants discussed that the theory helped them to meet the differences and needs of their students (Adcock, 2014). The participants believed that the theory of MI provided teachers with an abundance of instructional strategies and methods to use inside the classroom (Adcock, 2014). Thus, as these findings indicate, teachers hold positive attitudes towards the use of MI and view the theory as an instructional approach to meeting the diversity of all learners.

Similarly, in a study conducted by Jing (2013), the researcher sought to explore how to apply MI-based teaching in an English reading class in primary schools, and to assess whether this method of teaching could enhance students’ interest toward English reading. The participants of the study included two grade five classes, one control class and one experimental, and included fifty-nine children. The experimental class was taught by a teacher who used the MI theory as a guiding framework; whereas the control class was taught with a traditional method of teaching. Jing found that the children in the experimental class developed a sense of responsibility for their learning as a result of being given the freedom to choose activities that were geared towards their learning needs. Furthermore, Jing also concluded that when compared to the traditional method of teaching, the MI-inspired class was more effective in enhancing and stimulating the interests of the students. Jing asserts that the reason for such a result is based on the fact that the activities planned for the MI-inspired class sought out active involvement and diversity of the students, whereas the activities in the traditional teaching class did not. As these findings suggest, the theory Multiple Intelligences provides an alternative instructional approach that has positive implications on student learning and engagement. Furthermore, the findings also
indicate that the theory of MI can provide teachers with a wider repertoire of teaching strategies. What these studies are lacking however, is how such attitudes towards the theory MI explicitly influences and impacts the instruction of teachers inside the classroom. Alike, the studies made no reference or mention of how teachers’ understanding of and knowledge of the theory of MI influences their MI-inspired instruction. The coming section examines studies pertaining to teachers implementation of MI inspired lessons.

2.2.1 Implementation of MI inspired lessons

In efforts to explore how teachers in the field of education have used the theory of MI to guide and influence their instructional approaches, a number of different studies have been sought, which explore the influence of MI on the implementation of lessons inside the classroom. Such studies were sought to understand how the theory of MI could impact the instruction of teachers and the lessons that they implement inside the classroom.

Hopper and Hurry (2000) conducted an eight-month project with seven secondary teachers and three primary teachers, which sought to introduce teachers to the theory of Multiple Intelligences and analyze the way in which educators can seek out the intelligences in learning. Hopper and Hurry postulated that the teachers in the study who used Gardner’s theory as a framework for learning activities were most successful in forming effective ways of learning and working. It was found that when using MI lessons, many of the teacher participants were able to effectively teach their students. This was particularly the case for students who previously had difficulty in understanding classroom curriculum and content being taught using traditional methods of teaching. Such findings indicate that the theory of MI offers educators the tools necessary for creating and implementing lessons that are responsive to their learning needs and intelligences of all students and not just particular groups of students.
Similarly, in a study conducted by Ghamrawi (2014), the researcher sought to examine teachers’ use of the Multiple Intelligences theory on vocabulary acquisition with preschoolers in English as a second language classes. The participants consisted of eighty kindergarten students and eight teachers. The teacher participants of the study were trained on designing and implementing lesson plans that incorporated MI (Ghamrawi, 2014). Ghamrawi found that the students who were taught vocabulary words via a traditional method of teaching acquired the greatest number of new words when compared to the students taught via MI-inspired lessons. However, it was found that one month after instruction, the students who were taught vocabulary words via MI-inspired lessons were more successful at recalling and using vocabulary when compared to the students taught via traditional teaching (Ghamrawi, 2014). These findings indicate that the students in the traditional teaching class were able to memorize vocabulary quite quickly, whereas the students that received the MI-inspired teaching had better retention of the acquired vocabulary. Based on these findings of this particular research study, it appears as though the implementation of lesson plans that incorporate MI have the potential to have positive implications on student academic success and learning.

Likewise, in a case study conducted by Pienaar, Nieman, and Kamper (2011), researchers sought to assess the impact that a teaching approach based on the theory of Multiple Intelligences would have on teachers, students, and student performance. The participants of the study were five teachers who taught different subjects to one grade eight class. Teacher participants were trained on the theory of MI via the school’s principal and through a workshop from an outside company (Pienaar, Nieman, & Kamper, 2011). It was found that lessons that were designed and implemented using the different elements of MI took longer than expected, however teacher participants discussed that the students appeared to be enjoying the classes more
and were participating more (Pienaar, Nieman, & Kamper, 2011). These findings indicate how implementing lessons that incorporate elements of MI also have positive outcomes on student participation, engagement, and attitudes.

As it has been reviewed through several research studies, the positive implications and effectiveness of using MI as an instructional approach have been highlighted. Not only has the research highlighted the benefits of using MI as a way to reach the diversity of all learners, but it has also highlighted the implications that MI has on student attitudes, participation, and academic success. That being said, such research was scarce in exploring and identifying not only the impact of teachers’ knowledge and understanding on the theory of MI may have on their practice of teaching, but it also made no reference to the explicit ways in which teachers respond to the Multiple Intelligences of their students. I now turn to a number of different research studies that explore and discuss potential and possible barriers to using the theory of Multiple Intelligences as an instructional approach.

### 2.2.2 Barriers to using MI as an instructional approach

Despite increasing popularity of the theory of MI throughout the field of education, there are a number of different factors that influence the successful implementation of MI inside the classroom. In a study conducted by Mettetal, Jordan, and Harper (1997), teachers implementing a MI-based curriculum and who varied in their approaches to incorporate MI inside their classrooms discussed their uncertainty in how to appropriately incorporate MI into their classroom curriculum. Mettetal, Jordan, and Harper (1997) found that although teachers received guidance and support on MI, some were left unsure of how to appropriately use and apply the MI-based curriculum in their classroom. Thus, as such findings portray, one possible barrier to using MI as an instructional approach inside the classroom may be teachers’ lack of knowledge.
and confidence on how to appropriately use the theory of MI in planning and implementing curriculum. Alike, Oprescu, Craciun, and Banaduc (2011) also found that teachers in conventional schools emphasized difficulties that they frequently encountered when attempting to implement activities geared toward the different intelligences. These included teacher’s lack of training on MI, insufficient resources, and refusal of MI by students and parents (Oprescu, Craciun, & Banaduc, 2011). Furthermore, research conducted by Pienaar, Nieman, and Kamper, (2011) cited that a difficulty that teachers encounter when implementing the MI theory inside the classroom is having a high number of students present in a class. Teachers cited that high student numbers make it difficult to tune into each and every student’s individual needs and differentiate instruction accordingly (Pienaar, Nieman, & Kamper, 2011). As these studies have portrayed, there exist certain barriers and factors (i.e. lack of knowledge and confidence in using MI inside the classroom, insufficient resources, student and parent reluctance, large classroom sizes) that can influence a teacher’s ability to effectively and appropriately incorporate ideas from the theory of MI into their practice of teaching (Mettetal, Jordan & Harper, 1997; Oprescu, Craciun & Banaduc, 2011; Pienaar, Nieman & Kamper, 2011).

2.3 Teacher and Student Beliefs and Attitudes Towards Multiple Intelligences

When Multiple Intelligences theory is applied inside the classroom, both teachers and students are made aware of its implications and thus, in turn, form opinions and beliefs about the theory. When the theory of MI is applied to a classroom setting, it allows both teachers and students to become aware of one’s strengths and weaknesses and the many different ways one can go about approaching a problem or idea. Thus, in the coming sections, a number of different studies will be discussed in efforts to explore and analyze the beliefs and attitudes that both teachers and students hold towards the theory of Multiple Intelligences.
2.3.1 Student beliefs and attitudes towards MI

In a study conducted by Haley (2004), the researcher sought to assess the impact that the theory of Multiple Intelligences would have on foreign and second language learning in grades kindergarten to twelve. The participants of the study included twenty-three teachers, and six hundred and fifty students (Haley, 2004). Student participants in the experimental class were taught via instruction that used elements of MI theory (Haley, 2004). Contrary to this, the control class was taught via a more traditional method that was mainly teacher-centred (Haley, 2004). Haley found that student participants in the experimental class held more enthusiastic attitudes toward learning, and many of the behaviour problems previously typical of the class became minimized. It was also reported that many of the students in the experimental class held and expressed positive feelings toward teachers who used varied instructional strategies and assessments. Although this is only but one research study, such findings suggest that MI has the potential to positively affect the students’ attitudes toward learning and improve the behaviours of students.

Similarly, Jing (2013) conducted a study, which explored whether using MI-based teaching in an English reading class could enhance students’ interest toward English reading. It was found that the student participants who received instruction that was inspired by the MI theory held more positive attitudes toward English reading when compared to the students in the control class who did not receive MI-based instruction. The findings from the study also revealed that using MI theory inside the classroom helped students to develop a more comprehensive understanding and awareness of their learning strengths and preferences (Jing, 2013). Likewise, in a case study conducted by Pienaar, Nieman, and Kamper (2011) researchers utilized a student questionnaire in which findings indicated that students held a more motivated attitude toward
coming to school and actively participated more frequently once they received MI-based instruction. Similarly, in their study, Mettetal, Jordan, and Harper (1997) investigated teachers, students, and parents’ attitudes toward a school that was in a process of changing from a traditional curriculum to a curriculum that was based on the theory of Multiple Intelligences. Mettetal, Jordan, and Harper (1997) found that teachers, students, and parents held positive attitudes and beliefs about the MI-based curriculum. Specifically, the students believed that the big idea behind the theory of MI helped them to feel good about their strengths and capabilities and that it also helped to expand definitions of what it meant to be smart (Mettetal, Jordan, & Harper, 1997).

As it has been discussed through the review of research, MI appears to have positive implications on enhancing student attitudes and beliefs. Specifically, the research has highlighted the effectiveness that MI has on enhancing student’s attitudes and behaviours toward school and learning.

### 2.3.2 Teacher beliefs and attitudes towards MI

In a study conducted by Adcock (2014), teacher participants had the attitude that using the theory of MI inside the classroom is crucial in meeting the diversity and needs of all learners. Furthermore, Adcock (2014) reported that teacher participants firmly believed that using MI theory inside the classroom benefitted all students and not just the students whose learning needs and Multiple Intelligences did not coincide with the traditional methods of teaching.

