Single-Gendered Male Classrooms:
Do They Have An Effect On Student Achievement?

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Abstract

This research study explores the nature of single-gendered education and strives to determine what if any effects are produced from student participation in this type of educational setting. This study investigates whether or not there are any results in three aspects of student achievement, that being academic achievement, behavioural effects and social ramifications of single-gendered education. The purpose of this research is to determine alternative practices to the standard coeducation classroom setting and to see if they are beneficial to students’ academic, social and behavioural growth as students and individuals. This study draws on the research from experts in the field and was conducted by utilizing first hand accounts of two educators currently involved in the creation and implementation in single-gendered educational classroom settings through face-to-face interviews. Findings of this study point to the benefits which can be attributed to learning in a single-gendered classroom, not only for the students, but for the educators in those classroom settings as well. This is a powerful alternative, which can be extremely beneficial to student academic learning and social and behavioural progression as both students and individuals.

Key words: single-gender, single-sex, coeducation, alternative learning, boys, males, elementary school, student achievement
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SINGLE-GENDERED CLASSROOMS

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Table of Contents

Abstract ................................................................................................................................. ii
Acknowledgement ................................................................................................................ iii

Chapter 1: Introduction ................................................................................................. 1
  1.0 Introduction to the Research Study ................................................................. 1
  1.1 Purpose of this Study ...................................................................................... 2
  1.2 Research Questions (Key and Sub questions) ........................................... 3
  1.3 Background as a Researcher ......................................................................... 4
  1.4 Overview ............................................................................................................ 5

Chapter 2: Literature Review ...................................................................................... 7
  2.1 Differences as Learners ................................................................................... 9
  2.2 Social Aspects .................................................................................................. 10
  2.3 Behavioural Aspects ....................................................................................... 14
  2.4 Academic Aspects ........................................................................................... 17
  2.5 Research Questions (Key and Sub questions) ............................................ 19

Chapter 3: Methodology ............................................................................................ 19
  3.0 Introduction ........................................................................................................ 19
  3.1 Research Approach and Procedures ............................................................ 20
  3.2 Instruments of Data Collection .................................................................... 20
  3.3 Participants ....................................................................................................... 21
    3.3.1 Sampling Criteria .................................................................................... 21
    3.3.2 Sampling Procedures ............................................................................. 22
    3.3.3 Participant Bios ....................................................................................... 23
  3.4 Data Analysis ..................................................................................................... 24
  3.5 Ethical Review Procedures ............................................................................. 24
  3.6 Methodological Limitations and Strengths .................................................... 25
  3.7 Conclusion ......................................................................................................... 26

Chapter 4: Research Findings ..................................................................................... 27
  4.1 Theme 1: Differences Between Males and Females as Individuals in Their Interest and as Learners ........................................................................................................ 28
    4.1.1 Biological Differences ............................................................................ 28
    4.1.2 Different Interests ................................................................................... 29
    4.1.3 Differences as Learners and Academic Strategies ................................. 30
    4.1.4 Behavioural Differences ....................................................................... 32
  4.2 Theme 2: Creation of Community Amongst Male Students: ....................... 33
    4.2.1 Comfort ................................................................................................. 33
    4.2.2 Greater Simplicity In Teaching Practice ................................................ 34
  4.3 Theme 3: Positive Effect on Personal Teaching Practice: ............................ 35
    4.3.1 Professional Development (Access and Limits) .................................... 35
    4.3.2 Teacher as Positive Role Model/Relationship Builder ......................... 36
  4.4 Theme 4: Outcomes of Single-gendered Education: ...................................... 38
    4.4.1 Student Academic Achievement ........................................................... 38
    4.4.2 Student Behavioural Progress ................................................................. 39
    4.4.3 Student Social Progress ....................................................................... 40
4.4.4 Parent Teacher Relationship

4.5 Theme 5: Roadblocks to Single-gendered Education:

4.5.1 Lack of Available Training, Resources and Information

4.5.2 Negative Attitudes and Perceptions

4.6 Conclusion

Chapter 5: Discussion

5.0 Overview of the chapter

5.1 Overview of the Key Findings and Their Significance

5.2 Implication

5.3 Recommendations

5.4 Areas for Further Research

Appendix A: Letter of Consent for Interview

Appendix B: Interview Questions

References
Chapter 1: Introduction

1.0 Introduction to the Research Study

Think back for a moment about your own experience in elementary school. Picture the classrooms you sat in. Look at the work on the walls. It is probably a combination of the classes work, posters and inspirational quotes. Imagine the educator standing in front of the class teaching a lesson from the curriculum documents. Visualize your classmates seated around you. See them in their seats and look at their faces. For some, their gaze is fixed on the educator, while others may be preoccupied with non-school related activities. What do you notice about your classmates as a whole? Are there any defining features or characteristics? For a large majority of the population, we remember a classroom setting filled with both male and female students, working together in a coeducational environment and never knowing anything different or challenging in the traditional classroom structure. Students went about their everyday routines, completing individual and group work, writing tests and taking notes from the teacher. They did their work and received their grades based on their finished products. They formed bonds and relationships with their fellow students, which undoubtedly affected their social and behavioural maturity as individuals. Now, try and imagine that instead of your comfortable and recognizable coeducational classroom, you were placed in a single-gendered classroom. Would the outcomes be any different? Would there be any differences in your social or academic achievement? If so, would they be positive or negative?

