Utilizing Students’ Interests to Support Engagement and Intrinsic Motivation

By

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ABSTRACT

The following qualitative research study examines the question: How do a small sample of elementary school teachers draw on the interests of their students to increase intrinsic motivation and what outcomes have they observed from students as a result? To investigate this question, data was collected through semi-structured interviews with one Registered Early Childhood Educator and two Ontario Certified Teachers who utilize intrinsic motivation in their classrooms. All participants that were interviewed for this research study were contacted through convenient sampling within the Greater Toronto Area, where transcripts from these interviews were analyzed numerous times in order for central themes to emerge. The overall four themes that were most influential within the transcripts were: 1) How teachers learn about students’ interests, 2) Challenges with using students’ interests, 3) Indicators of student interest, and 4) Gender, interest, and intrinsic motivation. Implications for the education community and personal practice are then discussed in addition to some recommendations for educators to increase intrinsic motivation outcomes within the classroom.

Key Concepts: Motivation, Intrinsic Motivation, Student Engagement, Student Interests
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CHAPTER 1: INTRODUCTION

1.0 Context

Within the context of motivation, it can be reasoned that there appears to be a strong connection between patterns of motivation and a number of related behaviours. An example of this is self-perception, which reflects how motivation can be connected with internally driven conditions, similar to intrinsic motivation (Brown, Armstrong, & Thompson, 2013; Cerasoli, Nicklin, Ford, 2014; Katz, Eliot, & Nevo, 2014). Another area specific to the context of motivation is the clear distinction between intrinsic and extrinsic forces that stimulate motivation (Brown et al., 2013; Cerasoli et al., 2014). In fact, these sources allude to strong correlations between students’ interests and factors specific to motivation (Brown et al., 2013; Cerasoli et al., 2014). Hence, a large portion of current findings in relation to this idea of motivation suggest how learning is an active process and how when learning is active, it is a more natural and integrative process for the learner (Deci and Ryan, 2012).

Within the context of motivation that is internally based, it can be said that a number of bodies of research appear to reflect a strong correlation between autonomy and/or confidence, and an individual’s sense of personal engagement/learning potential (Brown et al., 2013; Cerasoli et al., 2014). Hence, given this insight it can be said that within the context of what it means to be intrinsically motivated; there is a strong connection between autonomous motivation and learning when it is made relevant to students (Brown et al., 2013). This outcome is evident because this research on autonomous motivation also provides strong correlations with internal motivational factors; such as student emotion and well-being (Deci & Ryan, 2012; Brown et al., 2013; Cerasoli et al., 2014).

Another well researched area specific to this context of motivation, is this idea of inquiry-focused learning and how it reflects learning opportunities that are interest driven by students.
(Meece et al., 2006; Carnes & Albrecht, 2007; Karia, 2015). Hence, teachers who facilitate programs like such (i.e. Full Day Kindergarten) and who use inquiry to drive and support students’ learning through their interests, have been shown to provide elements of freedom and flexibility in their teaching (Carnes & Albrecht, 2007; Karia, 2015). This insight from the research is powerful in relation to this notion of motivation that is intrinsically founded because given the distinction between intrinsic and extrinsic motivational patterns; intrinsic motivation provides stronger connections between higher level thinking and confidence (Brown et al., 2013; Cerasoli, Nicklin, Ford, 2014). Therefore, given these considerations my research aims to reveal the connections between these two areas of research and thus, how teachers use an inquiry and/or interest based approach to internally motivate students to learn.

In further consideration of this context of motivation (more specifically, motivation that is internally driven); it can be said that existing research shows that there is a strong connection between academic performance and learning (Klem & Connell, 2004; Cerasoli et al., 2014). Thus, considering that a large portion of current research considers how positive outcomes for learning are sustained through having supportive teachers within the classroom climate; it can be reasoned that this also suggests increased levels of interest and enjoyment for students in relation to learning outcomes when teachers are supportive (Ryan & Patrick, 2001; Hickey, 2008).

1.1 Problem

Aside from the above areas centred around intrinsic motivation that have been well researched however, it is evident that there is still little research on how to utilize this approach within the classroom (Brown et al., 2013; Katz et al., 2014). Therefore, in terms of teachers being able to connect with students’ emotions and attitudes to support their internal motivational
needs; this approach is still fairly new to both research and practice (Brown et al., 2013; Katz et al., 2011, 2014; Taylor et al., 2014; Deci & Ryan, 2012).

Another drawback is the struggle teachers’ face in making learning relevant for students. In other words, when it comes to using motivation to connect with students’ interests and apply their prior experiences, research shows that many teachers struggle with this approach and many often resort to more externally controlled approaches for motivating students (Brown et al., 2013; Taylor et al., 2014; Deci & Ryan, 2012). Therefore, one of the biggest problems within this research in the context of motivation is that students tend to be motivated through external outcomes rather than internal means. Hence, they are motivated due to external pressures and/or rewards, rather than for personal interest or enjoyment (Katz et al., 2014; Taylor et al., 2014; Klassen et al., 2009).

Therefore, to put this problem into perspective research shows that students are more often motivated through stickers and such to support building their performance and interests (Deci, Kestner, Ryan, 1999; Deci & Ryan, 2012; Cerasol et al., 2014). The problem with this however, is that students become reliant on these rewards and/or incentives (Brown et al., 2013; Cerasoli et al., 2014). Hence, when it comes time to students becoming motivated for their own benefit/enjoyment, studies show that such approaches can minimize motivation all together; especially in absence of the external rewards (Cerasoli, Nicklin, Ford, 2014; Deci & Ryan, 2012; Icekson, Roskes, & Moran, 2014).

Another consideration in relation to motivation is the impact of standardized testing on intrinsic motivation. This is a problem because standardized assessment practices within research tend to correlate with weak academic performance, motivation, and negative emotions for many students (Brown et al., 2013; Cerasoli et al., 2014). The reason being is that these standardized
approaches have been shown to lack relevancy to the interests and identities of learners (Brown et al., 2013; Cerasoli et al., 2014). Hence, they fail to consider how to intrinsically motivate students through making connections to their learning in ways that are meaningful (Deci, Kestner, Ryan, 1999; Deci & Ryan, 2012; Cerasoli et al., 2014; Icekson, Roskes, & Moran, 2014).

In relation to some of the long-term effects that this has on intrinsic motivation; a number of studies explore how rewards/incentives, and standardized approaches can later lead to students getting discourage and/or giving up (Katz et al., 2014; Taylor et al., 2014). The research further suggests how procrastination habits are also more likely and how students tend to have lower achievement drives, lower self-esteem, and lack successful regulatory behaviours as a result to a dominance in the use of extrinsic motivational approaches (Deci & Ryan, 2012; Brown et al., 2013; Katz et al., 2014; Klassen, Ang, Chong, Krawchuk, Huan, Wong, et al., 2009; Cerasoli et al., 2014).

In relation to the use of intrinsic motivational approaches being used across grade levels, it can further be argued that this poses an additional problem (Eccles, J. S., Wigfield, Harold, & Blumenfeld, 1993; Meece et al., 2006). This poses an additional problem because intrinsic motivation does not appear to be used consistently across grade levels (Eccles et al., 1993; Meece et al., 2006). Also, a similar factor appears to be true in relation to subject areas in which internal forms can be applied to. Hence, it appears as through some teachers find intrinsic motivation easier in some subjects more so than others when teaching students (Eccles et al., 1993).

With respect to a final consideration in light of why intrinsic motivation appears to be less common in practice; it can further be said that a number of areas of research also suggest that
gender appears to hold implications with respect to student opportunities for motivation (Perry et al., 2006; Hickey, 2008; Dweck & Master, 2009). Therefore, these studies reason that boys struggle more with achieving internally based motivational patterns (Ryan & Patrick, 2001; Perry et al., 2006; Hickey, 2008; Dweck & Master, 2009). Consequently, with this consideration in mind and in addition to many of the above implications related to intrinsic motivation, I have explored many of these within this research study on: ‘how teachers draw on the interests of their students to support intrinsic considerations for motivation.’

1.2 Research Purpose

The aim of my research is to learn how teachers draw on the interests of their students to increase their intrinsic motivation for learning and to hear their perspectives on how these approaches impact students developmentally within the classroom. In exploring these findings, my goal is to share my results with elementary school teachers. The findings I will share will consist of a combination of current research on the issue, as well as my own results from my research study.

1.3 Research Questions

How do a small sample of elementary school teachers draw on the interests of their students to increase intrinsic motivation, and what outcomes have they observed from students as a result? I will also investigate the following subsidiary questions:

- How do these teachers learn about students’ interests in order to be able to draw on them for fostering intrinsic motivation?
• What challenges do teachers encounter when incorporating students’ interests into the curriculum?

• What indicators of intrinsic motivation do these teachers observe from their students as outcomes of their efforts to investigate student interests?

• What are these teachers’ perspectives on the relationship between gender and intrinsic motivation? How, if at all, do they see gendered differences represented in students’ interests?

1.4 Reflexive Positioning Statement

As someone who has experienced being extrinsically motivated by teachers through incentives and other external rewards, and who has experienced a traditional learning environment where students’ interests were inconsistently considered in teaching; I hold a strong interest in intrinsic motivation and how it impacts learning. Thus, I am interested in how teachers support the interests of their students through motivating learning in ways that are personally engaging and build confidence in students.

I am interested in this idea of intrinsically motivating students because I am curious about the long-term outcomes that this has for learning. Therefore, when I consider my own elementary schooling experience I am able to recall a wide range of incentives in which teachers used to motivate students. I remember things like stickers and marble jars which were used to regulate classroom efforts, performance, and behaviours. Hence, I am intrigued by this idea of intrinsic motivation because I feel as though there are other ways to motivate students to fulfill certain criteria, rules, and/or expectations.
I became interested in this idea of intrinsic motivation because when I recall my elementary years of schooling, I feel as though there was a significant difference in the way I was motivated at home in comparison to the way I was motivated at school. In fact, I remember at school feeling motivated to achieve a particular goal because I really wanted the incentive that was being offered to me. Therefore, when the incentive was no longer being offered to me, I recall losing interest fairly quickly in wanting to obtain that particular goal. Contrary to my memories with motivation from school; I remember feeling quite the opposite in relation to opportunities for motivation at home. Hence, I was motivated to obtain goals because I genuinely wanted to achieve them, not because I had to or was being offered some sort of incentive.

Now that I am an adult, I find that my own intrinsic motivation, which began at home; has made me a much more goal-oriented person. In fact, often times I find myself wanting to do things because I am interested in them, I want to learn more about a particular subject, or I pursue a goal because I simply like the way that it makes me feel. For instance, I have had people throughout my life try and convince me to pursue an alternative career and tell me that there are no jobs in teaching and that it is a waste of effort and time. Despite these experiences and persuasions however, I have chosen this path because I am internally motivated to make a difference in the lives of children and not only with respect to education, but motivation as well. Thus, I want to motivate kids to stay true to their interests, and I want to motivate them to do things that they will enjoy doing.

This being said, I strongly believe that intrinsic motivation is a better approach for students with respect to motivation. I feel as though intrinsic motivation is more beneficial for students because given my own experience with motivation, I feel as though it has a greater long-term
influence in relation to maintaining personal desire to remain motivated and achieve personal goals.

1.5 Preview of the Whole

To respond to the research questions I have conducted a qualitative research study using purposeful sampling to interview three teachers about how they draw on students’ interests to increase intrinsic motivation in students. In Chapter 2 I review the literature in the areas of factors that are most influential to intrinsic motivation and I do this by exploring how these factors impact elements such as engagement, development, as well as academics. Next, in Chapter 3 I elaborate on the research design. In Chapter 4 I report my research findings and discuss their significance in light of the existing research literature, and in Chapter 5 I identify the implications of the research findings for my own teacher identity and practice, and for the educational research community more broadly. I also articulate a series of questions raised by the research findings, and point to areas for future research.
CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In this chapter I review literature in the areas of: factors that affect intrinsic motivation among students, how to motivate learners who struggle, the conceptualization of factors that impact student engagement, and developmental factors that impact intrinsic patterns for motivation. I start by reviewing the aforementioned literature in the areas of best practice approaches for motivation, student outcomes, challenges present that affect motivation, in addition to some supportive resources in relation to how inquiry supports the construction of motivation. Next, I investigate some of the factors that suppress motivation and supports available for teachers to foster motivation for these learners. From there, I review some areas of research on academics and social influences in order to consider how student engagement impacts as well as informs intrinsic motivation. Finally, I investigate cognitive, social, and psychological/emotional factors geared towards developmental considerations for intrinsic motivation and how these factors impact both motivation and student learning.

2.1 Factors that Affect Intrinsic Motivation among Students

Student motivation is a complex process that involves a variety of domains for which it can be determined. This is because factors that influence motivational patterns vary depending on the learner and different learners experience intrinsic motivation in different ways and at different intensities. Also, teaching approaches reflect on students’ motivation in a variety of ways where some approaches such as drawing on student interests and making learning purposeful act to support intrinsic motivation, whereas others such as traditional teaching approaches hinder the process in a number of ways (Deci & Ryan, 2012; Brown, Armstrong, & Thompson, 2013).
In this section of the review I will explore some of the best practices for intrinsic motivation in relation to how they impact student learning. I will then explore some of the student outcomes in relation to intrinsic motivation and how they impact learners, as well as some of the challenges with encouraging and promoting internal motivational patterns among students. To conclude this section of the review, I will explore some resources available to support intrinsic motivation within student audiences and I will do so using an inquiry focused approach. In this portion of the review I will use research to support why I believe that this approach is most beneficial to intrinsic motivation and I will suggest some approaches teachers can use with their students based on what the research dictates.

2.1.1 Best practice approaches

The relationship between students’ needs and attitudes are strongly linked to motivational patterns and behaviour. This being said, in order to effectively approach factors that impact strong motivational patterns among students it is important to consider some of the theories of need that are relevant to motivation such as: self-determination theory, internal and external motivation, as well as autonomy and competence and the how they impact academic performance and motivation (Deci & Ryan, 2012; Brown, Armstrong, & Thompson, 2013).