In a pilot project conducted by Shearer (2004), the researcher sought to explore the ways in which teachers could utilize students’ MI profiles. The teacher participants of the study included six public school and secondary school teachers. Teacher participants of the study reported that they benefited from identifying their own MI profile and also benefited from
assessing how their individual MI profile impacted their teaching pedagogy (Shearer, 2004). The teachers held the belief that each student’s MI profile was more than a mere label, rather it was a detailed description of each student’s intellectual capability (Shearer, 2004). Shearer (2004) asserts that when teachers identify their own MI profile and see its relevance to their teaching pedagogy, it brings a new level of acceptance towards the validity of the theory of MI. Shearer (2004) further points out that this form of acceptance from teachers can bring a positive Multiple Intelligences approach to their teaching and classroom environment. Similarly, Mettetal, Jordan, and Harper (1997) found that teachers held positive beliefs about an MI-based curriculum and viewed a MI-based curriculum as an alternative approach to thinking about student’s ability levels. Furthermore, Haley (2004) found that teachers who incorporated MI into the daily life of their classroom believed that doing so helped to strengthen their classroom management skills.

These research studies highlight the attitudes that teachers often have towards the theory of MI and its application inside the classroom. Many of these studies have found that teachers hold positive attitudes and beliefs toward the theory of MI, and understand the effectiveness of using MI as an instructional approach inside the classroom. These studies however, made no mention of how such positive attitudes explicitly influence and impact the instruction of educators when responding to the diverse intelligences and needs of all learners.

2.4 The Impact of the Multiple Intelligences Theory on Student Academic Performance

As it has been discussed, the theory of MI appears to be a tool that educators can utilize in their practice of teaching to address the intelligences and learning needs of all students (McFarlane, 2011). Based on this then, one may wonder, the implications that the theory of MI has on student academic performance. It has been documented that children who have been unsuccessful and who lack motivation in many aspects of their schooling career have gained
success and growth in their academics when a multitude of instructional techniques are employed in the classroom (Standford, 2003). It is asserted that children will learn better when teachers identify and respect children’s Multiple Intelligences and in turn differentiate instruction accordingly (Adcock, 2014).

Jing (2013) found based on both teacher interview results and post-test results that students who received MI-based instruction held significant improvements in their reading performances when compared to those students who did not receive the same instruction. Furthermore, Jing also found that the students’ reading comprehension proficiency in the experimental class was vastly greater than those students in the control class. Similarly, Pienaar, Nieman, and Kamper (2011) found that when comparing student’s academic achievement one year post MI-based instruction, improvement was noted in four out of five subject areas taught with an MI approach. Likewise, Haley (2004) found that students in an experimental group who received MI-based instruction outperformed students in the control group who did not receive MI-based instruction. These findings indicate that the theory of MI also has implications for student academic performance. Some research studies suggest an enhancement in student attitudes and beliefs, but the role of MI in improving students’ academic performance needs further investigation.

2.5 Conclusion

As an approach to reconfiguring traditional teaching pedagogy, the research reviewed in this chapter has indicated the potential positive implications that the theory of MI has on both students and teachers. As the review of literature has indicated, the theory of MI appears to be one theory that teachers utilize to reach the grand diversity in student learning. Through the review of literature and research, the multi dimensions and implications of the theory of Multiple
Intelligences have been to be explored and investigated. This chapter has discussed what the theory of Multiple Intelligences is, the use of Multiple Intelligences theory as an instructional approach/teacher pedagogy, teacher and student beliefs and attitudes towards MI, and the impact that MI has on student academic performance. This review has found a shared crucial need for teachers to recognize, understand, and respond to the Multiple Intelligences of their students. As previously discussed, a small number of research studies indicate that teachers understand and believe that incorporating the theory of Multiple Intelligences/elements of MI into the classroom is beneficial for both students and educators. Similarly, the literature highlighted the effective use of Multiple Intelligences theory as an alternative instructional strategy to the traditional method of teaching. Furthermore, the potential positive implications that the theory of Multiple Intelligences has on student academic performance and attitudes have been highlighted.

Although the current literature has provided an excellent basis for the theory of Multiple Intelligences and its implications in the field of education, gaps in the literature exist. Much of the literature was brief in addressing and discussing how teachers’ knowledge and understanding of the theory Multiple Intelligences directly influences their instruction. Moreover, the literature did not explore the explicit ways in which educators respond to students’ Multiple Intelligences. The literature that was investigated and discussed was scarce in identifying specific ways in which teachers identify and respond to the Multiple Intelligences of their students. Furthermore, much of the literature reviewed was weak in identifying how teacher's knowledge of MI influences and impacts their instruction, and how this knowledge plays a role in instruction. It is crucial that future research seeks to address and identify how teachers use the Multiple Intelligences of their students to plan classroom instruction and content. Thus, my study aimed to critically explore and analyze teacher knowledge and understanding of the theory of Multiple
Intelligences and how teachers plan instruction in accordance to the Multiple Intelligences of their students. Future research should address and assess the ways in which educators not only identify the Multiple Intelligences of their students, but also how they respond to these Multiple Intelligences when planning and implementing learning tasks and activities. The following study was designed to address the gaps that have been identified in the literature.
Chapter 3: Methodologies

3.0 Introduction to the Chapter

The following chapter provides an overview of the methodology employed for the purposes of the research study. The chapter begins by reviewing the approach and procedures used and adapted for the purposes of the research being conducted. An overview of the instruments of data collection that were employed when conducting research is discussed as well. Next, the sampling criteria, recruitment procedures, and biographies of the participants of the study are examined. The chapter then presents the procedures for the analysis and interpretation of the data. The description of the ethical review procedures related to the research study is followed by the strengths and the limitations of my research methodology. Lastly, the chapter concludes with a brief summary of what the chapter entailed and then a preview of the following chapter.

3.1 Research Approach and Procedures

The following research study was conducted using a qualitative research study approach. Denzin & Lincoln (2011) define qualitative research as research that addresses and explores phenomena in their most naturalistic and meaningful context. Qualitative research situates researchers “within their political, social, and cultural contexts” (Creswell, 2013, p. 45). Furthermore, qualitative research is often defined by its common method of data collection, which most often occurs directly in the field or environment from which individuals experience daily life (Creswell, 2013). Similarly, researchers employing methods of qualitative research typically use methods of data collection via direct contact with participants in settings that are natural and authentic to them (Bogdan & Biklen, 2007).
Quite often, qualitative research is referred to as naturalistic due to the fact that the researcher explicitly observes and collects data relating to a particular interest or phenomena in the context from which it naturally occurs (Bogdan & Biklen, 2007). When conducting research, qualitative researchers are highly driven by context and believe that the context from which a behaviour, practice, or action occurs is the most appropriate way to understand a phenomenon of interest (Bogdan & Biklen, 2007). When the goal of research is to develop a more comprehensive understanding and perspective of a particular phenomenon as it occurs most typically, researchers often seek qualitative research as the preferred method of research (Neuman, 2014). Reasoning for this is based on the fact that “qualitative research is about depth rather than breadth…” (Neuman, 2014, p. 71). It is for this reason that I selected a qualitative approach as the preferred method of research.

### 3.2 Instruments of Data Collection

Quite often in qualitative research studies, the researcher acts as a key instrument to data collection (Creswell, 2013); this is the approach taken in this study in regards to data collection. Researchers conducting qualitative research typically collect data firsthand via interviews and observations (Creswell, 2013). Common instruments of qualitative research data collection include technological devices, such as video equipment and recording devices as well as pencils and paper (Bogdan & Biklen, 2007). Thus, the instruments of data collection for my research study were designed drawing on the work of Creswell (2013), Bogdan & Biklen (2007), and Neuman (2014). I employed semi-structured interviews with two participants, wherein each interview lasted for a duration of forty-five minutes.

Often, interviews are designed and employed by researchers as a method of data collection in qualitative research due to the rich and comprehensive information regarding participants
perspectives and experience that is elicited and collected in interviews (Turner, 2010). Thus, individual interviews were conducted, in which each separate participant was interviewed independently. For the purposes of this study, the questions of the interviews were designed as so to be relevant and meaningful to the context of each participant’s teaching experience and practice in the field of education. Similarly, the questions asked were also designed as so to elicit open-ended responses. Furthermore, the interviews were conducted in natural settings (e.g. a coffee shop and my home) that had minimal to no distractions.

3.3 Participants

Participants of the study were chosen based on a number of different factors and criteria, which are outlined below. The biographies of the two participants are presented.

3.3.1 Sampling criteria

The sampling criteria for participant recruitment and selection were carefully designed as so in order to ensure that teachers in the field of education believed to be most appropriate and suitable for the following research study were recruited. Participants recruited for the study were certified and qualified primary and junior elementary school teachers by the Ontario College of Teachers (OCT). As I aimed to conduct an in-depth research study that was both relevant and specific to my own future teaching practice as an elementary primary/junior school teacher, I included participants that were qualified OCT primary/junior elementary school teachers. Based on accessibility and proximity, the teacher participants had worked or were working in the Greater Toronto Area at the time of data collection. Furthermore, participants were selected if they had instruction, either in their Bachelor of Education degree or in a professional development workshop, on the theory of Multiple Intelligences. Rationale for this is based on the fact that I was seeking to interview individuals with basic knowledge and understanding on what
the theory of Multiple Intelligences is and how this knowledge had informed and influenced their practice of teaching.

3.3.2 Recruitment procedures

Once a specific population of interest has been defined and a set of criteria is set in place to select participants of a study, researchers must draw a sample that adequately represents the given population under interest (Frankfort-Nachtman & Nachmias, 2007). Quite often, social scientists employ nonprobability samples, which are defined as a method of sampling in which the probability of the inclusion of a participant is unknown (Frankfort-Nachtman & Nachmias, 2007). One example of a nonprobability sample design is convenience sampling, which can be defined as a sampling method in which sampling units are selected based on convenient accessibility of a particular unit (Frankfort-Nachtman & Nachmias, 2007).