There has historically been substantive debate over the idea and practice of single-gendered education and whether or not it has any effect on student life and achievement. For years, researchers have been debating the potential positive and negative consequences and outcomes of such classroom structures. Parties on both sides brought with them vast amounts of qualitative and quantitative data supporting their positionality and there has yet to be any consensus on the matter.

Lately, there has been an increase in the debate surrounding single-gender education. This is due in large part to a recent movement in some countries, particularly the United States, towards such classroom settings (Jackson, 2010). The driving force
behind this move is a result of the “watering down of federal regulations…and Title IX” (Jackson, 2010). The constitutional amendment in 1972, which created Title IX, stated that, “No person in the United States shall, on the basis of sex, be excluded from participation in, be denied benefits of, or be subject to the discrimination under any education program or activity receiving Federal financial assistance” (US Department of Education, 2012). Title IX in essence made single-gender classrooms discriminatory, and therefore almost impossible to exist. The No Child Left Behind Act of 2001 prompted a reinterpretation of Title IX through a provision for grant funds to encourage more focused research on single-gendered programs in public schools (Friend, 2007). This opened the door for a re-examination of single-gendered classrooms. The United States thus saw a resurgence towards single-gendered education with the number of single-gendered public schools increasing from two in 1995 to 49 in 2008, and from 12 to 518 classes between 2002 and 2009 (Jackson, 2010).

1.1 Purpose of this Study

To date, there has been limited analysis of single-gendered education in the Canadian context, with most of the research being done in England and the United States. This glaring gap needs to be explored in much greater detail in order to determine the Canadian perspective on single-gendered education. Additionally, there has been no clear consensus determining the extent to whether single-gendered classrooms are beneficial or not. Research for the most part has been split down the middle, with strong arguments presented by both sides. One of the main reasons I am conducting this research and writing this paper is to try to understand and work through the immense amount of literature on this topic, and investigate how the effects of single-gender education plays out in actual classroom settings. Does it have effects on student achievement, social integration, attitudes and behaviour? With the growing Canadian population, the results inevitably lead to a larger student population. Best teaching practices must be explored in order to meet the individual needs and learning capabilities of these students.

Furthermore, there is a desire on the part of parents to maximize the learning potential of their children. They are searching for alternative options to the standard and historical coeducational school settings. Single-gendered classrooms are one alternative,
SINGLE-GENDERED CLASSROOMS

and are growing in numbers. It is therefore imperative and in the best interest of the students to determine what, if any effects are present in single gender classrooms and what the results of such learning can be.

1.2 Research Questions (Key and Sub questions)

The main research question driving this study is: what are the implications of male gendered classrooms from the perspective of the elementary educators who are involved in them?
The sub questions that were be considered are as follows:

- From the perspective of educators, what are the attitudes of male students in single-gendered learning environments?
- What are the advantages and disadvantages in working with only male students in an elementary classroom?
- What correlations have educators seen between males in a single-gendered elementary classroom between academic achievement, behavioural differences or social benefits?

I have chosen the case study approach for this qualitative study. The case study approach is defined as “where the investigator/researcher explores a real-life, contemporary bounded system…over time, through detailed, in depth data collection involving multiple sources of information, and reports a case description and case themes” (Creswell, 2013, p. 97). By taking a collective case study approach within which I selected multiple case studies to illustrate my issue, I focused attention on certain contexts but not on others (Stake, 1995).

I conducted standardized open-ended interviews with elementary educators who have been involved with male-gendered classrooms. They consist of educators currently teaching in these classrooms, one’s who have taught in these classrooms, or administrators who have a direct connection to these types of classrooms environments. In the open-ended interview process, all participants are asked similar interview questions, but the questions may be worded differently to illicit unrestricted responses...
SINGLE-GENDERED CLASSROOMS

(Turner, 2010). This allowed me to gather more information on the thought processes of the interviewees and provide a more in depth analysis of their true feelings and responses.

1.3 Background as a Researcher

My desire to approach the topic of the implications of single-gendered classrooms is threefold. Firstly, it stems from my religious ideological upbringing in a traditional Jewish home. My family raised me as a proud Jewish child and I attended private Hebrew school from kindergarten until the end of high school. In school, we learned both the Ontario curriculum (the same as students attending any other public school), as well as the Judaic curriculum. Half of our day was spent learning subjects such as Hebrew language and grammar, Torah, Jewish history and Jewish prayer. The second half of the day was being educated in the same curriculum as the rest of the province. The Jewish tradition holds firm beliefs in the differences in roles and obligations for males and females in society and Jewish life. It specifically discusses instances where men and women must be separated for religious reasons. The Torah refers to this as “tsniut” or modesty. This fundamental aspect of traditional Jewish life expresses itself in dress, in the physical separation of men and women in synagogue, in places of study and at social gatherings (Kohn, 2004).