To begin, self-determination theory has a strong impact on patterns that influence motivation and this is because as students, learning happens not because we are reinforced and/or constrained to do so, but rather because we “evolve to be inherently active, intrinsically motivated, and oriented towards developing naturally through integrative processes” (Deci and Ryan, 2012, p. 417). With this natural evolutionary process in mind, I feel as if intrinsic
motivation is a far more powerful approach in relation to understanding students’ attitudes towards a particular goal and/or objective.

For the purpose of understanding human nature in relation to factors that influence motivation, Deci, Ryan, and Colleagues (2012) distinguish motivation as either internal or external. For the purpose of this literature review, internal patterns is in reference to intrinsic motivation which: reflects personal goal(s), interest in a subject area(s), depends on personal engagement within chosen tasks, depends on feelings of competence (autonomy) and confidence, leads to deep understanding (original, critical, and divergent thinking patterns), and ultimately consists of learning outcomes that are flexible and transferable to a variety of contexts (Brown et al., 2013; Cerasoli, Nicklin, Ford, 2014). External patterns on the other hand, is in reference to extrinsic motivation which for the purpose of this review is: influenced by rewards and/or incentives (external), leads to a surface approach to learning, fear of failure, and produces inflexible learning outcomes that are not readily transferable to other contexts (Brown et al., 2013; Cerasoli et al., 2014).

Intrinsic motivation is therefore essentially an internal drive within an individual and relates to a set of goals deemed valuable, interesting, and/or meaningful by the individual (Deci & Ryan, 2012; Brown et al., 2013; Cerasoli et al., 2014). To put this motivational approach into perspective and as an example; consider a student who loves to read. In order for this student to be motivated towards wanting to read, we consider their autonomy and competence for reading and how these factors influence and motivate the student internally. Therefore, since meaningful learning requires a sense of motivation, autonomy and competence may be seen as not only learning needs, but motivational needs as well (Deci & Ryan, 2012).
The above example therefore illustrates the surface of how intrinsic motivation operates through the way it suggests that students’ who have a strong sense of autonomy and a high level of confidence are more likely to be intrinsically motivated individuals (Deci & Ryan, 2012). As a result, the following example which supports the findings in current research on intrinsic motivation is a very important implication for teachers (Deci & Ryan, 2012; Brown et al., 2013). It is important because in order to seek ways to motivate students’ learning, we need to connect with their interests in order to teach in a way that it is intrinsically interesting to our students. Therefore, when we are able to connect students’ learning to their interests, it is more likely that students will not only become intrinsically motivated in their learning, but they will develop ways to intrinsically motivate their own learning (Taylor, Jungert, Mageau, Schattke, Dedic, Rosenfield, & Koestner, 2014). Hence, planning lessons that are intrinsically interesting and motivating for students is more likely to not only result in greater academic success, but also foster a greater sense of autonomy and competence in students’ overall ability to learn; despite variations in learning and learning differences (Deci & Ryan, 2012; Brown et al., 2013; Cerasoli et al., 2014; Taylor et al, 2014).

2.1.2 Student outcomes

Collective sources of research explore autonomous motivation and define it as a source of power for overcoming negative outcomes and consider it to be an intrinsic, rather than extrinsic resource for coping (Klassen, Ang, Chong, Krawchuk, Huan, Wong, et al., 2009; Katz, Buzukashvili, & Feingold, 2012; Katz, Eliot, & Nevo, 2014). These researchers reasoned that the more autonomous the students’ motivational style is, the less likely it is that the student will
procrastinate when completing a set of activities to support their learning, especially in relation to homework completion (Katz, Buzukashvili, & Feingold, 2012; Katz, Eliot, & Nevo, 2014). Also, the more autonomous (intrinsic) the motivation, the higher the quality of engagement, the emotional experience, as well as the overall well-being of the student; which is the overall primary intent we have as teachers (Brown et al., 2013; Cerasoli et al., 2014; Katz et al., 2014). Hence, not only do we want students to be engaged with what they are learning in relation to motivation, but we also want our students to reach their optimal learning potential. Thus, we want students to reach their potential in ways that are intrinsic and build on positive cognitive, social, and emotional outcomes.

Although there isn’t much research on how emotions and behaviours are connected to ‘intrinsic motivation’ in terms of student learning, the reason we should strive for wanting students to achieve intrinsic motivational patterns is because, according to current research findings, negative emotions and behaviours are commonly associated a lack of intrinsic motivation (Brown et al., 2013; Katz et al., 2011, 2014; Taylor et al., 2014; Deci & Ryan, 2012). For instance, in a number of the research studies I came across on motivation and achievement, finding suggested that:

The type of motivation that students’ adopt towards learning has been found to predict emotions and behaviours related to students academic experience, such as emotions during academic activities, sense of competence, concentration, grades, and persistence (Katz et al., 2012, 2014; Taylor et al., 2014).

Therefore, with research providing a strong connection in relation to how motivation, our emotions, and our behaviours are in many ways related, this gives us future direction for research. It gives us direction in the sense that we need to work on developing ways to
intrinsically motivate our students if we want them to hold positive emotions and behaviours towards academic tasks. Also, if we want students to have a good sense of confidence in their overall abilities as learners, intrinsic motivation needs to be present within the classroom in a constructive and goal-oriented manner (Deci & Ryan, 2012).

Further research studies have also explored the role of motivation and the effects it has on self-perception of ability and educational outcomes, such as grades. What the findings revealed was that a procrastination habit among elementary student audiences had been linked to students holding lower achievement drives (Katz et al., 2014; Taylor et al., 2014). Findings also concluded that students’ were more likely to have lower self-esteem and lack successful self-regulatory behaviours, which in turn suggested negative outcomes in relation to their intrinsic motivation (Klassen, Ang, Chong, Krawchuk, Huan, Wong, et al., 2009; Deci & Ryan, 2012; Brown et al., 2013; Cerasoli et al., 2014; Katz et al., 2014). This is important for us to know as teachers because we want to intrinsically motivate students’ by engaging their interests, while having them complete learning goals under the influence of a strong and intrinsically motivated achievement drive.

Most of these findings also explored the area of academic procrastination and concluded that procrastination has a strong impact on motivation (Katz et al., 2012, 2014; Brown et al., 2013; Taylor et al., 2014). Thus, Klassen and his group of researchers suggested that students who are less motivated are more likely to procrastinate when completing a set of tasks and this outcome is likely to persist into adulthood because it becomes a learnt response (2009). Therefore, how do we teach students to avoid procrastination habits early on, so that this does not impact their intrinsic level of motivation?
What the research fails to consider in relation to procrastination as a student outcome however, is specific approaches that teachers can use to facilitate intrinsic motivation among student audiences within the classroom (Brown et al., 2013; Cerasoli et al., 2014; Katz et al., 2014; Taylor et al., 2014). Therefore, although findings suggest a number of implications that have the potential to impact motivational patterns, limited research exists that explores the strategies that teachers can use to best facilitate promoting intrinsic motivation within their classroom (Klassen et al., 2009; Deci & Ryan, 2012; Brown et al., 2013; Cerasoli et al., 2014; Katz et al., 2014). This limitation therefore ultimately serves and supports the overall purpose for my research, and the intent I had in exploring these findings.

Going forward, a large portion of the research also explores how motivational outcomes among students are typically controlled, meaning that they are more extrinsic (Katz et al., 2014; Taylor et al., 2014). This is problematic because rather than students being motivated by personal interest and/or engagement, the research shows how most students are motivated to complete homework for example due to external or interjected forces and/or pressures (Katz et al., 2014). For instance, students do their homework because they want to get better grades (external) or they have a fear of feeling ashamed when the teacher finds out their homework was not completed (Katz et al., 2014). Hence, the problem with these findings is that they allude to a variety of implications that are external outcomes for motivation, yet they fail to consider the ways in which these implications can be used to support the development of intrinsic motivational patterns among the students that were studied. This being said, my goal was to explore some of these outcomes using a small sample to support my research.
2.1.3 Challenges with motivation

One significant challenge in having students develop ways in becoming intrinsically motivated is the use of external rewards. For instance, often at times teachers will elicit external rewards with the intent to seek to motivate students in regards to their performance. An example of one of the many ways they do this is by giving students’ stickers on their work with the intent that this will motivate their efforts, and encourage/increase consistency in relation to their academic performance. The problem with this approach and intent; in addition to many others however, is that research shows consistency in external rewards decreasing, rather than increasing intrinsic motivational patterns (Deci, Kestner, Ryan, 1999; Deci & Ryan, 2012).

Although external rewards such as stickers are used by countless educators and the intent is to promote motivation towards education and ultimately promote success, the following quote by Dan Pink I feel does a excellent job in illustrating the summative findings within recent research on motivation,

> If you want people to perform better, you reward them, right? Bonuses, commissions, their own reality show. Incentivize them. But that’s not happening here. You’ve got an incentive designed to sharpen thinking and accelerate creativity, and it does just the opposite. It dulls thinking and blocks creativity (Dan Pink, 2009; Deci & Ryan, 2014; Cerasoli et al., 2014).

This quote is powerful because although our understanding with respect to motivation is continuously evolving through research, it captures one of the biggest challenges associated with motivation (Icekson, Roskes, & Moran, 2014). Thus, the above quote demonstrates how creativity is largely dependent on intrinsic motivation and how collectively, both are undermined by rewards and other extrinsic motivators. This being said, a large portion of the recent research on motivation is directed towards the notion that intrinsic motivation increases performance and
creativity, but incentives in the form of rewards (external) have been shown to reduce intrinsic motivation (Deci & Ryan, 2012; Cerasoli et al., 2014; Icekson et al., 2014). So with this various information in mind, which is more important as an educator when we are teaching students; based on what the research tells us…intrinsic motivation or extrinsic motivation?

Another challenge that holds a strong impact on students’ level of intrinsic motivation or ability to become internally motivated is classroom evaluation activities. For the purpose of this review, classroom evaluation activities will be in reference to activities such as standardized testing methods, worksheets to assess learning, and other standard approaches to learning. Therefore, given the collection of research from a variety of different research domains that tell us that students’ demonstrate a wide range of learning motivations; this helps us to understand how and why standard classroom evaluation activities fail to yield intrinsic motivational outcomes for all learners (Deci & Ryan, 2012; Brown et al., 2013; Icekson et al., 2014).

In fact, some researchers including Kaplan, Katz, and Flum (2012) hold strong arguments in relation to helping teachers create less standardized forms of evaluation. This argument I feel is important in terms of initiating future direction towards the promotion of intrinsic motivation and the development of new ways to motivate students (Marks, 2000). These new ways of intrinsically motivating students are understood in the sense that assessments of learning and performance are more focused outside of standardized norms and approaches (Kaplan et al., 2012).

Going forward, consistent bodies of research further explore the effects that these types of evaluation have on students’ cognitive and affective domains in relation to learning (Brown et al., 2013). The importance of these findings therefore, is that for some students, they reveal that lack in confidence (autonomy) and competence (in relation to these standardized forms of
evaluation), strongly correlates with limited and/or weak performance; which in turn suggests a limited and/or weak degree of intrinsic motivation seeing as performance is strongly linked with intrinsic motivational patterns (Brown et al., 2013; Cerasoli et al., 2014; Icekson et al., 2014). With this insight in mind...how do we motivate students using methods that refrain from standard evaluation procedures (i.e. tests and worksheets, etc.)?

2.1.4 Supportive resources in relation to how inquiry supports motivation

One of the biggest issues within elementary classrooms is the fact that some students are excited to learn and exert a strong effort in doing so, whereas others lack this engagement in their learning or they lack consistency in their engagement with learning (Wigfield & Cambria, 2010; Graham & Weiner, 2012; Katz et al., 2014; Taylor et al., 2014). Hence, this is why student motivation varies so much within classrooms. In this section of the literature review I will explore some of the methodologies that support stronger intrinsic motivation and how these resources can be used to better support student engagement in classrooms. I will explore these resources in support of intrinsic motivation through the lens of inquiry based programming and how these resources can be used to motivate student learning internally across grade levels.

With this notion of inquiry based programming in mind, there are a number of studies that make reference to motivation as “an inquiry into the ‘why’ of behaviour” (Carnes & Albrecht, 2007; Wigfield & Cambria, 2010; Graham & Weiner, 2012). This research provides a significant foundation to how we can better support intrinsic motivation in classrooms and the reason for this is because if we understand the ‘why,’ then we will be better able to utilize strategies and make accommodations to support students’ overall motivation (Carnes & Albrecht, 2007; Wigfield & Cambria, 2010; Graham & Weiner, 2012; Katz et al., 2014). Therefore, the real
question is, “how can teachers make classrooms more inquiry-focused, while at the same time fulfill the Ontario Ministry expectations across grade levels?”

In relation to inquiry-based programs like the Full Day Kindergarten program, student interest is the driving force for all curriculum planning and it informs the teacher’s instruction because lessons are planned and implemented in a way that supports a variety of student interests (Carnes & Albrecht, 2007; Karia, 2015). For example, consider the Full Day Kindergarten program in relation to using student inquiry to support learning. This program utilizes student interest and engagement as a foundation to support learning, and it does this by the way students are given the freedom and flexibility to construct their own learning (Carnes & Albrecht, 2007; Karia, 2015).

To illustrate this inquiry-focused approach, consider a student who loves dinosaurs. As the student’s teacher, this interest would be the driving force for his learning and this insight would be important for the teacher to be aware of in terms of next steps for planning in order to create learning opportunities that support this interest. Therefore, perhaps the teacher would approach motivating the student to learn a math concept through taking his interest in dinosaurs and applying it within a math centre. This way, the student is constructing their own learning based on what is interesting, engaging, and internally motivating to them and the teacher is simply guiding and extending this interest with a specific academic goal in mind (Karia, 2015).