Based on the nature and parameters of the following small-scale study, I used convenience sampling. I recruited participants based on the accessibility of a community and network of practica schools (mentor teachers), and family and friends working in the profession of teaching. Thus, participants of the study were contacted based on their fulfillment of the participant sampling criteria. After participants had been identified as fulfilling the sampling criteria, they were then provided with a brief overview of the current research study. Once the participants agreed to participate in the study, each participant was then provided with a letter of consent (refer to appendix A). This letter of consent provided participants with further details about the nature and content of the study, and required written consent to participate in the study.

3.3.3 Participant biographies

At the time of the interview, Genevieve (pseudonym) had obtained a teaching experience of six years engaging in long-term occasional teaching positions and several occasional teaching
Genevieve worked in the same school board for the duration of her teaching practice. She taught elementary grades kindergarten through grade eight, and obtained intermediate music qualifications.

Lillian (pseudonym), the other teacher participant, had a teaching experience of nineteen years at the time of the study, with the last seven years of that experience being at the same school. She had taught elementary grades three through six. As an educator, Genevieve held a deep passion for literacy, inquiry-based learning, and digital integration.

3.4 Data Analysis

Data analysis in qualitative research has often been defined as a task that requires extensive effort and time (Petty, Thomson, Stew, 2012). Quite often in qualitative research, there is a constant back and forth interplay amongst data collection and data analysis (Petty, Thomson, Stew, 2012). Qualitative researchers analyze data via inductive reasoning to identify and build themes (Creswell, 2013). One can come to think of and understand data analysis in qualitative research as a funnel, wherein the information goes from being very general to more specific (Bogdan & Biklen, 2007). When analyzing data, qualitative researchers meticulously analyze and interpret the content of data from which it was originally recorded and/or transcribed (Bogdan & Biklen, 2007). A qualitative researcher continuously revisits, studies, and reflects on the data collected from the interviews in order to gain a comprehensive account and understanding of the experiences of the participants (Neuman, 2014).

One process associated with data analysis involves the researcher’s role in transcribing interviews. In order to insure that a comprehensive and detailed account and record of the interviews takes place, interviews conducted with participants should be recorded and transcribed in full (Neuman, 2014). For the purposes of this study, after each interview was
conducted with participants, I transcribed the interviews thoroughly by listening to the audio recording of the interview while simultaneously transcribing on a Microsoft word document. I then engaged in member-checking/reflections as a medium to enhance the credibility of the findings of the study. After each interview had been transcribed, I then sent the transcriptions back to each separate participant wherein participants were given the opportunity to review the transcript and confirm that they were pleased with the information present in the transcription.

One of the most common methods of organizing and analyzing data involves identifying and creating codes that emerged from the data collected (Neuman, 2014). Qualitative researchers use these codes as a method of organizing and separating data into smaller units for analysis (Neuman, 2014). As the researcher repeatedly reads transcripts, one must precisely and appropriately choose how each piece of information will be coded (Neuman, 2014). For the purposes of the following study, I repeatedly reviewed and analyzed each transcript individually. Through this rigorous process, I worked with each transcript intricately to code and recode, and thus identified codes, categories, and themes that emerged from the data. Upon reviewing and revising these codes and categories I then synthesized the findings to derive a set of core themes that emerged from the data.

3.5 Ethical Review Procedures

One crucial aspect of conducting a research study that any qualitative researcher must take into consideration is both ethical review procedures and possible ethical issues that may arise throughout the duration of a study. Prior to conducting a research study, researchers first need informed consent and permission to include individuals as participants in the study. This is often done through an informed consent form or letter (Creswell, 2013). At all times throughout
the duration of a study, participants should not be deceived about the content and structure of a study and should be informed at all times (Creswell, 2013).

Based upon on the ethical review protocols of OISE, the interviews that were conducted for my research study were conducted outside of school instructional time and settings. To ensure this, I set up interviews with participants that took place on the weekend and after school (e.g. coffee shop and my home). I negotiated a time and place with participants that was both convenient and comfortable for them. Similarly, this research was conducted under the Ontario Institute for Studies in Education Master of Teaching Ethical Review, and thus, only educators were recruited as participants of the study. As a method of ensuring confidentiality of participants at all times, the participants were assigned a pseudonym by which they were identified. Participants of the study were not coerced to participate and at numerous stages of the research process were notified of their right to withdraw from participating in the study.

In order to receive consent from participants, each participant was required to sign a consent letter, which sought permission for the interviews to be audio-recorded (refer to appendix A). Each separate audio recording was stored on a password protected laptop, and was destroyed immediately after transcription occurred. Furthermore, the participants were given opportunity to review the transcripts of their interview to ensure that they were satisfied with the information gathered in the interview.

3.6 Methodological Limitations and Strengths

My research study presents both strengths and limitations in terms of methodology. One of the strengths of my study was the in-depth interviews that were conducted with experienced teachers in the field of education. The scope and depth of these interviews were intended to provide detailed information relating to the practice and teaching of experienced teachers. These
interviews also provided more in-depth information on the experiences and perspectives of teachers than would a participant survey. Conducting informal interviews with experienced teachers also provided the teacher participants the opportunity to share their knowledge and experience and make meaning of their experiences as a professional in the field of education.

Limitations in the study’s methodologies are concerned with the ethical parameters surrounding the study. Since the current study only included two participants, it is limited in the number of participants involved in the study, and thus has implications of being widely applicable to larger populations. Furthermore, based on ethical parameters in the study’s design and content, the researcher was not permitted to interview parents and/or children and was also not permitted to conduct observations. For this reason, the data collected from this study was limited to the informal interviews conducted with teacher participants.

3.7 Conclusion

This chapter has provided an overview and discussion on the methodologies of my research study. My study used a qualitative research design, wherein I, as the researcher, was the key instrument in collecting and analyzing data and information via in-depth, semi-structured interviews with two teacher participants. The process of data analysis in qualitative research was discussed and explored in relation to the current study that was conducted. In order to ensure that the study was completed both ethically and credibly, procedures and issues of ethical review have been explored and discussed. Moreover, the different strengths and limitations of the present study’s methodologies have been sought and explored. The following section of the research study aims at presenting and discussing the findings that were be collected and analyzed.
Chapter 4: Research Findings

4.0 Introduction to the Chapter

This chapter presents and analyzes the research findings that were derived from semi-structured interviews that were conducted with two elementary teachers from the Greater Toronto Area in the summer of 2016. The design and implementation of such semi-structured interviews were intended to seek out how elementary teachers’ knowledge and understanding on the theory of Multiple Intelligences (MI) influenced and impacted their instruction. Furthermore, the reported research findings obtained from the interviews are also discussed and analyzed in relation to past research pertaining to the theory of Multiple Intelligences and its application within the field of education.

In order to ensure that anonymity and confidentiality of the participants is maintained throughout the following chapter, the two participants have been given pseudonyms. Thus based on these matters of confidentiality, one of the teacher participants is referred to as Genevieve, and the other teacher participant is referred to as Lillian. In the coming sections of this chapter, both the similarities and differences between Genevieve and Lillian are explored in terms of their knowledge, understanding, and attitudes towards the theory of Multiple Intelligences and how this impacted their teaching instruction.

In an effort to analyze and interpret the data collected from the interviews, I went through rigorous and extensive stages of coding and recoding. These stages of coding involved the process of extensively working to transform the data from each given transcript into codes, categories, and eventually themes. Thus, in using both the data collected from the transcripts as well as the current main and sub questions of this research study, I have created and organized the research findings into three overarching themes and five sub-themes. These themes and sub-
themes are as follows: (1) teacher opinions and attitudes towards Multiple Intelligences: teachers’ previous knowledge and experience with and beliefs about MI, and beliefs about the relationship between MI and student learning and success; (2) teaching pedagogy and instructional approaches to student learning: teacher role in student learning, and teacher response to student diversity in lesson planning and instructional strategies; and (3) challenges in planning instruction to meet student diversity: solutions to counteract experienced challenges.

4.1 Teacher Opinions and Attitudes Towards Multiple Intelligences

Prior research was scarce in exploring and identifying teacher beliefs and attitudes towards the theory of Multiple Intelligences, and hence, this research study aimed at gaining new insights in regards to teacher beliefs about and attitudes towards the theory of MI. Both Genevieve and Lillian spoke of their prior experiences in learning about MI in Bachelor of Education programs and in professional development workshops. Although minor similarities existed between participants, Genevieve and Lillian understood and conceptualized the theory of MI in different ways. Furthermore, their beliefs and attitudes towards MI were also different. The following sections will explore and examine such similarities and differences between the attitudes, beliefs, and conceptualizations that the participants held about the theory of MI.

4.1.1 Teachers’ previous knowledge and experience with and beliefs about MI

In an attempt to explore whether the participants’ previous knowledge and experience with the theory of Multiple Intelligences impacted their knowledge, understanding, and instruction inside the classroom, participants were asked to discuss courses they previously took that educated them on the theory of MI. Both Genevieve and Lillian took prior courses either in their Bachelor of Education programs or in professional development courses. These courses were either focused on Multiple Intelligences or incorporated some aspect of the theory in their
design. One similarity that did exist between participants in their previous learning about the theory of MI was their mention of one influential scholar in the field of education- Barry Bennett. When explaining the influential role of Barry Bennett in their learning and understanding of the theory of MI, both Genevieve and Lillian spoke of Bennett’s work in educating them on a number of areas: the importance of MI in the education system, how educators can use the Multiple Intelligences of their students to help plan instruction, and the use of a wide variety of instructional strategies in efforts to target all learners. However, when asked if these prior courses impacted their practice of teaching, the experiences of Genevieve and Lillian were vastly different.

Genevieve discussed that the courses she took in her Bachelor of Education program that were centred on and incorporated MI significantly impacted her practice of teaching. More specifically, Genevieve discussed how such courses helped to provide a foundation in differentiating her instruction inside the classroom. Contrary to this, Lillian referenced her own personal experiences (i.e. personal research, professional learning, and experiential learning) as having the most impact on her practice of teaching. The significance of such findings lay within the fact that past and current literature on the theory of Multiple Intelligences in the field of education has yet to explore and discuss whether or not teacher’s previous learning and knowledge on the theory of MI influences their instruction.

When asked to define what Multiple Intelligences meant to them, both participants provided definitions that were uniquely different from one another. For example, Genevieve provided a definition that involved a conceptualization and understanding of who individuals are. When defining what MI meant to her, Genevieve said:
Multiple Intelligences are a way for us to acknowledge and understand that we are all individuals…that we are all different and that we all have different strengths and weaknesses and that’s okay because that’s what we need in our world. We need diversity to make it [the world] run.

Lillian, however, offered a definition that captured the intelligences as outlined by Gardner, in conjunction with her prior experiences with MI. Lillian stated:

When I think of MI, I most definitely think of Gardner’s seven categories of intelligences…logical, visual, musical, intra- and interpersonal, kinesthetic, natural, and linguistic…I also think of the MI survey that many teachers do at the beginning of the year to get to know their learners.

Thus, as one can see, the definitions provided by the participants highlight the fact that teachers in the field of education define and understand MI in different ways. This finding is also noteworthy in that previously sought out literature pertaining to the theory of MI made no mention or discussion surrounding how teachers define MI.

In regards to the participants’ conceptualizations and understanding of the theory, both similarities and differences emerged throughout the data. Findings revealed that both Genevieve and Lillian believed that there are a number of intelligences that students can have and thus, students have more than one intelligence through which they learn. This finding is supportive of Gardner’s (1983) claim that individuals have a set of intelligences and thus do not only possess a single intelligence. Moreover, both participants talked about the fact that intelligences are not fixed entities and can change over time. As discussed by Genevieve:

…knowing that [intelligences] can change over time makes us as educators, be aware of that. We have to be aware that that can change so when we’re first starting with the
young age group it’s really important to start by understanding what their general strengths are and then building on those and as they get older.

The idea of intelligences being subject to change is further illustrated by the following comment made by Lillian, “students need to recognize that learning styles and intelligences are not fixed and can change over time…” As these examples suggest, it appears as though both Genevieve and Lillian viewed student learning and intelligences as fluid and subject to change. This was further explored by both participants in their discussion involving their personal and professional reluctance in labeling and categorizing students. Both spoke about how such labeling and categorizing can be potentially harmful for student learning and success. When discussing this reluctance, Genevieve and Lillian used a series of different words to describe it, such as, “trap,” “pigeon hole,” “crutch,” and “categorize.” Genevieve stated:

I don’t like to pigeon hole and label students. I’m not really big on labeling because I really don’t think that you can take any one student and put them into one category and say, you’re this and that’s it…

What also emerged around participants’ reluctance in categorizing and labeling students, was the emphasis they placed on acknowledging that students have different strengths and access content in different ways. In this sense, the participants both recognized the potential harm of categorizing and labeling students while simultaneously acknowledging that students learn and access content in different ways. Lillian, for example, stated, “I mean I don’t think that it is necessary to categorize students into specific intelligences, but I do think it is important to keep in mind that students access content in different ways”.

Interestingly enough, prior research shows that one of the biggest criticisms of the theory of MI is its ability to potentially lead to the mislabeling of learners (Ghamrawi, 2014). This could
be the case in instances when students understand and/or are told by their teachers that they are a certain kind of learner or have a certain dominant intelligence. Based on the findings from Genevieve and Lillian, the act of categorizing and labeling students, can, in their words, “pigeon hole” and “trap” students in a way where students become focused on only one specific intelligence, and as a result, do not bother to further develop other intelligences. Lillian particularly spoke to this idea on how students view their strengths and intelligences in learning situations that do not involve their dominant way of learning:

I wonder if students consider their MIs as strengths and because they consider these strengths if they feel less confident to take risks when learning. For example, if a student were to say something like, “I’m no good in gym, I don’t have strong kinesthetic intelligence”. I would really hate students to use it as a crutch to avoid taking on challenges.

As these examples illustrate, similarities between the participants existed in terms of their conceptualizations and understanding of intelligences, as well as their reluctance to use the intelligences as a means to label and categorize students and their learning.

Differences between the participants surrounded their attitudes and beliefs about the theory of MI. While Genevieve’s attitudes and beliefs towards the theory of MI were similar to those reported in the literature, Lillian’s did not seem to align with those findings. For example, Genevieve talked about how understanding Gardner’s theory could provide a strong tool for planning and instruction. It is important to point out that while discussing this, Genevieve emphasized how a true understanding of Gardner’s theory is necessary in being able to provide educators with a strong tool for planning and instruction. Such was explored when Genevieve stated the following: “I think that understanding Gardner’s…really really truly understanding
Gardner’s Multiple Intelligences can provide educators with a very strong tool for the basis of their planning and education of their students. If they really, truly understand it.”

Genevieve also indicated that an understanding of Gardner’s theory involves having hands-on experiences with the theory and how the process of understanding the theory is more experimental and experiential. Furthermore, Genevieve elaborated that the theory of MI is often misunderstood and stated that it is crucial to consider and acknowledge that fact. Genevieve frequently cited the theory of MI as “one important colour on the pallet of educational tools” that educators could use to their advantage only when they understood and used the theory properly. Research conducted by Adcock (2014) also shows that teaching and learning are improved when educators understand the theory of Multiple Intelligences and how it can be incorporated into the classroom. Genevieve also spoke to the fact of how the theory of MI helped to differentiate instruction inside the classroom: “It [theory of MI] helps me understand my learners, which helps me to differentiate my instruction, to better accommodate them.”

This notion of MI as a way for educators to understand, accommodate, and differentiate their instruction for their learners was examined in a study conducted by Mettetal, Jordan, and Harper (1997). Researchers found that teacher participants held positive beliefs about MI and believed that MI was an alternative approach to thinking about student’s ability levels. In this sense, Genevieve viewed and conceptualized the theory of MI as one educational tool through which she could better understand and accommodate her learners.

Contrary to what Genevieve stated, Lillian spoke of her understanding and conceptualizations on the theory of MI in terms of caveats to the theory. For example, Lillian believed that Gardner’s theory asserts that children are a certain kind of learner and thus believed that learning and thinking do not fit into “compartmentalized boxes” as she believed the theory
posited. This example shows that Lillian held certain misconceptions about what Gardner asserts in his theory of MI. Literature pertaining to the theory of MI indicates that Gardner proposed a set of intelligences that are not rigid entities which are independent of one another (Gardner, 1983). Gardner (1983) proposed that humans have a set of intelligences that are interconnected and interrelated. Although Gardner did assert that individuals have one or two dominant intelligences through which they learn, he also asserted that when given appropriate instruction, all individuals have the potential and capacity to develop all of the intelligences (Armstrong, 2009). Thus what one can see in this finding are possible misconceptions and misunderstandings that Lillian held regarding the principles and ideas behind Gardner’s theory and what exactly he asserted about intelligence and learning. This idea is expressed through Lillian’s labeling of Gardner as a “compartmentalized theorist” when she states, “I think that MI’s are not as cut and dry you could say as the compartmentalized theorist might suggest.”

It is, however, important to point out that although these findings suggest that Lillian had possible misconceptions surrounding the theory of MI, she did acknowledge that the caveats and challenges she explored about the theory were based upon her own personal experiences and opinions in the field of education.

### 4.1.2 Beliefs about the relationship between MI and student learning and success

One of the aims of the present study was to explore and analyze how teachers identify the Multiple Intelligences of their students. Findings revealed that teacher participants utilized different approaches and strategies in identifying the Multiple Intelligences of students. On the one hand, Genevieve cited the use of observation, different types of activities, and having students read directly about the theory of MI as ways that helped her to identify the Multiple Intelligences of her students. More specifically, Genevieve talked about her use of implementing
activities that showcased the different intelligences and then making observations on how each student was either successful or unsuccessful in such activities. Surrounding this discussion, Genevieve emphasized the use of observation and the need to have a tracking page wherein she would write notes about individual students and their successes and challenges in such learning activities. This finding echoes the work of Armstrong (2009) who asserts that perhaps the best and most appropriate tool for assessing the Multiple Intelligences of students is through observation. In addition to having the students read about the theory of MI, Genevieve also discussed her role as a facilitator in the process of helping students to identify their intelligences while also guiding students to assume responsibility for their own learning:

…letting them read a little bit about it [theory of MI] and having them advocate a bit about their own education and putting them in the leadership role. Taking charge and giving them the tools to help identify how they learn can be very helpful and Gardner’s Multiple Intelligences can help a lot with that.

It appears as though this student leadership role in relation to the learning that Genevieve talked about is what Armstrong (2009) refers to as a type of metacognitive activity, wherein students become advocates for their own learning and are able to independently choose strategies when problem solving and completing learning tasks. Furthermore, this approach adopted and employed by Genevieve highlights what Jing (2013) refers to as MI-inspired teaching, wherein students learn and understand their own intelligences and how to utilize them. Contrary to this, Lillian spoke of her past experiences in identifying the MI’s of students through the administration of a MI questionnaire. She also spoke of concerns regarding the accuracy of such quizzes:
I had one student who scored zero on the Naturalist intelligence. Does that mean he does not care about the environment at all? In my opinion, certainly not. It just meant that in each of the questions, he had priorities that seemed greater at the time. And in fact, it turned out that he was a very environmentally aware young man, it just didn’t show up on the questionnaire, and I mean that’s where I began to question and wonder [about] the accuracy of doing such quizzes.

Perhaps this challenge experienced by Lillian is what critics of the theory of MI refer to as the mislabeling of learners (Ghamrawi, 2014). As illustrated in the above example, one can see how such a particular instance could lead to the mislabeling of learners. In such an instance, the student scored zero in regards to one specific intelligence, however his teacher was able to observe, outside the parameters of such a quiz, that he was actually very environmentally aware.