Thus, when students are given the opportunity to construct their own learning, their learning becomes very internally focused and when learning is internal, students are more likely to engage in curriculum content and develop intrinsic motivation (Deci & Ryan, 2012; Katz et al., 2014). Therefore, when students see a task as worthwhile, important, interesting, and/or enjoyable, they are more motivated to do and/or practice a skill (Wigfield & Cambria, 2010;
The reason for this is because the beliefs that students’ hold in relation to what they are learning, fuels their effort and persistence for learning and this is an important consideration in relation to how to intrinsically motivate all students’ efforts (Wigfield & Cambria, 2010; Deci & Ryan, 2012; Graham & Weiner, 2012; Katz et al., 2014).

This approach would also be beneficial across grade levels and the reason it would be supportive in relation to intrinsic motivation is because research shows that when students are interested in a learning goal, this influences their motivation in terms of behaviour (Wigfield & Cambria, 2010; Graham & Weiner, 2012; Karia, 2015). Therefore, some strategies we can use as teachers to support intrinsic motivation include: connecting with students’ interests and planning accordingly, connecting learning goals to a specific purpose that students understand and that supports their engagement with the task, and when approaching learning goals with students, often make use of inquiry-based programming approaches (Karia, 2015).

2.2 Motivating Learners who Struggle

The following section within this chapter of the literature review examines autonomously supported motivation in comparison with controlled motivation (Hornstra, Mansfield, Veen, Peetsma, & Volman, 2015). It explores supportive elements in relation to the topic of discussion for this review and further supports how I proved that intrinsic motivation holds stronger positive outcomes for students as learners. Then, it discloses the role that gender stereotypes and learned helplessness play within the construction of motivation; in addition to some of the specific courses of action that educators can take to best support the interest and engagement of their students.
2.2.1 Factors that impede and/or suppress their motivation

In regards to some of the factors that have the potential to suppress student motivation, there are many! In fact, a number of studies I came across showed that factors can range from gender stereotypes (Meece, Glienke, & Burg, 2006) to internal factors such as learned helplessness (Macher, Paechter, Papousek, & Ruggeri, 2012). Also, although there are many others that could have been explored, due to specificity for this review, I will only be exploring the ones mentioned in greater detail and how they relate to students who struggle with achieving motivation to drive their learning.

In regards to gender stereotypes, a number of the research studies explored how gender biases impacted student motivation towards learning (Meece et al., 2006). For instance, in the results of many of the research findings, boys demonstrated stronger abilities and interests in mathematics, sciences, and sport related domains; whereas girls had more confidence and interest in areas such as reading, language arts, and music (Eccles, J. S., Wigfield, Harold, & Blumenfeld, 1993; Meece et al., 2006; Deci & Ryan, 2012; Taylor et al, 2014). Thus, gender differences in relation to preferred and/or perceived areas of interest begin to provide implications for students’ motivation towards learning (Meece et al., 2006).

In relation to how this supports my research, it can be said that I explored these findings because one of the limitations within these research studies was that they failed to consider cross-cultural influences and learning differences based on gender (Eccles et al., 1993; Meece et al., 2006; Deci & Ryan, 2012). Hence, these factors were not taken into account in relation to how they impact students’ intrinsic motivation (Eccles et al., 1993; Meece et al., 2006; Deci & Ryan, 2012).
In relation to learned helplessness, many of the studies I came across defined this as a condition where an individual suffers from a sense of powerlessness, which is an important consideration in relation to my research on intrinsic motivation and how it impacts learning (Peixoto & Almeida, 2010; Macher et al., 2012; Sorrenti, Filippello, Costa, & Buzzai, 2015). It is an important consideration that drove my research on this topic because it appears to have negative effects in regards to intrinsically motivating students’ learning (Peixoto & Almeida, 2010; Macher et al., 2012; Sorrenti et al., 2015). Thus, the research tells us that students’ who have developed a sense of ‘learned helplessness’ have learned that they cannot control the situation and due to this factor, they become passive in negative situations, despite their potential in changing these outcomes (Peixoto & Almeida, 2010; Macher et al., 2012).

Also, the research connects learned helplessness to students academic success and the reason for this is because it argues that there are many psychological variables involved in students’ ability to learn including: self-efficacy, information processing, and motivation; to name a few (Peixoto & Almeida, 2010; Macher et al., 2012). Thus, despite the lack of balance in male and female students surveyed in this research (more males than females were surveyed), areas show how learned helplessness affects not only learning, but motivation as well (Peixoto & Almeida, 2010; Macher et al., 2012). So what does this mean for teachers in supporting intrinsic motivation? To answer this question, I will begin to do so in the next section of this review.

### 2.2.2 What teachers can do to support intrinsic motivation for these learners

The research in consideration of this review is divided into two methodologies in terms of how teachers can motivate their audience of learners. The first approach considers motivational strategies that are autonomously supportive (Hornstra et al., 2015). These approaches aim to
cultivate students’ inner motivational intentions and although the current research is not consistently supported and is very new, it proves to be associated with: more favourable learning outcomes among students, and higher levels of intrinsic motivation (Hornstra et al., 2015), which supports what I proved in my research. The second approach in relation to motivational strategies considers those that are controlled. In other words, motivates students by controlling them using a variety of different factors and by overruling students’ unique thinking and perspectives (Hornstra et al., 2015).

Teachers can facilitate autonomously supportive motivational patterns in their classrooms by transferring the responsibility of the learning process to the students (Hornstra et al., 2015). They can also provide elements of choice in relation to learning, connect their teaching with students’ interests, and most of all they can create learning opportunities that are meaningful, and where students understand and are able to connect with the intended purpose of the learning activity they are taking part in (Hornstra et al., 2015). Strategies like such, although they are new and limited within the context of research are important for teachers to be aware of because they support learning that utilizes intrinsic motivational patterns and they aim to support students’ individual willingness to learn (Hornstra et al., 2015). This insight is especially true for learners who appear to struggle with motivation in general (Hornstra et al., 2015).

In relation to when students have not developed autonomously supportive motivational patterns however, the research considers students’ motivation to be controlled (Katz et al., 2014; Taylor et al., 2014; Hornstra et al., 2015). What this means is that rather than teachers fostering and scaffolding students’ inner motivational intentions, students’ individual perspectives are overruled by the teacher and their thinking, emotions, and behaviours are determined through external factors such as: pressures and/or control, grades and other extrinsic rewards/incentives
to encourage learning, as well as many others that lack internal intention (Katz et al., 2014; Taylor et al., 2014). The problem with controlled motivation however, is that it motivates students’ learning with a different set of intentions where these intentions can hold long-term effects in relation to motivation (Katz et al., 2014; Hornstra et al., 2015). For instance, research shows that adverse affects may include lower intrinsic motivation, more controlled motivation, or even instances where students lack motivation in its entirety (Taylor et al., 2014; Hornstra et al., 2015).

Since these conclusions are still fairly new in the field of research on intrinsic motivation and how it impacts learning, my research further supported some of these conclusions presented. Thus, I explored in my research how encouraging students to become intrinsically motivated, rather than externally motivated held better outcomes in relation to students’ learning potential and interest/engagement towards being active learners.

2.3 Conceptualizing Factors that Impact Student Engagement

There are a number of factors associated with the impact on student engagement within the classroom; for the purpose of this literature review however, I will only be discussing the ones I feel require further research attention over the next few years. This being said, in this section of the review I will explore some of the academic factors that impact student engagement. In other words, how do these factors contribute to student learning? And, how does student engagement impact students’ academic performance, grades, and ultimately student interest towards learning?

Next, the following portion of this review will further go on to investigate the role that socially driven influences have on engagement such as: classroom environment and social interactions. Thus, the context for the review of this portion of the literature will consider how
intrinsic motivation and engagement appear to be co-constructed factors and how perceptions of teacher support play a vital role in fostering these elements for learning (Perry et al., 2006; Ryan & Patrick, 2001; Hickey, 2008; Nolen & Ward, 2008; Brown et al., 2013; Katz et al., 2014).

2.3.1 Student engagement in reference to academics

In relation to many educators’ ability to engage students in their own learning, this has imposed a challenge for decades (Elliot & Harackiewicz, 1996; Klem & Connell, 2004; Graham et al., 2012). In fact, studies show that students become more disengaged from school as they progress from elementary school to middle and high school; where 40-60% of students become chronically disengaged by the time they reach high school, not including those who drop out (Klem & Connell, 2004). This is important insight in relation to motivation and the reason for this is because as explored previously in this review, intrinsic motivation and engagement are closely linked (Deci & Ryan, 2012; Brown et al., 2013). Thus, collectively they work to support student learning, in addition to academic related factors (Klem & Connell, 2004; Brown et al., 2013; Cerasoli et al., 2014).

To compare academic performance with student engagement, research by Klem and Connell (2004) found that students who held higher levels of engagement displayed improved academic performance, which in turn resulted in higher grades. Those who displayed lower levels of engagement on the other hand, revealed opposing results in addition to disruptive classroom behaviours, non-attendance, and in severe cases, school dropout (Klem & Connell, 2004). This research therefore works to support this notion of student engagement and how it operates collaboratively with motivation to support students’ learning (Klem & Connell, 2004; Deci & Ryan, 2012; Brown et al., 2013).
Hence, although this research does not specifically provide evidence as to how this supports students’ ‘intrinsic’ motivation, it does however suggest that when students are more engaged with what they are learning, this impacts both performance and grades (Klem & Connell, 2004; Carnes & Albrecht, 2007; Cerasoli, et al., 2014). Also, students are more likely to persevere when they confront difficult learning goals and this perseverance, as explored previously, supports their intrinsic motivation (Carnes & Albrecht, 2007; Cerasoli, et al., 2014).

Another area of research by Dweck and Master (2009) works to further support the benefits associated with student engagement and it does this by defining engagement as “a psychological process, specifically, the attention, interest, investment, and efforts students expend in the work of learning” (Marks, 2000, p.154-155). Plus, although this research fails to consider psychological processes in relation to ‘intrinsic’ motivation, it does however shed light on what factors contribute to strong student engagement (Dweck & Master, 2009). Thus, it considers ways in which to guide and evaluate students’ academic behaviour, whether it is to motivate students internally, externally, or utilize a combination of the two (Dweck & Master, 2009).

2.3.2 Student engagement in reference to social influences

One of the most predominant social influences on student engagement in a number of studies that I came across was how students’ social environments impacted both engagement and motivation (Perry et al., 2006; Hickey, 2008; Nolen & Ward, 2008). These research studies explored a number of socially driven factors in light of student engagement; however, the parts of the studies that stood out to me the most were the ones that argued how students’ classroom environments and their social interactions within their classroom community worked to co-create
their level of perceived engagement and motivation (Perry et al., 2006; Hickey, 2008; Nolen & Ward, 2008).

What they discovered was that students’ perception of teacher support was a socially driven factor and that it had the strongest impact on student interest and engagement (Ryan & Patrick, 2001; Hickey, 2008; Nolen & Ward, 2008). Thus, collectively the studies defined teacher support as the extent to which students believed that teachers valued and established personal connections with them where characteristics such as: caring, friendliness, understanding, dedication, and dependability were involved (Ryan & Patrick, 2001; Hickey, 2008). Although the samples for these research studies were fairly small, they did however support signs of intrinsic motivation in the sense that when students perceived their teachers as supportive, reports indicated higher levels of interest and enjoyment in relation to schoolwork (Ryan & Patrick, 2001; Nolen & Ward, 2008).

This being said, although the research does not specifically address teacher support in reference to ‘intrinsic’ motivation, it does support enjoyment, interest, and engagement when support is positively constructed (Perry et al., 2006; Ryan & Patrick, 2001; Hickey, 2008; Nolen & Ward, 2008). Thus, this insight played an important role in driving my research and this is because a large portion of topics explored in this literature review hint to the notion that engagement and intrinsic motivation are co-constructed and exist simultaneously (Perry et al., 2006; Hickey, 2008; Nolen & Ward, 2008; Deci & Ryan, 2012; Brown et al., 2013; Cerasoli et al., 2014; Katz et al., 2014; Taylor et al., 2014). Consequently, in conducting my research study I addressed teachers’ perceived level of support for their students, in relation to how it impacted student engagement and how it worked to internally motivate students’ learning within the classroom.
2.4 Developmental Factors that Impact Intrinsic Motivation

The below section of this literature review explores some of the primary developmental factors that have the tendency to impact student potential for learning in light of intrinsic motivation. It explores cognitive factors that influence intrinsic motivation in regards to behaviours that support cognitive functioning, learning performance, and decision making (Wigfield & Cambria, 2010; Brown et al., 2013). It then explores some of the social factors that contribute to students’ tendencies towards extrinsic motives for behaviour over intrinsic motivations for learning (Cialdini & Goldstein, 2004; Panagopoulos, 2010). Then, to conclude this final section of the review, it investigates some of the psychological and/or emotional factors that can contribute to motivation. Thus, it explores how emotions that support motivation are typically thought of as internal processes (Carnes & Albrecht, 2007; Graham et al, 2012).

2.4.1 Cognitive factors

In relation to some of the cognitive benefits associated with motivation, a number of studies that I came across revealed that the majority of motivational patterns are cognitively generated functions and that they support better cognitive functioning (Wigfield & Cambria, 2010; Brown et al., 2013; Cerasoli et al., 2014). They also explored how these cognitively generated functions provide a basis for student behaviour and that when these behaviours are self-regulatory, a positive influence is produced on both performance as well as decision making (Wigfield & Cambria, 2010; Deci & Ryan, 2012). Hence, cognitive functioning, as it relates to motivation, results in a higher sense of self-efficacy, which in turn is linked to stronger physical efforts in relation to learning goals (Wigfield & Cambria, 2010; Graham & Weiner, 2012; Taylor et al., 2014).
Although most of the research fails to consider students’ cognitive development in relation to ‘intrinsic’ motivation specifically, this research does however help us in relation to future direction for research (Deci & Ryan, 2012; Brown et al., 2013). Therefore, given that students’ are typically more likely to master a set of goals due to intrinsic ‘interest’ in learning activities; we can infer given the current research that this influences students’ intrinsic motivation towards a goal (Cerasoli et al., 2014). Seeing as this is only an inference however, my goal was to support this notion through my research.