Both Genevieve and Lillian asserted the same belief that MI had implications and benefits on all students and not just particular groups of students. When speaking about implications and benefits of MI on all groups of students, Genevieve discussed how the only implications that are different are the manner in which educators use MI’s with the different grades and age levels. She asserted that the way in which a kindergarten teacher would utilize the MI’s of students would be different than how a junior grade teacher would utilize students’ MI’s. Talking in more broad terms, Lillian stated the need for educators to have a wide repertoire of instructional strategies as a means to ensure that the learning needs of all students are being met. These findings follow in close congruence to a study conducted by Adcock (2014), in which teacher participants of the study firmly believed that the use of MI inside the classroom benefited all students, and not just students whose learning needs and intelligences did not coincide with the traditional methods of teaching.
4.2 Teaching Pedagogy and Instructional Approaches to Student Learning

As the findings indicate, both participants discussed similar approaches to teaching and the relations amongst MI and their role in student learning and planning instruction. In discussing their approach to teaching, both Genevieve and Lillian spoke to the idea of being creative and entertaining in their approach to teaching, and how doing so is a way to speak to all learners and make learning accessible for all. In discussing the connection between the theory of MI and her approach to teaching, Genevieve explained her approach to teaching as one where she employs a role of entertainer:

Because let’s face it, we are not obviously, as educators, we are not entertainers, but that is kind of important as well. It’s important to be able to captivate your audience. You are a bit of a performer. You do have to captivate your audience and this is one way [MI] you can do it, you can really speak to them.

Similarly, Lillian spoke to the idea of creativity and responsivity in her approach to teaching, stating that she believed that teachers had to be creative in the ways in which they approach teaching as well as being responsive to the ways in which all students learn.

4.2.1 Teacher role in student learning

A recurring theme from the data involved both participants’ acknowledgement and discussion surrounding their role and responsibility in student learning. Both Genevieve and Lillian explained that they believed that all students have a different way of learning and a unique set of skills and needs that they bring to the classroom learning environment. Also, both discussed the crucial need for educators to get to know their students and the different factors that make up their learning profile. This need for educators to get to know their students is captured in following the statement made by Genevieve, “It is so important to acknowledge our
learners as being all individual learners and I think that tying it back to MI…everyone has you know a different way of learning…” Similarly, Lillian spoke to the need for educators to get to know all learners as individuals rather than breaking them down into a “set of data.” Furthermore, both participants discussed how such information provides a framework from which educators can plan their instruction as a way to ensure that all students learning needs and intelligences are being met. As discussed by Lillian:

I think that teachers need to provide a differentiated program for all of their learners. I mean, whether they [teachers] consider MI or individual student learning needs, there needs to be some framework that teachers use in order to plan their lessons to ensure that all students have access to the content.

As these findings suggest, both Genevieve and Lillian believed that being aware of and acknowledging students’ learning needs and intelligences has implications on their approach to planning and implementing instruction inside the classroom. This idea is also present in the work done by Armstrong (2009) who asserts that the acknowledgement and understanding of MI has implications on the structure of the learning environment and how such a structure can ensure that the needs of all learners are being met.

In addition to the above, both Genevieve and Lillian explained the necessity on their part to encourage and help students build their intelligences. In the view and understanding of the different Multiple Intelligences inside the classroom, both Genevieve and Lillian viewed their role as an educator as one that helps students to build their intelligences. Furthermore, both participants also spoke of the need for students to play active roles in understanding and identifying their intelligences and the ways in which they learn. This idea aligns with the previously discussed findings involving both participants reluctance to label and categorize
students on the basis of intelligences. In explaining how having students identify their most dominant intelligence may potentially be a trap, Genevieve stated that, “it’s important for us as educators to help them [students] build all of their intelligences and give them opportunities to explore other intelligences and invite that growth.”

Speaking in terms of growth in their intelligences and learning, Lillian frequently referred to the importance that teachers play in teaching students growth mindset as a way to tackle areas of their learning that do not follow in congruence with their dominant intelligence. Lillian noted the crucial role that educators play in teaching students to shift their mindset as so to become “reflective learners who are willing to take risks, fail, learn, and grow,” and encourage students to build intelligences they may find challenging. As these findings illustrate, both participants talked about their role in getting to know their students as individuals who have a number of different learning needs and intelligences, and their role in helping to build the intelligences of their students. Prior research was scarce with reference to the active role that teachers play in helping students to build on and expand their already existing intelligences.

4.2.2 Teacher response to student diversity in lesson planning and instructional strategies

Findings that were derived from the data indicated a recurring element of responsivity to student diversity in the instructional approaches and lesson plans employed by the teacher participants. In discussing such, Genevieve talked more specifically about MI as an instructional tool to respond to student diversity, whereas Lillian talked more broadly about instructional strategies to address such diversity in learning. One prominent finding from Genevieve’s interview that repeatedly emerged was her belief that the theory of MI was an instructional tool that educators could utilize to identify and understand how students learn, as well as a tool that
could be used in helping educators to plan instruction. When discussing the impact of the theory of MI on her practice of teaching, Genevieve stated, “Gardner’s Multiple Intelligences can provide educators with a very strong tool for the basis of their planning and education of their students.”

Without directly citing the theory of MI as an instructional approach to responding to the diversity of all learners, Lillian discussed the crucial importance and need for educators to have a wide repertoire of instructional strategies in responding to diversity in student learning.

Both Genevieve and Lillian talked about the need to utilize and incorporate students’ MI’s to plan and build lessons as a way to accommodate all learners and ensure that all students had access to the content. More specifically, both participants spoke to the fact of having an element of MI in their lessons as a means to support students’ intelligences. Similarly, both participants spoke about how ideas from the theory, as well as awareness about MI, can assist educators in planning lessons. Genevieve asserted the belief that the ideas about the different intelligences could be utilized by educators as a way to plan and implement more elaborate lessons that accommodate all learners. Similarly, Lillian spoke to the fact that awareness on MI can assist educators in considering different entry points when planning learning opportunities.

These ideas and beliefs surrounding teacher response to student diversity in lesson planning were further illustrated through the participants’ use of examples from their own personal practice of teaching. Genevieve for instance, stated:

For example, if you know that Susie is a very kinesthetic learner then you can really play on that, or if you know that a number of your students are kinesthetic learners then you’re going to want to have something in your lesson that is really hands-on and really gets them up out of their seats…
When speaking of her efforts to accommodate all learners and their intelligences across the curriculum, Lillian explained her efforts to create dances to remember math formulas and sing songs about science concepts. Furthermore, Lillian also spoke of the need when planning lessons, to build an element of choice, in order to make sure that students are able to share and demonstrate their learning in a number of different ways. As these findings illustrate, the theory of MI is viewed as an instructional tool that teacher participants utilized to address the diversity in student learning when planning and implementing lessons across the curriculum. These findings are similar to those from a study conducted by Adcock (2014), which reported that 75% of teacher participants maintained that the theory of MI helped them in meeting the differences and needs of their students.

While the findings from this research study indicated that educators need to utilize and incorporate students’ MI’s when planning and building lessons, prior research regarding the implementation of MI-inspired lessons point to alternative findings. Prior research cite how such lessons help teachers to effectively teach students, especially students who previously had difficulty in learning content via traditional methods of teaching (Hopper and Hurry, 2000). Moreover, research in this area also indicates that MI-inspired lessons have the potential to positively impact student academic success, learning, engagement, and attitudes (Ghamrawi, 2014; Pienaar, Nieman, and Kamper, 2011). Thus as one can see, the findings from this research study present a different dimension to understanding and identifying teacher beliefs and attitudes in incorporating the Multiple Intelligences of students when planning instruction and lessons.

4.3 Challenges in Planning Instruction to Meet Student Diversity

Both Genevieve and Lillian spoke of challenges that they previously experienced in planning instruction in accordance to the Multiple Intelligences of their students. The following
sections will explore and discuss the similarities and differences on the challenges that Genevieve and Lillian previously experienced when planning instruction in accordance to the Multiple Intelligences of their students. Moreover, the solutions the participants utilized as a means to overcome such challenges will also be explored and examined.

Both Genevieve and Lillian spoke about it being challenging to incorporate and meet the learning needs of all learners. Such challenges involved difficulty in accommodating all learners and their Multiple Intelligences. Lillian explained:

…in the past, I have had students who are strong kinesthetic learners, and it is sometimes more challenging to meet all of their learning needs. In those instances, I have created things like for example dances, to remember math formulas and sometimes I would sing songs about science concepts.

These findings above indicate some similarities with the findings from a study conducted by Pienaar, Nieman, and Kaper (2011). These researchers found that one difficulty that teachers encountered when implementing the theory of MI in the classroom was the high number of students in a given class. Although neither Genevieve nor Lillian spoke explicitly to the idea of it being challenging in having a high number of students present in a class, the challenge they have experienced in accommodating and incorporating all learners and their Multiple Intelligences in planning instruction may be attributed to the number of students. The participants differed in their experiences with such a challenge. On the one hand, Genevieve experienced the challenge of incorporating and accommodating all students’ learning needs and intelligences in terms of curriculum demands, whereas Lillian spoke of such a challenge more so in terms of assessment.

Genevieve referenced an isolated instance in her teaching experience wherein curriculum demands acted as a barrier in her efforts and ability to plan instruction in accordance to the
intelligences of all her students. In this given instance, Genevieve and her colleagues collaboratively planned lessons to teach the grade six Ontario social studies curriculum. Genevieve shared that she and her colleagues discussed the idea of teaching the curriculum in the same way and at the same pace, and within a short period of time. Thus, they decided to teach the curriculum via power points, note taking, and textbook work. This decision made Genevieve feel that she fell short of accommodating all students and their MIs. Genevieve stated:

…that [teaching the social studies curriculum via power points, note taking, and textbook work] was a huge challenge because were some of our learners left behind because of that and because they didn’t learn that way? Absolutely. I would say a good percentage of them were left behind. It was during this time I felt like I fell short of accommodating all learners and did not include all of the multiple intelligences of my students.

As the above quote indicates, in such an instance, curriculum demands may act as a challenge and barrier in teachers’ efforts to plan instruction that would meet the learning needs and Multiple Intelligences of all students.

Conversely, Lillian spoke of challenges in terms of assessment and how she found it to be challenging to build differentiated ways for students to share their learning back. For example, Lillian shared how it had been a challenge to design both tasks and assessments that were reflective and responsive to students’ intelligences and learning needs. Furthermore, Lillian also spoke of how the way in which certain students learn (e.g. learning in groups or in pairs) created challenges when it came to assessment. In discussing such challenges, Lillian stated:

…students who, for example, have strong interpersonal skills, and hence like to work with partners or a group have been a challenge for me. I mean I am all for collaborative learning and working with peers, but I just feel that the biggest challenge with this is
when it comes to assessment. In such an instance, I just found it not possible to always provide tasks that can be assessed collectively.

From the above it is clear that Lillian struggled with providing opportunities for collaborative work that could be assessed individually. Prior research also indicates that the theory of MI has implications for assessment, such as providing varied opportunities for students to show their comprehension (Standford, 2003). That being said, Genevieve and Lillian bring new insights about assessments. Existing research that pertains to the challenges that educators face in incorporating and including the Multiple Intelligences of their students includes challenges such as: educators being unsure of how to appropriately incorporate MI into classroom curriculum, lack of teacher training on MI, scarce resources in being able to incorporate MI, and a reluctance towards MI on part of students and parents (Mettetal, Jordan, and Harper, 1997; Oprescu, Craciun, & Banaduc, 2011). My research study seems to add two additional challenges that educators may potentially face when attempting to plan instruction in accordance to the Multiple Intelligences of their students, which include curriculum demands and assessment.

4.3.1 Solutions to counteract experienced challenges

Findings from this present research study have indicated possible ways that teachers can counteract challenges experienced when implementing the theory of MI inside the classroom. Since Genevieve and Lillian spoke of challenges based on personal experiences in their practice of teaching, the solutions each participant shared and discussed are different from one another.

In an effort to address the challenges of curriculum demands while simultaneously accommodating all students and their intelligences, Genevieve discussed a number of different approaches she utilized in response to student feedback. Genevieve shared that she solicited and
received frequent feedback from students whose learning needs and intelligences were not being accommodated during the social studies curriculum lessons and teachings. She identified such needs through observation, and also cited using reflection as a means to be responsive to such students. Genevieve also shared that she frequently used one-on-one follow-ups with students, provided students with daily affirmations (i.e. that the learning tasks might be challenging and that they had the ability to succeed at such learning tasks,) and provided students with other tools necessary for being successful in their learning. As these findings suggest, although Genevieve may not have been able to accommodate the intelligences of her students on a whole group level, she still succeeded in providing accommodations and being responsive on an individual basis.

Lillian, on the other hand, spoke about a solution involving finding a balance amongst accommodating individual student learning needs and necessities of assessment. For example, Lillian described her efforts to provide many opportunities for students to work on learning tasks in pairs or in a group. At the same time, Lillian, also maintained that anything that needed to be assessed needed to be completed independently. It is important to point out that in reviewing the literature pertaining to the theory of MI, I was unable to locate research studies that explored solutions that educators utilize to address challenges that they experience when planning instruction in accordance students’ Multiple Intelligences. Thus, the following findings add a new dimension to teacher experiences and voices in the application of MI inside the classroom as a way through which instruction is planned.

4.4 Conclusion

The findings that were derived from two semi-structured interviews conducted with elementary teachers from the Greater Toronto Area have been presented, discussed, and analyzed. Findings obtained from the interviews highlighted and explored the knowledge,
understanding, attitudes, beliefs, and experiences with the theory of MI of these two different elementary teachers. Findings indicate both similarities and differences between participants.

The two teacher participants conceptualized and understood the theory of MI in both similar and different ways. Both participants acknowledged and discussed the importance for educators to get to know their students and their learning needs and intelligences. As well, both participants acknowledged that students learn in a multitude of ways and that intelligences are fluid and thus subject to change. Alike, both teacher participants held the belief that MI had implications and benefits on all students and not just particular groups of students. Genevieve and Lillian also emphasized how such knowledge and information about their students (i.e. intelligences and learning needs) not only provided a framework from which to plan instruction, but also had implications on the manner in which educators plan and implement lessons. More specifically, both participants spoke to the need of having an element of MI in their lessons and how ideas and awareness on the theory of MI can assist in planning lessons as a means to support students’ intelligences. Findings derived from the present research study also indicated that teacher participants held the belief that both teachers and students alike play active roles in understanding and identifying the different intelligences. Thus, such findings illustrate the participants’ belief that the theory of MI can be an instructional tool that educators can use to address diversity in student learning.

As it was explored in the findings, it appears as though the theory of MI has the potential to impose challenges in teachers’ efforts to utilize and employ the theory in their practice of teaching. Both Genevieve and Lillian spoke of challenges they experienced when planning instruction in accordance to the Multiple Intelligences of their students. More specifically, both participants found it challenging to accommodate all learners and their Multiple Intelligences.
Teacher participants did however differ in the specific challenges they faced when implementing instruction in accordance to the Multiple Intelligences of their students. On the one hand, Genevieve discussed challenges in terms of incorporating and accommodating all students’ intelligences in terms of curriculum demands, whereas Lillian spoke of challenges in terms of assessment. As these findings indicate, it appears as though the theory of MI has the potential to pose specific challenges in teachers’ efforts to include and accommodate the intelligences of all students.

The findings from this research study add new insights to the theory of MI in the field of education, insights that explore the voices of educators and how their knowledge and understanding on the theory of MI influenced and impacted their instruction. In the following chapter, Chapter Five, both broad and narrow implications of the findings will be discussed, recommendations pertaining to the field of education will be provided, and areas for further researcher will be identified.
Chapter 5: Conclusion

5.0 Introduction to the Chapter

The present research study was designed to learn more about elementary teachers’ attitudes and beliefs towards the theory of Multiple Intelligences and how their understanding and knowledge on the theory influenced and impacted their instruction. The following section of this research study aims to summarize the findings obtained from two semi-structured interviews with two elementary school teachers and their significance, the broad and narrow implications of such findings, recommendations for various stakeholders in education, directions for future research, and concludes with lasting thoughts about the significance this research has for the field of education.

5.1 Overview of key findings and their significance

Through rigorous and extensive stages of coding, recoding, and analysis, findings derived from semi-structured interviews with two elementary teachers, revealed three main themes. These themes included: (1) teacher opinions and attitudes towards Multiple Intelligences; (2) teaching pedagogy and instructional approaches to student learning; and (3) challenges in planning instruction to meet student diversity: solutions to counteract experienced challenges. The following sections aim to review the key findings and significance from each of the themes and sub-themes.

As the findings revealed, teachers defined, conceptualized, and understood the theory of Multiple Intelligences in different ways. That is, when defining what Multiple Intelligences meant to them, both participants defined it in different ways. That being said, one aspect of the theory that participants appeared to have similar views and understandings on was intelligences and the benefits the theory has on particular groups of students. Both participants believed that
there are a number of different intelligences that students can have, that intelligences are fluid and subject to change and that MI had implications and benefits on all students and not just particular groups of students (e.g. groups of students whose learning needs do not coincide with traditional methods of teaching, groups of students who require additional time on learning tasks, etc). Findings emerging from the data also indicated that participants held vastly different attitudes and beliefs towards the theory of MI and in the ways in which they identified the Multiple Intelligences of their students. Genevieve held more positive attitudes and beliefs towards the theory of MI, stating that the theory could be a strong tool from which educators could utilize in planning and implementing instruction. Contrary to this, Lillian held more negative attitudes and beliefs towards the theory of MI, discussing personal opinions and beliefs on the caveats of the theory. Such findings are significant based on the fact that previous research was scarce in identifying and exploring teacher beliefs and attitudes towards the theory of MI. These findings provided an in-depth exploration into the explicit attitudes and beliefs of two different elementary teachers on the theory of MI. More specifically, as the findings indicated, it appears as though teacher educators are different in the ways in which they define, conceptualize, and understand the theory of MI and in their attitudes and beliefs towards the theory. It appears as though such findings may have implications on how teachers may or may not utilize the theory of MI in their practice of teaching and to what extent the theory is actually apparent in the instructional approaches they employ inside the classroom.

As indicated from the findings, both participants held similar views on teaching pedagogy and student learning, which included the idea of being creative and entertaining in their approach to teaching as a means to make learning accessible for all learners. Likewise, data revealed that both participants understood and believed that students have different ways of
learning and have unique skills that they bring to the classroom learning environment. When planning instruction to meet the learning needs and abilities of all students, both participants discussed using students’ needs and intelligences as a framework from which to do so. Findings indicated that teacher participants held the belief that both teachers and students play active roles in understanding and identifying the different intelligences and ways of learning. This finding is then significant as it pertains to the work of McFarlane (2011), who indicated the theory of MI is an instructional tool, which can be utilized by teachers to expand curriculum and assessment as a means to address the learning needs of all students and aid in employing teaching approaches that are most appropriate for all students. Thus, as the findings suggest, in the field of education, the theory of MI is viewed, interpreted, and understood as one instructional tool that educators utilize in efforts to reach the learning needs and intelligences of all students. Similarly, such findings indicate that when understanding student learning profiles, one factor that teachers take into consideration are the Multiple Intelligences of students. That being said, understanding that students have different learning needs and intelligences, the findings indicated that teachers can be responsive to such variance in student learning through employing the theory of MI in their practice of teaching.

Data emerging from the interviews revealed that the theory of MI posed specific challenges on teachers’ planning and implementation of instruction inside the classroom. As the findings indicated, teacher participants found it challenging to accommodate all of the intelligences of their students in classroom content and lessons, citing challenges as they pertained to curriculum demands and assessment. Such findings hold significance in that prior research on the theory of MI has also identified a number of different challenges that can arise in teachers’ application of the theory of MI inside the classroom. As indicated by prior research,
there exist certain factors (e.g. lack of knowledge and confidence in using MI inside the classroom, insufficient resources, large classroom sizes, etc) that pose challenges in teachers’ ability to successfully incorporate aspects of the theory of MI in their practice of teaching (Mettetal, Jordan & Harper, 1997; Oprescue, Craciun & Banadue, 2011; Pienaar, Nieman & Kamper, 2011). Thus based upon findings from this present research study and prior research, it appears as though there exists certain factors that influence and impact teachers’ efforts to employ the theory in their practice of teaching.