Also, when students demonstrate higher levels of self-efficacy, the research tells us that they are more likely to spend a longer period of time persevering in times of uncertainty or difficulty in completing a specific learning goal (Wigfield & Cambria, 2010; Katz et al., 2012, 2014). These findings are important for us to know as educators and the reason for this is because the more we encourage and support students to persevere using constructive methodologies, the more likely we are to increase students’ motivation. Hence, when students take part in activities that support their interest, research shows that students’ are more likely to be engaged with what they are doing (Brown et al., 2013; Katz et al., 2014). This is important for teachers to be aware of when planning lessons for their students and the reason for this is because interest, achieving personal goals, engagement, and students’ level of competence reinforces this notion of what defines intrinsic motivation (Brown et al., 2013; Cerasoli et al., 2014).

2.4.2 Social factors

Social norms influence behaviour; therefore studies show that at times students have the potential to be motivated in convention with social norms due to a fear of standing out if they do
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not comply with a norm (Cialdini & Goldstein, 2004; Panagopoulos, 2010). Therefore, due to this social factor that has the potential to influence motivation; students appear to be motivated due to external causes rather than internal forces within the research (Cialdini & Goldstein, 2004; Brown et al., 2013; Cerasoli et al., 2014). This is important to note because a large portion of the research explored looks at how social norms influence behaviour and decision making, but they fail to consider how this impacts a person’s intrinsic drive alone in light of motivation (Panagopoulos, 2010; Cialdini & Goldstein, 2004; Cerasoli et al., 2014).

For instance, some of the areas of research that I came across seemed to claim that “rewards are predicated to provide satisfaction of the need for competence and thus enhance intrinsic motivation” (Panagopoulos, 2010, p.2). The problem with this conclusion however, is that it fails to consider ways to promote intrinsic motivation in absence of extrinsic consideration (i.e. rewards), which one may argue is inconsistently founded. Thus, one of the goals of my research was to prove that there are ways to intrinsically motivate students in absence of these externally driven considerations.

The reason I have arrived at this problematic conclusion in relation to how this social conformity is externally driven, is because based on the research previously explored in this review on the difference between intrinsic and extrinsic motivational patterns; motivation due to fear of failure categorizes as extrinsic (Brown et al., 2013; Cerasoli et al., 2014). This is important for teachers to be aware of because of the benefits associated with intrinsic motivation and how it supports autonomy, confidence, and engagement (Brown et al., 2013; Cerasoli et al., 2014). With these considerations in mind, we should want our students’ motivation to be driven by internal causes rather than external motives. In relation to reasons for why internal motivation holds better outcomes for students, I have explored this further in my research study.
2.4.3 Psychological and emotional factors

Motivation also has a significant impact on an individual’s sense of self-esteem and is in part governed by self-beliefs of efficacy, which have been explored in some areas of the research that I came across (Carnes & Albrecht, 2007; Cerasoli, et al., 2014). In regards to psychological pressures to maintain good grades for example, this has been shown within research to influence a students’ level of motivation in relation to demonstrated level of performance (Carnes & Albrecht, 2007; Cerasoli, et al., 2014). For instance, studies within the research revealed that when students felt emotionally confident, they were more likely to succeed in completing a task (Carnes & Albrecht, 2007; Taylor et al., 2013). Thus, in relation to some of the research previously explored in regards to emotions and how they are typically thought of as internal processes; confidence appears to be the intrinsic force that drives the behaviour of completing the task (Carnes & Albrecht, 2007; Graham et al, 2012; Taylor et al., 2013).

In comparison, research where students’ felt emotionally incapable of achieving certain grades; held negative impacts on students’ performance and energy level towards achieving learning goals (Cerasoli, et al., 2014; Icekson et al., 2014). Therefore, this hints to the notion that perhaps students’ intrinsic motivation was also affected. Seeing as a good portion of the research I came across reflects the notion that emotions are typically thought of as internal rather than external processes, this suggests that when students demonstrate low and/or limited performance, they lack intrinsic forces in their motivation (Carnes & Albrecht, 2007; Graham et al, 2012; Taylor et al., 2013).
2.5 Conclusion

In this literature review I looked at research on best practice approaches for motivation, student outcomes, challenges present that affect motivation, as well as some supportive resources in light of how inquiry works to construct positive student engagement. All of which recognized a collection of factors that affect student motivation. Also, I explored some of the factors that suppress motivation and recognized some supports available within the research that are available for teachers to foster motivation for these learners. This area of the research addressed areas pertaining to student engagement.

Additionally, I investigated academic and social influences in order to conceptualize and shed light on why student engagement seems to inform patterns of intrinsic motivation. I then concluded this literature review by considering cognitive, social, as well as emotional developmental factors and explored why these areas appear to be relevant to students’ ability to utilize intrinsic forms associated with motivation.

This review elucidates the extent that attention has been paid to how needs and attitudes as well as self-perception and personal engagement are linked to motivation and learning, how learning has been explored as an active process for students and the benefits that arise when learning is relevant for students, the benefits of scaffolding autonomously motivated students, how inquiry supports student interest and flexibility in learning, as well as positive outcomes in relation to students being exposed to teachers who are supportive of their interests and enjoyment towards learning.

It also raises questions about how teachers can avoid motivating students through means that are externally driven and that adhere to external pressures (i.e. grades). Hence, it questioned how to avoid external/controlled motivational patterns from over-dominating internal patterns.
Also, it further raised questions about how to inform teachers about the negative repercussions with standardized assessment on student interest/intrinsic motivation.

Going forward, the following review of the literature also points to the need for further research in the areas of methods for utilizing intrinsic motivation through connecting student emotions and attitudes with intrinsic motivation, methodologies for making learning relevant for students through using what we already know about intrinsic motivation, specific strategies directed towards making learning relevant for students, the potential impact procrastination has on student motivation, in addition to benefits of inquiry programming across grade levels, and factors that support how intrinsic motivation and engagement appear to be co-constructed.

In light of this, the purpose of my research was to learn how teachers draw on the interests of their students to increase their intrinsic motivation for learning.
CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction (Chapter Overview)

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

3.1 Research Approach & Procedures

This research study will be conducted using a qualitative research study approach to review relevant literature and existing research relevant to the research questions and purpose of this study. In utilizing this research approach, this study will also consist of conducting semi-structured, face-to-face interviews with two to three teachers/educators. A qualitative data collection approach will be used for this research study because it holds many positive outcomes, as explored in a number of recent areas of research (Seidman, 2006; Smith, 2008).

To put this into perspective in light of qualitative means for collecting data, research by Seidman (2006) and Smith (2008) consider telling stories a meaning making process; where experiences stream from an individual’s consciousness. In fact, both researchers highlight how stories that are shared can be used to understand one’s culture. This is important to note within Seidman (2006) and Smith’s (2008) research because understanding one’s educational practice culture in qualitative research can allow individuals the opportunity to make sense of experiences endured (Golafshani, 2003; Strauss & Corbin, 2007). In other words, it is further supported
within research that qualitative research through interviewing provides context to not only peoples’ lived experiences, but it helps us to make sense of the meaning associated with the behaviour. Thus, it provides us with access to understanding a person’s actions (Bryman, 1992; Seidman, 2006; Strauss & Corbin, 2007).

Qualitative research has also been shown to be most beneficial in exploring research in the early stages of development, which is what I have done in this research study (Bryman, 1992). More specifically, it reflects how researchers themselves evolve through exploring a specific focus, and how learning occurs continuously throughout the data collection process (Abawi, 2010). A number of researchers also consider qualitative research important in providing richer and more in depth insight of diverse issues; where quantitative research can lack this depth (Coyne, 1997; Seidman, 2006; Strauss & Corbin, 2007). This conclusion therefore stems from this idea that researchers are often criticized for not describing sampling procedures in depth, which can make it more difficult to interpret findings in quantitative research data, in comparison to qualitative research data (Coyne, 1997; Strauss & Corbin, 2007).

Hence, given that the goal of my research was to learn how a small sample of educators were utilizing intrinsic means to motivate student learning, I felt as if a qualitative approach was most appropriate given what I wanted to learn. It was most appropriate because many researchers consider it a naturalistic approach to understanding a phenomenon (Golafshani, 2003; Strauss & Corbin, 2007; Smith, 2008). They consider it naturalistic because where quantitative researchers seek determination, prediction, and generalization; qualitative researchers seek clarification, understanding, and extensions of current knowledge (Golafshani, 2003; Smith, 2008). This being said, since the aim of my research was to explore and understand ulterior means of already
existing motivational forms; a qualitative approach appeared more suitable given the context of my research.

3.2 Instruments of Data Collection

The primary instrument for data collection used in this study was the semi-structured interview protocol. Semi-structured interviews provide the opportunity to hear about participants’ lived experiences, as well as allow them to both attend to and extend areas of focus within the research study (Seidman, 2006; Strauss & Corbin, 2007). In fact, semi-structured interviews typically involve constructing and delivering a set of pre-determined questions which are constructed by the interviewer, and allows for a combination of both focus and fluidity to the interview (Barriball & While, 1994). Thus, this interview protocol allows the interviewer full control to design the interview in a way that best attends to the focus and purpose of the study (Barriball & While, 1994).

Since I was seeking concrete and subject specific data from the interviews that I conducted, this approach appeared most relevant to my research because I was not seeking observational data. In other words, data that correlates more specifically with interview practices that are rigid and/or structured (Barriball & While, 1994). The type of data collection I wished to obtain within this research study however, was lived experiences and/or practices from experienced teachers (Clandinin & Connelly, 2006). Therefore, I wished to explore experienced based outcomes in an environment that was less controlled and more open for participants to provide extensions of knowledge, which could otherwise be overlooked by the researcher (Clandinin & Connelly, 2006).
It is also important to note that because I chose to use this interview approach however, and seeing as this approach seemed most purposeful within the context of my study; it is vital to be aware of and realize that the results I encountered are not at risk of or lack validity and/or reliability in any way (Strauss & Corbin, 2007). In other words, despite the fact that some of the research available argues that semi-structured interviews pose more risk of these factors than structured interviews; it is also important to note that there is also a great deal of research that contradicts this belief (Barriball & While, 1994; Seidman, 2006). For example, in a research study by Barriball and While (1994), conclusions support that semi-structured interviews have the potential to yield a significant degree of reliability and validity, especially when pre-assigned interview questions are designed in a way that minimize and/or eliminate the use of repeated words and/or suggestive language (Barriball & While, 1994). Hence, seeing as I designed my interview protocol in a similar fashion, it can be safe to assume that my study does not pose risks of the above mentioned limitations through my data that was collected.

3.3 Participants

Here I review the sampling criteria I had established for participant recruitment, as well as a range of possible avenues for teacher recruitment that were consistent with my research purpose (Ismat, 1998; Denscombe, 2014). In this section of the chapter I have also introduced each of my three participants that I have interviewed for this research; where I have devised a brief overview for each in relation to their experience, commitment, and leadership with fostering intrinsic motivation. Thus, these overviews pertaining to the participants used within my research begins to reflect the diverse perspectives within this focus area; where I begin to introduce perspectives from junior teachers, primary teachers, and early childhood educators.
3.3.1 Sampling criteria

The following criteria were applied to all educator/teacher participants:

1. Must be educators of some sort where they hold a diploma, degree, or higher in the field of education.
2. Is required to hold a minimum of 3 years experience working as an educator with an Ontario School Board.
3. Having taught or is currently teaching in an elementary school (Grades K-6) would be considered an asset in order to partake in this research study.
4. Must be educators that utilize intrinsic (personal benefit) rather than extrinsic (incentives) approaches to motivating K-6 audiences of students.
5. Must have a demonstrated commitment to drawing on student interests to foster motivation.
6. Must have demonstrated leadership in the area of fostering intrinsic motivation.

Due to the size and selective natural of this research study I was interested in gaining different perspectives from educators in terms of how they engaged the interests of their students in intrinsic ways. Hence, my findings included perspectives from a combination of early childhood educators and primary/junior teachers. This was an important component of my criteria because research shows that studying various perspectives within the same context supports both reliability and validity through providing consistency in results across ages/grade levels (Golafshani, 2003).

Also, since within this semi-structured, qualitative research study I was interested in exploring some of the challenges teachers had faced with utilizing intrinsic motivation in their classroom and how their expertise with motivation had evolved through their practice; a degree
of expertise was required. Therefore, a specific degree of expertise with incorporating intrinsic motivation within the classroom was intended to provide me with some of the basic requirements needed to fulfill the purpose for this research.

Furthermore, since my interest was in seeing how teachers drew upon the interests of their students to support intrinsic motivation towards learning, teachers/educators were required to have worked within an elementary school classroom. Without classroom experience this would have impacted the focus of my findings, which would have in turn impacted what I was trying to prove. This being said, experience working (not volunteering) in an elementary school classroom was considered essential in supporting the consistency and validity of my findings (Golafshani, 2003).

Last of all, intrinsic methodologies were practiced by the teachers involved within this study. This was the most central element of criteria for this study because without utilizing intrinsic means for motivating students, my study would have been at risk of validity (Golafshani, 2003). Therefore, I would not have achieved my overall purpose in conducting research on intrinsic motivation unless I explored perspectives and strategies from teachers who actually used intrinsic approaches with their students.

3.3.2 Sampling procedures

For the purpose of this research study I have used convenient sampling measures to locate my participants. Convenient sampling is one of the least vigorous techniques used in many areas of qualitative research (Marshall, 1996). It involves selection based on the most accessible subjects and in many cases this is highly beneficial to the research (Marshall, 1996). In relation to credibility of sampling procedures that are convenient, this procedure does produce a risk of
credibility (Marshall, 1996). Hence, a thoughtful selection process that is justified is a must when using this procedure (Marshall, 1996).

In consideration of these factors, and in order to achieve purposeful and convenient sampling within my research, I had employed a number of easily accessible procedures to locate and recruit my participants. For the purpose of specificity, some of my primary recruitment procedures included connecting with members within the educational community through sharing my research focus as I took part in different and exciting volunteer experiences. Therefore, through connecting with teachers and sharing similar values within these volunteer opportunities, I shared my research and invited teachers who held these values to take part in my study. Research supports this strategy through recognizing it to be one of the most accessible resources for connecting with education staff (Ismat, 1998).

Another procedure that I utilized was locating and attending local workshops and professional development conferences that aligned with my research focus and allowed me to connect with teachers/educators who shared similar interests to me. This included workshops offered through different universities, colleges, and school boards (where and when appropriate), teacher education programs, as well as subject-specific specialization programs. This appeared to be consistent with the parameters of local and convenient sampling procedures because according to resent research, 77 percent of researchers who utilize this convenient sampling measure do so using many of the above mentioned approaches (Denscombe, 2014).

Last of all, an additional procedure that I utilized to recruit participants for my study was through utilizing and sharing my research focus and purpose via the internet. This included online group chats, content specific postings, and more specifically, digital sharing tools. In fact,
digital sharing tools for research via the internet have been proven in recent studies to be considered a highly accessed resource among all researching approaches (Denscombe, 2014).

3.3.3 Participant biographies

To provide a beginning insight into the perspectives of the participants used in my research study; below is a short biography on each, which outlines a combination of their experiences and leadership in fostering intrinsic motivation for students.

Participant 1 – Lisa (pseudonym)

Lisa is a qualified primary/junior/intermediate teacher who has been teaching for 13 years and has experienced working with students in Grades 2 through 6. This person holds a variety of additional qualifications that range from a specialization in special education, to a variety of specific art-based disciplines. Lisa currently works in an elementary school within the province of Ontario as a Grade 4-5 teacher in a special education classroom. This person has also shown commitment to fostering intrinsic motivation in a variety of ways.

Lisa demonstrates commitment to fostering intrinsic motivation through creating a variety of opportunities and inquiry-based projects where students are encouraged to lead the process in their learning. Lisa can be said to be someone who values intrinsic motivation because they structure their classroom, planning, and lesson facilitation in ways that adhere to the interests of the students she teaches. Also, Lisa demonstrates leadership within the area of intrinsic motivation because it is evident that there are a variety of supports, outside resources, and courses that are used to support this teaching approach which is currently practiced.
Participant 2 – Mary (pseudonym)

Mary also demonstrates commitment to fostering intrinsic motivation similar to Lisa; however, Mary currently utilizes this approach with younger audiences of students. Therefore, Mary is a qualified primary/junior teacher who has been teaching for 24 years. Over the length of her career, she has taught a variety of age groups; more specifically, Grades 2, 3, 5, 6, as well as kindergarten for a number of years. Thus, it is worth mentioning that Mary currently works in an elementary school as a kindergarten teacher in a full-day kindergarten program in Ontario, and has taught this age group for a number of years now.

In light of Mary’s commitment to fostering intrinsic motivation, it can also be said that she utilizes a variety of hands-on approaches centred around the interests of students and frames planning opportunities around these interests. With respect to additional qualifications, Mary holds a range of experience ranging from specializations in kindergarten/primary education to areas specific to special education; similar to Lisa. With this being said, Mary can be described as someone who has demonstrated leadership within this focus area because many of the qualifications obtained have been completed to best support their practice and facilitation within this intrinsic motivational approach.

Participant 3 – Gabriella (pseudonym)

My final participant that I interviewed has been a Registered Early Childhood Educator (ECE) with the Ontario College of Early Childhood Educators for 12 years. Therefore, Gabriella has worked in an elementary school for a number of years. Prior to Gabriella beginning to teach in Canada, she also taught Grades 3-12 in their home country for an additional 8 years. Hence, it can be said that this is Gabriella’s 20th year as an educator. In relation to Gabriella’s current
position, she currently teaches in a full-day kindergarten classroom as the designated ECE, where she demonstrates commitment to fostering intrinsic motivation by always using students’ interests to scaffold desire for learning.

Gabriella can therefore be defined as someone who has demonstrated leadership within the area of intrinsic motivation because many of the additional qualifications that she has obtained, have been to foster this growth through minimizing/eliminating behavioural concerns to strengthen students’ ability to achieve this focus area. Hence, similar to how Lisa and Mary hold additional qualifications; Gabriella does as well. Thus, it can be said that Gabriella’s qualifications range from areas of child development/psychology to areas specific to the domain of play therapy.

3.4 Data Analysis

Data analysis enables the researcher to determine the extent of whether or not the research findings have been obtained (Huberman & Miles, 2002). It is the detailed interpretative stage of analysis that involves coding of the data that has been collected (Huberman & Miles, 2002). In terms of how I planned to analyze the data I had collected, I began this process by transcribing each of the discrete interviews that I conducted. It can be said that transcribing is imperative in qualitative research and the reason being is that it suggests specific questions in relation to how a set of data is conclusively reported (Davidson, 2009). Transcription of data is also important because it is “a selective process that involves reflecting theoretical goals and definitions” within research (Duranti, 2007, p.44).

After I had transcribed my data, I then analyzed my findings further before I was able to report them. I did this by then coding each of my transcripts individually in order to identify
categories, themes, and patterns within the data I had collected. It can also be said that coding provides significant relevance to qualitative research and the reason being is because as the coding process is executed, results are clustered and organized into a hierarchal structure (Huberman & Miles, 2002; Smith, 2008). This is important because it provided stronger delivery of reliability and validity to the research collected and reported (Huberman & Miles, 2002; Seidman, 2006).

In the final stages of my data analysis, I then reported my findings accordingly and shared my results with the broader educational community. This is important to address because although there appears to be a significant amount of research on extrinsic motivation; intrinsic motivation holds many more positive outcomes not only cogitative, but socially and emotionally as well (Carnes & Albrecht, 2007; Cerasoli, et al., 2014).

3.5 Ethical Review Procedures

To begin this section of this chapter, it is important to note and is often said that confidentiality within qualitative research is axiomatic in order to ensure honest exploration of topics within dialogue (Baez, 2002). Hence in providing secrecy in the identity of participants when conducting research, it can also be said that confidentiality protects participants from harm through limiting/eliminating the risk for accountability in information that is shared with the researcher and the world (Baez, 2002). This being said, one of the primary ethical procedures considered in this research study was this element of confidentiality and how this has be maintained throughout this data collection and analysis. With this factor in consideration, I informed all participants involved in my research that confidentially was considered and implemented throughout all aspects of the study. Therefore, I informed participants prior to and
throughout the study that their identities would remain confidential and that when findings were reported, participants would be given a pseudonym so that they could not be identified. I also informed participants that identifiable markers related to their school and students would be excluded from the study, hence reinforcing this notion of the importance of confidentiality in qualitative research (Baez, 2002).

In regards to the importance of consent letters in qualitative research on the other hand, these documents are typically created by the researcher, and outline all of the rights of the interviewee and specific considerations pertinent to the research study (Sin, 2005). Also, they hold significant importance with respect to liability considerations (Sin, 2005). With this in mind and in relation to further ethical procedures in need of consideration prior to conducting my interviews; participants were asked to sign a consent letter giving their consent to be interviewed and audio-recorded (see Appendix A). The intent of this consent letter was to provide participants with an overview of the study, address ethical implications, as well as specify expectations of participation; one 45-60 minute semi-structured interview. Also, it reminded participants of their right to withdraw from the study at any point deemed necessary by the participant.

Another ethical procedure that was taken into account given the topic of intrinsic motivation guiding my research questions (see Appendix B), was that there were no known risks involved with participation. There were no known risks because as mentioned previously, I reinsured participants within the interview as well as in the consent letter that they had the right to refrain from answering any of the questions at any point in time that they did not feel comfortable answering (Smith, 2008). Also, in further consideration of this ethical procedure, I
re-stated to all participants their right to withdraw from participation in this study at any point deemed necessary by the participant.

To conclude this section within this chapter, a final ethical protocol I followed, was that I reminded my participants prior to and at the end of the data analysis, that all data (including audio recordings) would be stored on my computer/iPad/phone with a protected password. I also informed and reminded all participants (before and after completing the study) that the data would be destroyed after 5 years and would not be shared with anyone other than my professor for the purpose of program completion.

3.6 Methodological Limitations and Strengths

Aside from all of the above sections mentioned within this chapter and in regards to my research methodology; a subsequent element to be aware of is the limitations and strengths which were evident in this study. Hence, the most significant limitation to this research study was that the findings would not be able to be generalized to a larger population due to the sampling size being significantly small (Golafshani, 2003; Denscombe, 2014). Thus, in having only 2-3 samples to yield data from, this constituted the largest limitation within this study, similar to the study conducted by Denscombe (2014). It is the largest limitation because as mentioned within current research, limited sample size has the potential to reflect bias perceptions in the sense that participants must fulfill a set of criteria deemed significant by the researcher (Button, Ioannidis, Mokrysz, Nosek, Flint, Robinson, & Munafo, 2013; Denscombe, 2014). Hence, participants who do not meet the set of established criteria are excluded from the research study and this can make the target audience limited and selective in many ways (Denscombe, 2014). A strength related to this procedural approach however, was that interviews
and a small sample sizes decreased and reduced the likelihood of non-response bias; which was a factor that has been shown to increase as the sampling size within a study becomes larger (Golafshani, 2003; Denscombe, 2014).

Another limitation paramount to make note of within this research study was the target audience and the fact that it was only available to teachers and/or educators of some sort. Hence, given the ethical parameters that I have approval for, this Master of Teaching Paper (MTRP) could not include students and/or parents within this selective research sample. This factor therefore posed an additional limitation to my research because according to current research, collective collaboration between teachers, parents, students, and other community members; this has been shown to reflect greater student learning and success in school (Booth & Dunn, 1996). This being said, this factor may also constitute strength to this study in the sense that there was a number of research available that supports how teachers perspectives combine many views from both students and parents because of their special relationship (Booth & Dunn, 1996; Button et al., 2013; Denscombe, 2014).

Also, it is important to note that a final strength associated with interviewing a small sample of teachers/educators was that it allowed me to hear from their perspectives and experiences in greater depth as opposed to utilizing a closed-ended survey to receive my set of data (Golafshani, 2003; Denscombe, 2014). Therefore, as mentioned previously this sampling approach allowed me to explore one’s experiences, beliefs, and actions within the context of intrinsic motivational patterns currently being utilized by experienced teachers (Coyne, 1997; Golafshani, 2003; Seidman, 2006; Strauss & Corbin, 2007).
3.7 Conclusion

In this chapter I have explored a number of research methodologies that I have employed for conducting my research. Therefore some of the key considerations highlighted are that I have utilized a qualitative research approach through using convenient sampling and semi-structured interviewing. With respect to the ethical considerations within this research study, I have maintained confidentiality in relation to the identities of my participants who have contributed to this research. Also, I have introduced my sampling criteria in which these participants were required to meet and I have outlined a brief biography for each in relation to how their experiences connect with my research focus. Thus, how these participants have demonstrated leadership and experience in relation to drawing on students interests to foster intrinsic motivation.

Finally, in terms of my data analysis procedures, I had used the audio recordings from each of the three interviews that I conducted, transcribed, and coded to uncover whether or not my findings were obtained. Therefore, in the next chapter (chapter 4) I will speak more specifically to these findings and report them accordingly.
CHAPTER 4: RESEARCH FINDINGS

4.0 Introduction to My Findings

This chapter aims to present and explore the findings that emerged through analysing research collected by conducting semi-structured interviews. Throughout this analysis it is important to note that the research question: “How do a small sample of elementary school teachers draw on the interests of their students to increase intrinsic motivation and what outcomes have they observed from students as a result?” was consistently and carefully taken into consideration. Within this chapter, connections will be drawn between two Certified Ontario Teachers and a Registered Early Childhood Educator’s perspectives and experiences. Following this discussion, current literature on intrinsic motivation from Chapter 2 will be examined to support and/or challenge these findings. The collected data has therefore been divided into the following four main themes:

1. Participants recognized that offering students choice and learning about student interests aid in fostering intrinsic motivation.

2. Participants revealed a number of students’ individual learning needs and classroom considerations as challenges with utilizing student interests.

3. Participants indicated that deep learning and student-initiated inquiry within a variety of contexts were key indicators of interest and motivation in learning.

4. Participants demonstrated awareness of research related to gender-specific interests yet explored how motivation was not dependant on gender.

It is important to note that these themes have sub-themes which further illustrate how teachers use students’ interests to support intrinsic motivation. For each of the four themes mentioned, each begin with a description, followed by examples and perspectives within the data, concluding with connections to existing literature to highlight the significance of the data
collected. Findings will then be summarized and a brief overview of recommendations will be reported.

4.1 Participants Recognized that Offering Students Choice and Learning about Student Interests Aid in Fostering Intrinsic Motivation

According to current research regarding intrinsic motivation, it is known that the motivational spectrum for student engagement with learning varies significantly. Therefore, some students are excited to learn and demonstrate a strong, committed effort to engage in this process (Wigfield & Cambria, 2010; Graham & Weiner, 2012; Katz et al., 2014; Taylor et al., 2014). Other students however; lack this engagement or lack consistency in seeing experiences as purposeful or meaningful (Graham & Weiner, 2012; Katz et al., 2014; Taylor et al., 2014). Given this insight, is important to learn about students’ interests so that teachers can best meet the needs of all students.