5.2 Implications

The following section identifies and discusses both broad (i.e. educational community) and focused (i.e. personal implications as an aspiring educator) implications derived from the major findings of this research study.

5.2.1 Broad implications

The findings from this present research study have significant implications for educational reform. Consistent with the work of Bennett and Rolheiser (2001), findings from the study serve as a reminder that the theory of Multiple Intelligences is one educational-related theory that can be utilized as an instructional tool through which teachers can acknowledge and value diversity in student learning. It is important to point out that although MI was asserted as a theory in its initial release, within the field of education, it has been consistently interpreted, understood, and viewed as an instructional tool that educators can utilize in their approaches to teaching. This was found both in prior literature and in the findings derived from this present research study. As both prior research and findings from this study have shown, students have different intelligences and multiple ways of doing and learning. Although traditional forms of schooling have been dominated by logical-mathematical and linguistic intelligences and have
traditionally included a one-sided approach to teaching, this has shown to be ineffective and unresponsive to the learning needs and intelligences of all students (Stanford, 2003; Sulaiman & Sulaiman, 2010).

As this indicates, students are vastly different in their learning needs, abilities, and intelligences and thus, such diversity must be taken into consideration to ensure that all students are successful in their learning. Likewise, the study highlighted and explored the fact that Multiple Intelligences are one component that make up student learning profiles and hence should be considered when planning and implementing instruction. This coincides with the work of Gardner (2011), who believed that teachers should take into account the variability in individual intellectual profiles when planning and implementing educational experiences. As the findings have illustrated, it appears as though both teachers and students play active roles in facilitating and building intelligences. Such findings are similar to the work of Armstrong (2009) and Jing (2013), who identify the need for students to learn about and understand their intelligences, how to utilize them, and in turn, become advocates for their own learning.

Emerging findings from this study indicated that teachers play an active role in this process as a means to both facilitate and help students engage in metacognitive activity involving their intelligences. As the findings have suggested, the theory of MI has the potential to pose challenges in teachers’ employment and application of the theory inside the classroom. This finding aligns with the work of Mettetal, Jordan, and Harper (1997) and Oprescue, Craciun, and Banaduc (2011) whom also cite a number of challenges that teachers face in incorporating and including the Multiple Intelligences of their students in classroom content and instruction.
5.2.2 Narrow implications

The findings from this current research study present and provide numerous implications for my future practice of teaching as an elementary school teacher. While many of the findings reaffirm my beliefs and attitudes towards student learning and success, such findings have offered explicit insights into the implications that the theory of MI has in the field of education and for my own personal practice of teaching. For one, it appears as though the theory of MI can be viewed as one educational-related theory that has the potential to influence the instructional approaches I may choose to employ in my practice of teaching. As both prior literature and the findings from this study have explored, MI has the potential to be highly valuable and insightful when planning and implementing instruction inside the classroom.

That being said, findings have highlighted the importance of teachers’ awareness and acknowledgement of the different factors (e.g. intelligences) that make up the learning profiles of all students and how such factors should be considered when planning and implementing learning experiences and tasks for all students. Thus, taking into account the many intelligences of all students, I can then utilize the theory of MI in hopes of moving away from traditional teaching pedagogies that have been dominated by logical-mathematical and linguistic intelligences, which as it has been previously noted, have only been beneficial to certain kinds of learners and intelligences (Sulaiman & Sulaiman, 2010). As a means to move away from traditional and inequitable approaches to teaching, then it is only feasible, necessary, and appropriate to take into account the many intelligences of all students and use the intelligences of students to plan instruction accordingly. By doing so, I will ensure that learning is accessible for all students and that all students will have the opportunity to succeed in their learning.
As the findings have suggested, teachers are in a crucial position to help facilitate students’ recognition and understanding of their intelligences. While both teacher participants spoke to their experiences in identifying the Multiple Intelligences of their students, Lillian spoke of the lack of credibility in administering Multiple Intelligences quizzes to students as a means to discover students’ most dominant intelligences. Genevieve on the other hand, however, spoke of her successful use of observation as a means to identify and assess the intelligences of her students. This finding coincides to the work of Armstrong (2009), who asserted that the most appropriate tool that teachers can use when assessing the Multiple Intelligences of students is observation. As this applies to my future practice of teaching, it appears as though observation is one appropriate and credible tool to assess and identify the Multiple Intelligences of students. Thus, in attempts to plan effective instruction for all students in my future practice of teaching, I should seek to include observation as one feasible tool through which I can identify and understand the Multiple Intelligences of my students.

As findings have indicated, it appears as though efforts to implement and employ the theory of MI into one’s practice of teaching can pose potential challenges, and thus moving forward, I must be cognizant of such challenges. Findings regarding the challenges experienced by both teacher participants also revealed an element of resposnsivity in one’s practice of teaching. That is, both participants were responsive to the challenges imposed on the learning needs and abilities of students and offered solutions to counteract such challenges. As this then relates to my future practice of teaching, I must seek and maintain an element of responsivity as a means to counteract potential challenges and ensure that all students are successful in learning tasks and assessments. I must create and seek out alternative lessons, tasks, and methods of instruction as a means to be responsive to the learning needs and intelligences of all students and
thus ensure success for all. Using the intelligences of students as a guiding force in the planning and implementation of learning tasks, I will then seek to differentiate the structure, content, materials, and delivery of all learning tasks in order to ensure that all students learning needs and intelligences are being met. In this regard then, as the findings have illustrated, the theory of MI appears to be one medium I can utilize in my efforts to be responsive to the learning needs and abilities of all students.

5.3 Recommendations

As the implications relate to the work of numerous stakeholders involved in the educational system, a number of different recommendations can then be suggested for pre-service and in-service teachers and for the nature and content of professionally-related development workshops and Bachelor of Education courses centred on the theory of MI. As this present study involved the voices and perspectives of two elementary school teachers, many of the recommendations are of particular relevance to the teaching practices and pedagogies of teachers.

Based upon findings from this study and prior research, it is understood that students have multiple ways of knowing, doing and learning. This then assumes the idea that not one specific instructional strategy will work for all students at all times (Stanford, 2003). Thus, it then only makes logical sense for teachers to have a wide repertoire of teaching pedagogies and instructional methods when planning and implementing lessons to reach the diversity in the needs and intelligences of all students. As the findings have highlighted, the theory of Multiple Intelligences is one educational-related theory that can be utilized as a guiding framework in the instructional methods of teachers as a means to be responsive to the learning needs and intelligences of all students. It is important to note, however, that this recommendation is not
suggesting that Gardner’s theory of MI as a guiding theory/framework for instruction is the only educational-related theory that teachers should employ and utilize in their practice of teaching. Rather, as one teacher participant said ever so perfectly, MI is one important “colour on the pallet of educational tools.” Although the theory of MI has been criticized for its validity (Armstrong, 2009; Ghamrawi, 2014), it appears as though the theory can act as a guiding framework in the instructional tools that teachers should take into consideration when planning instruction inside the classroom. Taking into consideration the theory of MI then, teachers may initially begin by assessing and evaluating the intelligences of students through a number of different tools, such as observation and questionnaires. As teachers begin to recognize the different intelligences of students, they can then begin to be responsive to such intelligences through differentiating lessons, tasks, and forms of assessment.

As the findings revealed, teachers must be cognizant of the potential of the theory of MI to lead to the mislabeling of learners and categorizing students into specific intelligences. Both teacher participants spoke of their active role in helping to facilitate students’ identification of their most dominant intelligences and the role they play in planning and implementing learning tasks that are centred on the intelligences of all students. Both participants spoke of the need for educators to get to know who their students are as learners, create and implement lessons and learning tasks that adhere to the intelligences of all students and provide opportunity in learning tasks that allow students to explore their intelligences and invite growth within them. The participants spoke of their role in creating and implementing learning tasks that are varied in the content, method, and structure as so to adhere to the intelligences of all students.

As the theory of MI denotes, given appropriate instruction, all students have the capacity to develop any and all of the intelligences to a high degree (Armstrong, 2009). Thus, when
assessing and evaluating the intelligences and learning needs of students, I recommend that teachers take on an active role in helping students to identify and understand their intelligences and facilitate the growth of all of the intelligences of students. I am recommending that teachers help to facilitate students’ awareness and understanding of their intelligences in ways that enable students to become motivated and confident to engage in learning activities and lessons that involve both their dominant and non-dominant intelligences. One way in which teachers can accomplish this is by utilizing different intelligences in different lessons, activities, and methods of assessment. While it is not feasible to suggest for educators to include all of the intelligences in one specific lesson, I am recommending that educators vary the intelligences they utilize in each lesson so that at some point or another what is being taught is coinciding with the learning needs and intelligences of all students. Teachers can do so by varying the method of teaching for any given lesson, altering the structure of the lesson, and including varied forms of assessment. Including the different intelligences of students when planning and implementing lessons and tasks may include for example, creating a dance to help teach a math formula, singing a song about science concepts, or having teacher-student conferences to evaluate and assess the learning and knowledge students obtained from a given social studies unit.

Just as there are Multiple Intelligences and many different ways to teach, there are also multiple ways to identify and assess the Multiple Intelligences of students. As concerns surrounding the credibility of administering typical MI questionnaires have been highlighted, I suggest that teachers use a variety of tools in attempts to identify the Multiple Intelligences of their students and are also cognizant and aware of the credibility of such tools. I do not believe that one single, isolated questionnaire can provide an accurate picture of the intelligences of students and it is for this reason that educators should be aware and cognizant of the credibility
and validity of such questionnaires. This was highlighted in the one teacher participants comments regarding her belief that typical MI questionnaires lack providing educators with a true and comprehensive of the learning abilities and needs of students. Similarly, I recommend that when identifying and assessing the intelligences of students, that teachers use a number of different tools. As both prior research and findings from this study have shown, observation is one credible tool that teachers can utilize when identifying and assessing the intelligences of students. In order to reach a comprehensive understanding of the Multiple Intelligences of students, I suggest that teachers use a variety of tools to do so. Furthermore, I also recommend that when choosing different tools through which to identify and assess the Multiple Intelligences of students, that teachers choose tools that are age appropriate. It is not feasible for educators to, for example, administer MI questionnaires to students in a kindergarten class based upon developmental age and learning needs of students in this specific grade. A more appropriate tool through which educators could assess the intelligences of students in a kindergarten class would be, for example, through observation.