Thus, this first theme within the research will explore how Lisa, Mary, and Gabriella’s additional qualifications and learning practices have enabled them to refrain from traditional teaching practices, providing a more inquiry-based approach to their teaching. They will also investigate these participants’ collaborative opportunities. These include getting to know students, as well as Lisa’s strategy of creating co-constructed learning opportunities aimed at supporting her learning about students’ interests. From there it will explore how cross-curricular opportunities such as Lisa’s math board game support both choice and intrinsic motivation among students.
4.1.1 Participants indicated that obtaining professional development opportunities in areas of student interest served to enrich their teaching practice

All participants identified how acquiring additional professional education played an important role in providing more diverse opportunities to engage student interests within the classroom. More specifically, Mary and Gabriella shared how they had acquired professional knowledge through taking additional qualifications that were explicit to confronting challenges they had faced with utilizing student interests within the classroom.

This was evident by the way Mary discussed acquiring her kindergarten specialist prior to teaching the full-day kindergarten program within her school. More specifically, she recognized that the traditional approach to teaching the kindergarten curriculum was flawed because it failed to consider open-ended learning opportunities. As a result of her education she knew that she could better support her students through an interest-based approach. Mary reported that through taking these courses she learned vital considerations for supporting student interests in learning through providing open-ended resources. This is evident in the use of tactile and visual materials such as corks, erasers, and gems to trigger students’ curiosity.

Gabriella on the other hand, specialized in play therapy as a means of supporting specific areas of student interest. For example, she would provide students with daily play exploration opportunities to observe which play materials students tended to gravitate towards. Lisa’s specialization however, was to enrich her teaching practice through the use of visual arts by exploring a range of mediums to better provide an element of choice for her students when creating art projects. This allowed her to provide differentiated instruction in terms of the interests of her students. For instance, she supplied a range of different art materials to student as formative assessments. She also allowed students the choice of which material they preferred to
use as a summative project. This reflected a specific, individualized interest of students within visual arts.

These findings confirmed an expected element within the research. Thus, there is a correlation between the interview-based findings and the literature. This is shown by the teachers’ professional development opportunities enabling them to refrain from traditional teaching outcomes. This in turn provided participants with the opportunity to facilitate innovative ways of sustaining student interest throughout the curriculum (Deci & Ryan, 2012a; Brown et al., 2013). Next, this theme will explore how these areas of professional development impacted teachers’ ability to provide collaborative opportunities within the classroom to learn about specific students’ interests.

4.1.2 Participants indicated that offering collaborative opportunities for students helped them learn about their interests

All participants offered collaborative opportunities as part of an effort to uncover students’ interests. This included getting to know students through verbal communication and offering group decision-making to students. More specifically, Mary stated that getting to know students can start with something as simple as asking students what their interests are. Gabriella extends this perspective by suggesting how observation plays a key role in many of these collaborative opportunities. She shared that when students’ interests are unclear getting to know them and how they learn plays a fundamental role in supporting learning about their interests. This supports curriculum planning by enabling teachers to tailor lessons and continuously maintain student interest.
In addition to the methods already mentioned, Lisa noted that offering co-constructed classroom decisions to students through providing opportunities for leadership further enabled her to discover where and how students’ interests were represented. These findings demonstrate an interesting parallel with the research as these fundamental attributes have been linked to creating positive areas of collaboration within the context of learning about specific student enjoyment (Hickey, 2008). This is significant because the research is similar to activities implemented by the participants in recognition of student interests (Ryan & Patrick, 2001; Hickey, 2008). The next section of this theme will investigate how these opportunities enable teachers to provide challenging and choice specific cross-curricular connections to students.

4.1.3 Participants provided cross-curricular learning opportunities that fostered student choice and relevant challenges to support intrinsic motivation

One of the fundamental considerations all participants emphasized in learning about students’ interests was the idea of choice. To provide a context to this understanding, Mary and Gabriella mentioned specifically that “when you are given choice…you are more likely to do more with it.” This insight spoke to how all participants felt that achievable challenges within a real-life context enabled students to develop deeper levels of thinking.

To put this into perspective, Lisa shared how she designed a math project for her students that included elements of art, language, and media. This project supported deeper level thinking among students as Lisa reasoned that, throughout the scope of this project, students demonstrated critical and divergent thinking patterns. Students did this through the choices that they made to design their board games. Lisa reasoned that this was evident by the way students made connections and extended their learning through multiple subject areas.
Many of the above findings did not come as a surprise because throughout nearly every context of the research that was explored choice was the primary consideration (Brown et al., 2013). As a result, choice becomes the foundation for teachers to learn about students’ interests (Brown et al., 2013). Participants’ perspectives provided an interesting parallel with current research, in the sense that these findings matched how providing choice to students through cross-curricular approaches provides learning outcomes that are flexible and transferable to a variety of contexts (Brown et al., 2013; Cerasoli et al., 2014).

The second theme addresses some of the core challenges teachers face in utilizing students’ interests. Some of the specific challenges that will be addressed in this section will include factors like: individual learning and behavioural needs, access to time and resources, and teachers’ flexibility to change to best meet students’ interest needs.

4.2 Participants Revealed a Number of Students’ Individual Learning Needs and Classroom Considerations as Challenges with Utilizing Student Interests

Research supports how extrinsic motivation is more commonly used in classrooms than intrinsic approaches. Therefore, more teachers utilize incentives/rewards as a means to drive student performance (Icekson et al., 2014). This approach has been proven through existing research to present challenges for students in relation to developing a sense of creativity in a number of disciplines. Current research reasons how creativity is largely dependent on intrinsic motivation (Deci & Ryan, 2012a; Cerasoli et al., 2014; Icekson et al., 2014). It is dependent on motivation because the classroom teacher has a strong amount of influence on the atmosphere of the classroom which determines how students are able to express themselves. Thus, the teacher is the one responsible for managing various student needs as well as controlling the level of
motivation among students in ways that contribute a creative element of interest in learning (Deci & Ryan, 2012b; Cerasoli et al., 2014).

With this in mind, the next theme will outline how participants used the strategy of teaching students self-regulation through areas of interest to overcome behavioural and individual barriers in learning. It will also investigate how open access to resources was seen as both a positive and a negative consideration in supporting student interests. From there, this theme will investigate participants’ perceptions of supporting student interests across a variety of subjects/grades.

4.2.1 Students’ individual learning and behavioural needs can be challenges when utilizing student interests in teaching

Individual learning and behavioural needs were two of the most influential implications that participants identified as challenges with incorporating students’ interests into the curriculum. Lisa and Gabriella reasoned that the need to teach students self-regulation in order to overcome difficult behaviours sometimes limits the extent to which interests can be supported. Although participants identified this as a challenge, they also suggested that self-regulation and student interests share common good. Hence, Mary acknowledged that “if students are not interested with what they are learning then they get bored and start fooling around.” This is why teaching self-regulation though students’ interests is crucial.

This finding was surprising as the literature review identified that teachers primarily encountered academic-based challenges when utilizing students’ interests in teaching practices (Carnes & Albrecht, 2007). Thus, it was expected that participants would highlight how a lack of engagement can negatively impact students’ performance and grades. Instead, participants
identified primarily internal factors such as confidence and cognitive coping mechanisms, whereas the research outlined more external considerations like rewards and incentives (Klem & Connell, 2004; Carnes & Albrecht, 2007; Cerasoli, et al., 2014). This demonstrates an understanding that participants considered meeting students’ internal need for self-regulation as an influential determinant of their external academic success. In addition to these challenges, participants also identified accessibility of resources and lack of time as additional constraints when utilizing students’ interests into cross-curricular planning; which is the topic of the next section.

4.2.2 Open access to resources and lack of time may provide challenges with integrating diverse student interests into the curriculum

Lack of time was one of the leading challenges that participants identified when utilizing students’ interests in planning. Participants articulated that time was a core challenge by recognizing that students’ interests vary and how addressing them all is a time consuming process. More specifically, Mary recognized that finding commonalities in students’ interests was a primary consideration within the cross-curricular planning process. This often took her an extensive amount of time to do. For example, she shares how she combined a group of students’ interest in leaves with other students’ interests within the classroom (such as mixing and dramatizing). Her intention in doing this was to drive her planning in math (counting), science (mixing, predicting), as well as the arts (drawing, moving like leaves). At the same time these activities were designed to accommodate student interest. Overall, Mary stated that the overall preparation behind this project took her about a month to consolidate a plan in relation to combining the interests of her students.
In addition to time constraints with using students’ interests to drive intrinsic motivation, Lisa and Gabriella further identified how approaches for integrating multiple areas of the curriculum were dependent on accessibility of resources. Participants explained that having access to an overwhelming number of resources made them feel restricted at times. The reason being that choosing a new resource often took a lot of time and sometimes resulted in student interests being overlooked if it failed. For instance, Lisa shared how she tried using a new software program in her classroom however students were not as interested as she predicted. This resulted in more time spent to cover her energy unit as she decided to introduce multiple resources/softwares giving her students choice of material. In this case, while the students were intrinsically motivated to complete the project, the teacher spent significantly more time on research and planning.

Given this consideration, it is evident through current research that there are a number of known barriers that cause challenges with supporting intrinsic motivation in students. Some of these barriers included in the research highlight factors such as rewards/incentives, standardized testing approaches, and worksheets (Brown et al., 2013; Cerasoli et al., 2014; Icekson et al., 2014). In addition to these barriers, participants further identified time constraints, which previous literature doesn’t consider. Thus, participants reasoned that limited time played an influential role on the resources they used to support the interests of their students. Given this understanding, the next section will explore how lack of flexibility in teaching can provide further challenges in addressing students’ interests from a cross-curricular lens.
4.2.3 Participants identified lack of flexibility in modifying teaching approaches as challenges that can interfere with incorporating students’ interests across the curriculum

Participants identified that providing sufficient flexibility in teaching was another challenge with integrating students’ interests into the curriculum. Both Mary and Gabriella identified some subjects/grades as being more conductive to student interest than others. For example, Mary stated that “making interests cross-curricular is easier when students are in kindergarten because the curriculum is designed to enable flexibility” in teaching approaches. Similarly, Gabriella argued how “once students leave kindergarten this becomes challenging because the curriculum is less flexible.” Hence, participants faced challenges with utilizing students’ interests in older grades because they felt higher grades were more structured than kindergarten, which was seen as more open-ended. With this in mind, there is a need for further research on how the curriculum influences the flexibility in teaching.

This outcome was surprising considering the literature review, it was expected that teachers’ were mostly challenged in motivating student involvement by relying on external rewards such as stickers (Icekson et al., 2014). Contrary to this, participants highlighted both curriculum and teacher flexibility as additional challenges to utilizing students’ interests to foster intrinsic motivation; which is overlooked in the review of the literature.

The next theme will address how depth and student-initiated inquiry are key indicators of students’ interests. Therefore, some of the specific indicators that will be explored will include things like: attention and concentration, implications of questioning through student exploration, as well as confidence and learning progression.
4.3 Participants Indicated that Depth of Learning and Student-Initiated Inquiries within a Variety of Contexts were Key Indicators of Interest and Motivation in Learning

If we consider how negative emotions/behaviours are commonly associated with a lack of intrinsic motivation; then we can understand why intrinsic motivation is important (Brown et al., 2013; Katz et al., 2011, 2014; Taylor et al., 2014). Therefore, if we want students to have a strong sense of confidence as learners, then intrinsic motivation needs to be present because it provides a number of positive implications for learning (Deci & Ryan, 2012).

With this in mind, this theme will investigate how multiple participants considered focused attention and depth of exploration to be key indicators as to whether or not students were interested. Following this focus, this section will then explore how participants considered student questioning, connections, and striving to extend their learning as indicators of their concentration. Next, it will reason how participants’ perceptions of student confidence and seeing tasks as purposeful further contributed to ideals of student interest.

4.3.1 Participants indicated that depth of focus and student exploration provided indicators of interest and motivation

Observable indicators such as students’ ongoing attention and length of concentration were two of the initial indicators that all participants noticed from students to judge the level of interest in lesson material. All three participants mentioned how students spent longer on tasks they enjoyed and were more inquisitive about things that sparked their curiosity.

Additionally, students’ depth of exploration provided another indication of interest. Lisa shared that sometimes she used observations of students’ exploration as a strategy to extend student learning to material in other subjects. Mary also used this strategy to provide
individualized support by extending student interest to a less desired subject as, “students further demonstrated a high level of attention and concentration in completing the task.” Mary also reasoned, “it’s almost as if they forget it isn’t their favourite thing because they are so involved throughout the process.”

The finding that student attention denotes interest compliments research literature because Marks (2000) also confirms this by identifying student engagement as, “the attention, interest, investment, and efforts students expend in their work of learning” (p. 154-155). This supports participants’ beliefs in how students’ attention and concentration within a given focus can be seen as indicators of student interest. This finding also affirms an understanding of motivational indicators because similar to the research, participants indicated a higher sense of self-efficacy to be linked to stronger efforts in relation to confronting learning goals (Wigfield & Cambria, 2010; Graham & Weiner, 2012; Taylor et al., 2014). The next section will investigate how these foundational indicators can be used to further support specific areas of student exploration.

4.3.2 Participants noted instances of student exploration as fundamental indicators of student interest

Participants highlighted three types of questions as fundamental indicators of assessing student interest. These included questioning to: 1) make connections, 2) extend/enrich learning and, 3) bridge prior understanding. Within all three of these questioning indicators, participants reasoned that the more questions asked by the student, the more interested they were in a given topic. For example, Lisa shared that a student in her class asked questions about graffiti to support their understanding in visual arts. This questioning reflected an area of interest because
the student was able to connect this type of art to other art forms. They did this by using prior knowledge to enrich their understanding of different forms of art.

With respect to Mary and Gabriella’s perspective with these types of questions (as indicators of interest), both made connections to experiential learning. They reasoned that, “students made connections to things they were curious about” providing indication of interest. The significance of this is that, similar to Lisa’s student, the questions many students asked were geared towards what they knew and what they wanted to know more about.