As the findings have indicated, in attempting to understand and conceptualize the theory of MI, some educators hold misconceptions about the nature and content of the theory. As this study has illustrated, the theory of MI appears to be a valuable theory through which teachers can utilize as a means to reach the diversity that is ever so present in student learning. That being said, if teachers are to appropriately and successfully utilize the theory in their practice of teaching, then it is reasonable to assume that they receive adequate and appropriate training on the theory. This then holds particular relevance to courses in Bachelor of Education programs and professional development courses and workshops offered to both pre-service and in-service educators. In order to ensure that both pre-service and in-service educators are well equipped and
achieve a comprehensive understanding of the theory and its applicability in the field of education, then I suggest that the content of such courses include a wide range of information about the theory. That is, when teaching pre-service and in-service educators about the theory, course content should include information regarding the theory as first proposed by Howard Gardner, its place and role in the field of education, interpretations of the theory as they relate to the field of education, criticisms of the theory, and alternative perspectives. The content of such courses should also explore potential challenges in both the theory itself and in the application of the theory in one’s practice of teaching. Perhaps courses provided to pre-service and in-service educators could provide individuals with explicit tools, strategies, and resources intended to help appropriately deal with such challenges.

5.4 Areas for Further Research

While this present study provided an in-depth exploration into the perspectives and attitudes of two elementary teachers on the theory of Multiple Intelligences, questions have arisen through the research process and potential areas for further research have also surfaced. First and foremost, if research is to be conducted inside the systems of education wherein students are at the core of the profession, it would only make sense to include the voices and perspectives of students themselves. That is, research as it pertains to the theory of Multiple Intelligences has the potential to become richer if the voices and perspectives of students are actively sought out and included. Future research should seek to include student participants and their experiences, attitudes, and perspectives on the theory of Multiple Intelligences. I believe that seeking out and including the voices of students has the potential to provide a much more comprehensive depiction of the theory of MI as it relates to the field of education.
As both teacher participants spoke to their own personal educational experiences in learning about the theory of MI in their Bachelor of Education programs and Professional Development workshops, one may begin to wonder the scope and depth of such courses. Alike, one may also begin to wonder the quality and credibility of such instruction and learning about the theory of MI. This then leads to wondering if the theory of Multiple Intelligences inside the field of education is something that is fully accepted and employed, not accepted nor employed, or partially accepted and sometimes employed in teaching practices. Perhaps future research could strive toward exploring and investigating the extent to which teachers’ understanding of the theory aligns to what Gardner proposed in his theory and to what extent teachers actually include the Multiple Intelligences of students in lessons and activities.

5.5 Concluding Comments

The purpose of this present research study was to critically explore and analyze how elementary teachers’ knowledge and understanding on the theory of Multiple Intelligences influenced and impacted their instruction as well as how teachers used the Multiple Intelligences of their students to plan instruction accordingly. Semi-structured interviews provided an in-depth exploration and investigation into the experiences, knowledge, and beliefs and attitudes of two elementary school teachers from the Greater Toronto Area. Although this study only incorporated the voices and perspectives of two teachers, the findings have provided a window into the theory of Multiple Intelligences and its applicability in the field of education. As the findings have shown, teachers differ in their definitions, conceptualizations, and understandings of the theory of MI. Moreover, teacher participants also differed in their attitudes and beliefs towards the theory of MI. Although differences emerged amongst participants, data indicated that the teacher participants believed that teachers play an active role in helping to build the
intelligences of students and that it is extremely crucial for teachers to include and incorporate the Multiple Intelligences of all students when planning and implementing lessons. As illustrated through the experiences of teacher participants, findings revealed that employing the theory of MI inside the classroom has the potential to lead to different challenges.

As it has been discussed and explored via the findings from this research study, the theory of Multiple Intelligences appears to be an educational-related theory, which can inform instructional tools and can enable teachers to acknowledge and value the grand diversity that is present in student learning. More specifically, the theory of MI appears to be a valuable educational-related theory that can assist educators in moving away from traditional modes of teaching and learning. Understanding that there exists grand diversity in student learning, the Multiple Intelligences of students have been identified as one factor that teachers should consider when planning and implementing instruction inside the classroom. As the findings have implied, both teachers and students play active roles in evaluating, assessing, facilitating, identifying, and building intelligences. It does however appear that when attempting to apply and employ the theory of MI in one’s approach to teaching potential challenges may arise. That being said, potential challenges that may arise from employing the theory of MI in one’s practice of teaching requires an element of responsivity as a means to respond to and counteract such challenges.

Based upon findings from this present research study, a number of different recommendations have been put forth for various educational stakeholders. In hopes of reaching the grand diversity in student learning, it has been recommended that teachers have a wide repertoire of teaching pedagogies and instructional methods. That being said, as it has been discussed, the theory of MI appears to be one feasible educational-related theory to be considered for employment and utilization in one’s practice of teaching. This recommendation
may take the form of having teachers assess and identify the MIs of students and using such information as a guide to planning differentiated lessons, learning tasks, and forms of assessment. It was also recommended that in attempting to take on an active role in facilitating the process of identifying and understanding the intelligences of students, teachers can alternate different instructional approaches and methods of delivering instructional content, vary the structure of lessons, and include a variety of different forms of assessment. That being said, as it has been recommended, when assessing and identifying the Multiple Intelligences of students, teachers should aim to use a number of different tools that are developmentally age appropriate, such as observation and Multiple Intelligences questionnaires. Lastly, in hopes of avoiding possible misinterpretations and misunderstandings about the theory of MI, it has been recommended that Bachelor of Education courses and professional development workshops and courses on MI should include a wide range of information. Such courses that are offered to pre-service and in-service teachers should aim to provide sufficient and appropriate information in aims of well versing and equipping individuals to confidently apply the theory of MI in their practice of teaching.

Future research should aim to include the voices and perspectives of students as well as the scope and depth of MI courses in both Bachelor of Education programs and professional development workshops in educating both pre-service and in-service teachers about the theory of MI. This present research study explored one dimension of the theory of Multiple Intelligences inside the field of education, which included the perspectives, understanding, attitudes and beliefs of two elementary school teachers. As it has been discussed, the theory of MI appears to be a useful educational-related theory, which can enable teachers to teach more effectively for all learners. If educators are to move away from traditional methods of teaching, then it appears as
though the theory of MI can be one theory that can inform the instructional methods of teachers as a means to counteract traditional methods of schooling that have posed many challenges over the years. Incorporating the theory of MI inside the classroom appears to provide a glimmer of hope in employing instructional methods that reach the learning needs and abilities of all students. One thing I wish for others to take away from this research is the crucial understanding and acknowledgment that each individual student learns in their own unique way and in order to truly be successful in their learning, each student requires instruction that is tailored to their unique intelligences, skills, needs, and abilities.
References


Appendices

Appendix A: Letter of Consent

University of Toronto
OISE | Ontario Institute
For Studies in Education

Date: ___________________________

Dear ____________________________,

My Name is Mary Dermentzis 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 teacher perspectives and attitudes towards the theory of Multiple Intelligences. I am interested in interviewing teachers who are certified primary/junior elementary school teachers whom have taken a minimum of one course and/or workshop on the theory of Multiple Intelligences or learned about the theory in their Bachelor of Education program. 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 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 immediately after the interview has been transcribed. 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, Mary Dermentzis
Email: mary.dermentzis@mail.utoronto.ca
Telephone:

Course Coordinator’s Name: Angela Macdonald
Contact Information:
Email: angela.macdonald@utoronto.ca
Telephone:

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 Mary Dermentzis 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 (Interview Questions)

Thank you for agreeing to participate in this research study, and for making time to be interviewed today. This research study aims to learn about teacher perspectives and attitudes towards the theory of Multiple Intelligences. This interview will last approximately 45-60 minutes, and I will ask you a series of questions focused on your knowledge and understanding on the theory of multiple intelligences and how this impacts your teaching instruction. 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?

Background Information
1. How long have you been teaching? How long have you been at the school you are currently teaching at?
2. What grades have you taught? For how long did you teach each grade?
3. Is there any subject that you have a deep passion and/or experience for?
4. Have you taken any courses or workshops on multiple intelligences theory?
5. If yes, do you feel like these courses or workshops have impacted your teaching?

Teacher Perspectives/Beliefs
1. Can you describe your philosophy on education and teaching? Would you say this philosophy is fluid?
2. What does multiple intelligences mean to you?
3. What are your beliefs and attitudes towards MI?
4. How has the theory of MI influenced the way in which you view and understand your students?
5. What are your beliefs on the relationship between MI and student learning and success?
6. Do you believe that MI has implications and benefits for all students? Or just particular groups of students?
7. Do you believe that students benefit from identifying their most dominant MI? If yes, how so?

Teacher Practices
1. Does your understanding of MI impact your teaching? If yes, how so?
2. How do you identify the multiple intelligences of your students?
3. What ways, if any, do you help your students in identifying their multiple intelligences?
4. What are the different ways you respond to the multiple intelligences of your students?
5. How do you use the multiple intelligences of your students to plan instruction?
6. Do you feel that identifying your own multiple intelligences influences your teaching instruction?
7. If yes, how do you feel this influences your instruction?

Supports and Challenges
1. Have you experienced any challenges and/or barriers in planning instruction in accordance to the multiple intelligences of your students? If yes, what are some of these challenges and/or barriers?
2. If you have experienced any challenges and/or barriers, how do you or have you gone about addressing them?