The above findings confirm some of the expected outcomes from the research; that teaching with students’ interests in mind enable them to engage in deep understanding and open-ended thought processes (Brown et al., 2013; Cerasoli et al., 2014). This has resulted in both the research and participants experiences confirming how students are better able to generate transferable skills through this approach (Cerasoli et al., 2014). Thus, students asking questions to make connections and bridge prior understanding demonstrates engagement/transferable skills and how student learning can be developed across disciplines. The following section of this theme will explore how students’ learning growth and sense of confidence are influenced by their interest in learning goals.

4.3.3 Participants found that student interest in learning goals contributed to learning growth and a sense of confidence

Participants further indicated high confidence to be a key attribute in pinpointing student interests. Lisa and Mary reasoned that, “students who are confident do not require affirmation of what they are doing as they know that they have produced good work.” In relation to students learning growth, participants also recognized how purposeful teaching to foster confidence had a
very influential role in discovering student interests. For example, Mary learned that a student in her class was interested in trains and extended this interest into a writing lesson. This made the experience purposeful for the particular student as, “the student took more initiative with writing,” which supported his growth and development as a writer.

In another example, Lisa indicated that she let students choose products they felt were their ‘best’ and wanted to put on display. This reflects purposeful teaching as well as indicating student interest because Lisa argues that the choice offered to students reinforced their confidence in evaluating their own work. Therefore, students were able highlight an area of interest through the choices they made as well as displaying confidence in their decision making skills. The significance of these findings is that they demonstrate how interest driven choices and relevant connections to learning provide examples of scaffolding students’ learning growth and confidence.

This supports research by Brown (2013), Cerasoli (2014), and their groups of researchers indicating how confidence is a fundamental consideration within the context of intrinsic motivation. These findings also considered expected outcomes from the research. Within the review of the literature, it was suggested that procrastination habits among elementary audiences can sometimes be linked to lower achievement (Carnes & Albrecht, 2007; Cerasoli, et al., 2014). In comparison, participants shared how purposeful teaching opportunities reinforce not only learning improvement, but initiative and confidence towards learning goals.

For the final theme, participants’ awareness of gender-based research regarding motivation will be investigated. Some of the specific areas of focus that will be addressed within this theme will include: why interests are individual rather than gender specific, as well as open-ended resources challenging gender-specific ideals and encouraging problem solving among students.
4.4 Participants Demonstrated Awareness of Research Related to Gender Specific Interests yet Did Not Believe Motivation was Dependant on Gender

Gender can play an important role in motivation because gender-based stereotypes can have the potential to influence students’ acquisition of learned helplessness (Peixoto & Almeida, 2010; Macher et al., 2012). Therefore, when students feel they lack control over situations based on their gender, they become passive participants in their learning; this impacts their motivation by increasing the potential of leaving students with feelings of incompetency (Hornstra et al., 2015).

Given this understanding this theme will investigate how participants demonstrated awareness of gender-based perceptions of interests in the sense that boys are typically associated with math-based interests and girls are perceived to have more language-based interests. This topic will also investigate how participants demonstrated that interests aren’t dependent on gender, as they provided examples highlighting how incorporating technology within the classroom supported the interests of all students. Next, this theme will investigate how participants used a variety of open-ended resources typically targeted towards male audiences to promote problem-solving among students. It will explore how participants used materials such as Lego, dinosaurs, and insects to challenge gender norms in relation to student interests.

4.4.1 Participants demonstrated their awareness of research on gender-based interests

Within the context of gender-based interests it was evident that both primary and junior participants were familiar with current research. Participants were aware that boys were perceived as more mathematical and spatial reasoning oriented, whereas girls were perceived as
more creative and language oriented (Meece et al., 2006; Deci & Ryan, 2012). This was evident by the way junior participant Lisa shared,

I know there are tests that have been done that say that girls are better at writing and boys are better at math…but I don’t follow along with that because I think it’s more about how the teacher directs the students’ learning by getting them to think outside the box.

Thus, it is understood that, opportunities for creative thinking enables teachers to avoid interests from becoming gender specific.

Mary and Gabriella’s primary teaching perspectives on interests and gender, are based on the reasoning that both genders like to build; however, they acknowledge, when students do, they do so in different ways. Both participants supported this by noting that girls typically build houses and boys build things like vehicles. This suggests that girls demonstrate interest in utilizing math/spatial reasoning skills, not just boys.

These findings therefore challenged the research by opposing the notion that boys demonstrate more interest in math/science and that girls have more interest in reading/music (Eccles et al., 1993; Meece et al., 2006; Deci & Ryan, 2012). Thus, it is evident that participants’ experiences allude to the possibility that 21st century teaching is perhaps creating a shift in these ideals. They challenged the literature by recognizing that girls utilize math/spatial reasoning skills through building structures such as houses. Therefore, this demonstrates how promoting opportunities for problem-solving and getting students to, “think outside the box” demonstrates a strategy for avoiding gender-specific interests. With this in mind, the next section will consider how elements like technology and inquiry provide indication of interests that are individual rather than gender-based.
4.4.2 Participants reasoned that interest was individual rather than gender specific through making connections to technology as well as inquiry-based investigations

Considering the context of students’ gender and their interests, all participants agreed that gender was not dependent on students’ gravitation towards specific subjects. All identified similar strategies that supported students’ interests in an individualized manner. For instance, Lisa articulated that using technology was a teaching method that could be used to engage the interests of all students. Mary further supported the strategy of using technology by sharing how she used it in combination with a phonics lesson, and how students from both genders were asking for a turn to play the game.

In addition, participants also highlighted the importance of inquiry-based investigations and how they can be used to identify individualized interests of students. To put this into perspective, Mary shared how two of her students bonded over shared stories of their younger siblings and both demonstrated interest in the subject. Before this these students had seemed disinterested in the classroom. This relates to inquiry because Mary concluded that since both children had siblings that were babies, they were interested in the care of small children although one child was a boy and the other was a girl. Hence, the significance of this inquiry is that it argues that individual interests are not determined by gender. In addition to this, Gabriella mentioned specifically how, “motivation is like personality in the sense that it is very individualized.” Thus, both participants supported how the same interests do not always apply to same gendered students.

These findings came as a surprise because most of the research considered gendered learning differences (Eccles et al., 1993; Meece et al., 2006). The significance of what participants shared is the reasoning that technology and inquiry-based learning opportunities
were strategies that could be used to challenge learning differences based on gender. These findings outline new areas within literature that current research fails to consider. In relation to the final section, this will investigate how open-ended resources can be used to promote problem solving by challenging gender specific ideals of interests.

4.4.3 Participants suggested offering open-ended resources to support problem solving and to challenge gender specific ideals in relation to interest

Providing open-ended resources and opportunities for problem solving were two specific approaches that all participants utilized in challenging gendered ideals of interests. Lisa explored how she used Lego in a math/media project, an area usually identified as an interest, “commonly perceived as intended for boys.” In using this medium she further shared how a group of girls in her class created an advertisement using the Lego that was specifically targeted towards female audiences. This example speaks to the focus on intrinsic motivation by recognizing how lessons that utilize open-ended resources and require students to problem solve enable students to demonstrate areas of interest.

Mary and Gabriella described a similar perspective in relation to the use of open-ended resources. For example, Mary provided a number of dinosaur-themed materials such as erasers, figurines, and photograph collages to students. In doing this, she noticed that many students were interested in dinosaurs however, they were all interested in different ways. For instance, some students were interested in counting the erasers, whereas others were interested in drawing pictures of the erasers or using them as game board pieces. Therefore, in each instance students had to be inventive in how they used the materials reflecting how open-ended resources support not only problem solving, but student interest as well.
These findings therefore challenged expected outcomes because the literature review suggested that boys typically struggle more with achieving intrinsic motivation (Ryan & Patrick, 2001; Perry et al., 2006; Hickey, 2008; Dweck & Master, 2009). In comparison, participants recognized that providing students with open-ended resources aimed to support problem-solving skills to successfully enable increased intrinsic motivation in boys. In addition, contrary to current research, female students also demonstrate skills with math/spatial reasoning. This is evident because participants supported that since open-ended materials did not have a defined purpose or fixed use; rather, they required students to be innovative and use problem-solving skills. As a result, it can be said that participants considered open-ended resources to be an influential factor for logical thinking as well as achieving intrinsic motivations, whereas current literature overlooks this influence.

### 4.5 Conclusion Based on Findings

Overall, it is evident that a number of these findings created an interesting overlap with current research on students’ interests and intrinsic motivation. More specifically, within the literature on how teachers learned about students’ interests regarding intrinsic motivation professional development and collaboration were identified as vital components. The research also emphasised power of providing choices to students across a range of learning opportunities and how considerations ensuring that interests were flexible and transferable across subjects. The significance of these findings in comparison to results from this study is that a consistent parallel was evident.

Contrary to these specific findings, participants also identified how less specialized areas of professional development such as the arts could be used to support learning about students’
interests. Also, they identified how co-constructed collaboration with students and providing achievable challenges within a real-life context supported deeper understanding of interests. These findings stand out within this research study because they consider extended methods for teachers in learning about students’ interests, which current literature overlooks.

In relation to exploring potential challenges incorporating students’ interests into the curriculum the literature looks at performance, rewards and/or incentives such as: grades, standardized testing, and the use of worksheets as challenges. These methods can present barriers with incorporating students’ interests in the curriculum. This research study addressed these considerations, in addition to ones that the literature fails to consider. These new contributions include how teaching students’ self-regulation through their interests can support their academic achievement. They also identified time constraints, an abundance of resources, and lack of flexibility in teaching as additional challenges with utilizing students’ interests within the curriculum, which is also overlooked within the literature.

With respect to observable indicators of interest when supporting students’ intrinsic motivation, the literature also supports how attention, investment, efforts, and most of all confidence provide indication of interest. Furthermore, it suggests that these indicators enable students to engage in deep understanding and open-ended thought processes; all of which are also represented in this research. With respect to new areas found within this research however, participants recognized how encouraging students to ask questions and make connections to prior knowledge demonstrates what student interest looks like as transferable skills. Thus, it reflects an initial consideration to supporting indicators of interest; which is overlooked in the literature.

Finally, when considering gender and intrinsic motivation to determine the implications of stereotypes on students’ interests, the literature reasoned that learning differences could be
gender-specific and that boys typically demonstrated more interest in math/science than girls. Literature also suggested that boys tend to struggle more with achieving intrinsic motivation than girls. This research study therefore challenges all of the above findings. In comparison, participants supported how girls demonstrate math/spatial reasoning skills in different ways than boys do and how this process is enabled through providing students with opportunities to problem solve. This research also considered the implications of technology, inquiry-based learning opportunities, and the use of open-ended resources to meet intrinsic motivational need of all students, whereas current literature overlooks these considerations.

Some of the findings from this study are inconsistent with established research and therefore require further investigation. Recommendation include supplementary studies on the effects of intrinsic rather than extrinsic solutions for the confidence of students, considerations regarding resources for individual learning needs, and the effect of gender roles on student learning processes. In the final chapter (Chapter 5), the implications of this research will be discussed, with additional recommendations for the education community and considerations for further research.
CHAPTER 5: DISCUSSION

5.0 Introduction

This chapter will investigate implications of the key findings from this research study and their significance. It will begin with me reviewing my findings in relation to how students’ interests support intrinsic motivation. I will then explore the implications of these findings for the broader educational community, as well as how they influence my professional teaching practice. From there, I will then make recommendations for a range of educational professionals such as teachers, school boards, and the Ministry of Education. Finally, I will suggest areas for further research that I feel would benefit opportunities to support intrinsic motivation.

5.1 Overview of Key Findings and their Significance

Similar to the previous chapter within this study, it is evident that teachers utilize students’ interests in a variety of ways to support their attainment of intrinsic motivation. Teachers prepared for supporting students’ intrinsic motivation by acquiring professional development that they felt enabled them to recognize specific areas of interest. This commitment allowed teachers to provide more open-ended choices of materials to students as well as provide cross-curricular projects to support students’ divergent thinking. These opportunities empowered participants to discover areas of student interest by strengthening their classroom observations and collaboration with students. More specifically, participants recognized how visual arts could be used to provide a broader range of choices to students, which is significant in comparison to more focused areas of professional knowledge because it considers how open-ended strategies can be used across a range of disciplines. They also reasoned that classroom decisions that are co-constructed with students further enable curriculum planning to be tailor to students’ interests.
Participants’ commitment to fostering students’ intrinsic motivation was reflected by their resiliency to confront challenges. This is evident because despite rewards/incentives being known obstacles with fostering intrinsic motivation; participants were able refrain from using teaching practices such as standardized testing and worksheets within the dynamic of their classrooms. In addition to these known challenges, participants also considered time constraints, an abundance of resources, and lack of flexibility in teaching as additional challenges with utilizing students interests in curriculum planning. These challenges are significant because current literature overlooks how teaching students’ self-regulation through their interests aims to minimize some of these barriers that participants were confronted with.

Furthermore, attention, effort, and confidence have been shown to provide indication of student interest within the context of intrinsic motivation (Deci & Ryan, 2012b). Given this consideration, teachers recognized that they could learn about these indicators by extending student learning to other subjects or by encouraging them to make connections. The significance of these methods for learning about students’ interests is that they provide further indicators of attention. They do this by recognizing how encouraging students to ask questions and make connections to prior knowledge, demonstrates what interests looks like as transferable skills.

Finally, with consideration to gender and intrinsic motivation, participants were aware that there are stereotypes regarding the implications of students’ interests. These stereotypes suggest how boys typically demonstrate more interest in math/science and how they struggle more with achieving intrinsic motivation than girls. However, participants also shared how providing students with problem solving opportunities within the classroom challenged this stereotype. Therefore, participants reasoned that interests were more individual rather than gender specific. The significance of these findings is that they considered the implications of technology, inquiry-
based learning opportunities, and the use of open-ended resources to meet intrinsic motivational need of all students, regardless of their gender.

5.2 Implications

In this section of the chapter I consider the implications of my research for the educational research community including: teachers, school boards, and the Ministry of Education. Next, I evaluate this influence for my own professional identity and practice.

5.2.1 The educational community

The various strategies used to learn about students’ interests and foster intrinsic motivation are of particular importance in relation to students’ level of engagement (Deci & Ryan, 2012a). According to research from the literature, some students are excited to learn, whereas others lack engagement because they struggle with seeing experiences as purposeful (Graham & Weiner, 2012; Taylor et al., 2014). Considering these factors as well as participants professional development influences in avoiding traditional teaching approaches, I believe it is important for the educational community to explore intrinsic ways of supporting students’ interests. I believe that this need is important due to the awareness that there is a consistent correlation between engagement and student achievement (Deci & Ryan, 2012a; Brown et al., 2013).

Furthermore, considering the lack of research in using technology to support intrinsic motivation, it is evident that participants’ experiences with technology reflected a level of comfort in using this tool to support their teaching practice. With this in mind, I feel that the educational community should also be aware that their comfort level with technology and/or whether or not it is accessible in their school board could be providing implications for fostering
intrinsic motivation. Thus, I believe that a more consistent relationship between using technology and fostering intrinsic motivation needs to be explored.

In addressing the need to better foster intrinsic motivation as a whole, I feel that it is important to be aware and recognize that not all teachers use the resources highlighted in this research study to support student learning. In fact, literature reasons that many teachers still idealize rewards and incentives as a fundamental consideration for motivation when curriculum planning (Brown et al., 2013; Cerasoli et al., 2014). Since participants recognized internal motivators for student engagement and these outcomes were more conductive to student learning, I believe that this is an important insight for the education community, especially teachers and the Ministry of Education. Next I will explore some further implications in relation to how this research influences my identity and practice.

5.2.2 My professional identity and practice

I have always had a strong commitment in fostering engagement by using areas of student interest to support my curriculum planning. These considerations are vital in supporting intrinsic motivation as they offer more meaningful learning to students, by providing a more enjoyable and relatable experience. Thus, I am confident that having completed this research study, I am more knowledgeable in how to effectively use students’ interests to support engagement. With this in mind, I am excited to utilize many of these strategies explored for fostering intrinsic motivation in my own practice, despite the potential challenges I may encounter.

When considering the perspectives from my participants, it can be said that one’s openness to change plays a fundamental role in whether or not intrinsic motivation is used within the classroom; or more specifically, how it is used. Hence, I will aim to always consider the interests
of my students when I am planning a unit or an individual lesson. I will do this by challenging myself to engage all students learning needs through careful observation and getting to know my class. I will also aim to find more innovative ways to bring technology into the classroom and will challenge my students to use problem solving skills in project planning. My goal in doing this is that similar to participants in this study, I will aim to confront gender stereotypes in relation to motivation.

Given these considerations, I am eager to share this passion with my students by including their voices into daily classroom decision making. This study has helped me to recognize how co-constructed collaboration with students aims to support interest and engagement within the classroom. Thus, a goal for my professional practice is to provide my students with a sense of ownership within the classroom and to offer them learning opportunities that allow them to express their individual interests. Another aspiration I have for my practice is to use the knowledge that I have acquired through this study by utilizing students’ interests in their less preferred subject areas. My goal in making use of this strategy is that similar to this study; my intention is to create learning engagement through a cross-curricular lens. This is important because it aims to provide students with a broader range of transferable skills. In the next section of this chapter, I will then make some recommendations for the educational community.

5.3 Recommendations

One of the most rewarding opportunities of becoming part of the educational community is the opportunity to immerse myself into a world of life-long learning. In fact, in my practice teaching I have learned that teachers who are committed to their students learning engagement are always considering students’ interests within the scope of their curriculum planning. They do
this by exploring new and innovative ways to engage students and make learning interesting for them. Given this consideration, I feel that my findings within this study present the need for additional professional learning opportunities for teachers. Therefore, one of my suggestions is for principals to offer teacher workshops (to support and foster intrinsic motivation) as a professional development opportunity. In doing this, teachers would be provided with relevant examples of how to support and foster intrinsic motivation within their classrooms.

In terms of self-driven professional learning opportunities, another recommendation I have is for teachers to obtain comfort in using technology within their practice. The reason for this is that not only does this strategy support 21st century learning for students, but it also aims to create relatable learning opportunities that are geared towards the interests and motivation of all students (Graham & Weiner, 2012). Teachers could access this knowledge in a variety of ways; however, my recommendation would be to seek the support of colleagues and/or to take additional qualifications geared towards technology integration in the classroom.

In addition to supporting teachers’ professional knowledge, it can also be said that participants identified how technology can be a useful tool to support motivation. When teachers are comfortable with using technology in their classroom and they work in a school board where they have a rich supply of devices to support student learning, this can help to eliminate some of the stereotypes associated with gender and intrinsic motivation. Considering this insight, a recommendation I pose for school boards is to provide students and teachers with more access to technology. I pose this suggestion with the intention that if schools have more access to this resource, perhaps more members of the educational community will research its influence to recognize and understand how this tool can be used as one of many strategies to gauge student interest and support intrinsic motivation.
Throughout my interviews, participants also recognized how intrinsic motivation can be fostered through collaborating with students and providing a range of learning opportunities that offer an element of choice. Considering these findings, I recommend that the Ministry of Education include these strategies into the Ontario curriculum. This proposal would therefore allow common strategies to be shared with all Ontario teachers, and thus provide support for teachers who are new to utilizing this approach in their practice.

5.4 Areas for Further Research

Available research on intrinsic motivation is very limited, especially with respect to strategies for “how” students’ interests can be used to foster it within the classroom. Many of the studies available within current research explored how barriers such as rewards/incentives, standardized testing approaches, and worksheets pose challenges with supporting students’ intrinsic motivation (Brown et al., 2013; Cerasoli et al., 2014; Icekson et al., 2014). Given this consideration, I believe that this research that I have conducted builds upon how utilizing students’ interests in curriculum planning can be used as a strategy to challenge many of these known barriers. It is my belief however, that more research should be explored to determine the long-term implications of utilizing students’ interests to drive curriculum planning, and the affect intrinsic motivation has on students’ academic achievement.

In conducting my research, participants all explained how engagement and purposeful learning were fundamental considerations to fostering intrinsic motivation in their classrooms. They also reasoned that students were more confident learners by being provided with self-driven choices, problem solving opportunities/challenges, and relevant connections to make in their learning. In consideration to these factors, I am interested to see if there are long-term
implications to utilizing these strategies to foster intrinsic motivation. Therefore, such research could study a sample of students over a period of time to explore the impact student engagement and interests have in fostering intrinsic motivation.

5.5 Concluding Comments

In this chapter I presented a brief summary of my findings from Chapter 4, which outlined elementary teachers’ commitment to using areas of student interest to foster intrinsic motivation. Teachers demonstrated this commitment by extending their professional development to provide more relevant choices/experiences to students, and to facilitate more opportunities for co-constructed collaboration within the classroom. Although teachers faced some challenges in their commitment to fostering intrinsic motivation, they were able to confront these obstacles by teaching students self-regulation through their interests. They also committed a significant amount of time to drawing upon new resources if ones used in their practice did not support student interest. My research also discovered ways in which depth of student questioning demonstrated student interest as a transferable skill. Overall, my findings considered the implications of technology, inquiry-based learning, and the use of open-ended resources to meet intrinsic motivational need of all students.

In addition to highlighting specific findings from my research, I addressed a broad range of implications for the educational community. These implications reasoned that members should be aware of the correlation between engagement and student achievement. It also suggested how teachers comfort in using technology could be providing implications on stereotypes related to gender and motivation. In addition to this, teachers’ access to successful strategies could be limiting their potential to create an environment that supports intrinsic motivation. From there, I
provided an overview in relation to how this research will have an influence on my teaching practice. Thus, I reasoned that my goal is to implement this research in my teaching practice.

I then make specific recommendations for teachers, school boards, as well as the Ministry of education by suggesting how things like workshops, more access to technology, and sharing strategies to support intrinsic motivation through the Ontario curriculum, aim to support public awareness. To conclude, I make suggestions for further research by posing the need to study long-term effects on the strategies used in this study. Thus, my hope is that my work will have an influence on the educational community.
References

Abawi, K. (2010). Qualitative and quantitative research. *Foundation for Medical Education and Research*, 1-34.


Appendix A: Letter of Consent for Interviews

Date:

Dear ______________________________,

My Name is Danielle Clarke and I am a student in the Master of Teaching program at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). A component of this degree program involves conducting a small-scale qualitative research study. My research will focus on how teachers draw on students’ interests to support the development of intrinsic motivation. I am interested in interviewing elementary teachers/educators with a minimum of 3 years teaching experience who have demonstrated leadership in the area of fostering intrinsic motivation in learning. I think that your knowledge and experience will provide insights into this topic.

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

Please sign this consent form, if you agree to be interviewed. The second copy is for your records. I am very grateful for your participation.
Sincerely,
Danielle Clarke
danielle.clarke@mail.utoronto.ca

Course Instructor’s Name: Dr. Angela MacDonald
Contact Info: angela.macdonald@utoronto.ca

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

I have read the letter provided to me by Danielle Clarke 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

Introductory Script:

Thank you for agreeing to participate in this research study, and for making time to be interviewed today. This research study aims to learn how teachers draw on the interests of their students to foster intrinsic motivation. This interview will last approximately 45-60 minutes, and I will ask you a series of questions focused on what intrinsic motivation means for you as an educator and how you facilitate intrinsic motivation in your practice. 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?

Interview Questions

Background Information

1. Can you please describe to me your current position?
2. How long have you been a teacher/educator?
3. What grades/ages of students have you taught over the length of your career in education?
4. What kinds of experience have you had in working with diverse backgrounds and/or demographics of students?
   a. (If applicable) Can you tell me more about the school where you currently teach? (size, demographics of students, program priorities)
5. As you know, I am interested in learning about how you foster intrinsic motivation for students. Can you start by first telling me more about your own experience of learning when you were a student?
   a. What are your recollections of how teachers motivated students in your own learning experience? How did they motivate you?
   b. Would you describe yourself as someone who is intrinsically motivated?
   c. What motivates you to learn?
6. You have demonstrated commitment to this area of learning. Can you tell me more about what experiences helped develop your commitment to fostering intrinsic motivation, and helped prepare you with the knowledge and skills to enact this commitment in practice? *listen and then probe as necessary re: personal, professional, and educational experiences.
7. When we spoke ahead of the interview you shared with me that drawing on students’ interests was one key approach you take to fostering intrinsic motivation. Have you ever
taken any teacher education or professional development courses to support your planning and facilitation of interest-focused curriculum programming (i.e. courses related to using inquiry as a tool for learning)? If yes, what opportunities for learning did you have and what did you learn through these experiences?

Teacher Perspectives/Beliefs

1. What do you believe is the role of motivation in education?
2. From your perspective, what does it mean to be intrinsically motivated? How would you describe intrinsic motivation to someone who has never considered or implemented this approach in their teaching?
   a. And what does it mean to be extrinsically motivated?
   b. In your experience, what are some of the benefits experienced by students when they are intrinsically motivated? What outcomes do you feel intrinsic motivation has on student learning?
   c. Drawing on students’ interests is one key approach that you use to foster intrinsic motivation. Can you tell me more about why you believe this is important?
3. How do you know when a student is intrinsically motivated? What indicators of this do you see?
4. In your view, is it common for teachers to foster intrinsic motivation? Why / why not?
5. Are there particular subject areas that you feel are more relevant than others when it comes to fostering intrinsic motivation?
6. In your experience, what, if anything, have you observed about the relationship between gender and intrinsic motivation?
   a. What, if anything, have you observed about the relationship between students’ interests, gender, and intrinsic motivation?
   b. [If applicable] Can you relay an example or two for me?

Teacher Practices

1. In your experience, what kinds of instructional approaches help to foster intrinsic motivation in students? *listen and probe as necessary
2. What are some of the key strategies that you use to foster intrinsic motivation?
   a. Can you provide me with some specific examples of how you have fostered intrinsic motivation for students, generally, or for an individual student, specifically?
      i. What opportunities for learning did you create and why?
      ii. How did students respond? What indicators of intrinsic motivation did you observe from them?
3. How do you learn about students’ varied interests in order to draw on these as a resource for fostering intrinsic motivation? What range of strategies do you use to get to know students’ interests?
4. Can you give me some examples of the kinds of interests that you have drawn on, and how you have used these as a resource to foster intrinsic motivation? How did your students respond?
5. Generally, do you find that students’ gender impacts what interests you draw on to foster intrinsic motivation. If yes, in what ways? Can you relay some examples?
6. What strategies do you use to support learners who struggle with achieving intrinsic motivation?
   a. Do you modify your teaching to support students’ achievement of specific learning goals and how do you do this?

7. What resources have you used in your practice to support intrinsically motivating your students?

8. Can you tell me about how, if at all, intrinsic motivation factors into your assessment practices?
   a. Can you give me an example of a means of assessment you have used in practice that you felt motivated your students?

**Supports and Challenges**

1. What kinds of challenges do you encounter or have you encountered with fostering intrinsic motivation in students?
2. And challenges related to drawing in students’ interests as an instructional tool?
3. Over the course of your career, was there ever a time where intrinsic motivation was particularly difficult to implement in your practice? If, yes, why do you think that was? What factors or circumstances played a role?
   a. What teaching strategies, if any, help you overcome this challenge?

**Next Steps**

1. In your view, how might the education system, as an institution, further support the development of intrinsic motivation in students? *listen and probe re: teacher preparation and professional development*
2. What advice, if any, do you have for a beginning teacher who is committed to fostering intrinsic motivation in students, and to drawing on students’ interests as a resource toward this end?

Thank you for your participation in this research study.