Even at an early age, this knowledge caused me to question whether or not this could have any effects on other factors pertaining to everyday life. It was the extension of the Judaic curriculum learning, which took place in high school specifically in Jewish ethics and philosophy courses, which expanded the principals learned in elementary school. In these courses, we went further to explore the results of these differences in the lives and roles of men and women within the Jewish community. I was then able to extrapolate and expand on this new knowledge. My interest in working with children caused me to question whether such separation in schools could make any differences in the outcomes of abilities of those students. Additionally, once in high school, I made friends with a number of males and females who had attended single-gendered Hebrew elementary schools and I was always intrigued with the stories they would tell with respect to their experiences. They were always vastly different from one another and my own. For example, because I had been in a coeducation classroom setting, I was more
aware of “acceptable talk” and was not shy to talk about certain subjects around females compared to some of my single-gendered classroom male counterparts. I always wondered if situations like this were a result of the their single-gendered educational setting.

Secondly, my interest in researching this topic is based on my desire to further my understanding and knowledge of the differences and ways in which to maximize student potential. My personal goal as an educator is to provide both a safe and secure learning environment for students where they can express their beliefs, desires and feelings without fear and to create every opportunity to maximize the learning potential and capabilities of my students. If single-gendered classrooms can provide any tangible ongoing benefits to my students, then it is my duty to immerse myself in this knowledge. It is imperative for me to provide any sort of advantage for my future students by doing whatever necessary to maximize their potential.

Lastly, I conducted this research by garnering data from the perspective of the educators, because they are the ones directly influencing the learning of these children. Unlike the parents or the students themselves, the educators work with a larger field of study and have direct hands on contact with the students. Their insight may prove to be most valuable as they are the ones on the front line when it comes to maximizing student learning and potential. They can see the direct outcomes of an entire class of students in a single-gendered educational setting. Having direct contact with these students enables them to provide a larger base of support into the positive or negative effects of single-gender classrooms as they can speak on behavioural, social and academic differences, which may or may not be present in single-gendered classrooms.

1.4 Overview

Chapter 1 includes the introduction and purpose of the study, the research questions, as well as how I came to be involved in this topic and study and my rationale for involving myself in this area of study. Chapter 2 contains a thorough review of the literature from both sides in order to allow a deep understanding and appreciation of expert opinions and data into the concept and idea of single-gendered education. Chapter 3 provides an outline of the methodology and procedural practices utilized in this study
including information about the sample participants and data collection instruments. Chapter 4 identifies the participants in the study, measures their expert opinions on this topic and describes the data as it addresses the research question. Chapter 5 includes limitations of the study, conclusions, recommendations for practice, and further reading and study. References and a list of appendixes follow at the end.
Chapter 2: Literature Review

The debate over the effect of single-gendered education on student academic achievement, behaviour advancement and social advancement has been mixed. To date, there has been no clear consensus determining whether single-gendered classrooms are beneficial or not, and if so, to what extent. Research for the most part has been split down the middle, with strong arguments presented by both sides.

One of the main reasons I conducted this research was to work through the immense amount of literature on single-gender classrooms and investigate how these arguments play out in actual classroom settings. With a growing Canadian population resulting in a larger student population, there is a desire on the part of parents to maximize the learning potential within their children; they are searching for alternative options to the standard coeducational school settings. Single-gendered classrooms are one alternative that are growing in numbers. It was therefore imperative to determine what if any effects are present, and what results of such learning can be. This chapter starts by discussing the possible differences between males and females as learners, then moves on to potential social, behavioural, and academic benefits with the focus on male student classrooms.”

Before an analysis of the literature can take place, it was imperative that some of the major terms being discussed in this study are being defined in order to create transparency and understanding of the context in which this paper used the terminology. For the purposes of this thesis, we are required to differentiate between sex and gender as they can sometimes be used interchangeably. The National Academies Press attempts to define the differences between sex and gender in Exploring the Biological Contributions to Human Health: Does Sex Matter? They stated that, “With respect to sex, humans are generally dimorphic. With some exceptions, individuals are either chromosomally XX and developmentally female or chromosomally XY and developmentally male. In contrast, gender is a continuum. An individual may display characteristics considered more typical of the opposite sex, and a person’s sense of gender may change over the course of a lifetime” (Wizeman & Pardue, 2001, 17).

One of the leading researchers on the subject of single-gender schooling, Leonard Sax, has extensively examined the differences between the two. Sax argued that gender is
in fact not socially constructed (Sax, 2005). The following exemplifies Sax’s reasoning; just because women on average have a longer hair length than men, does not mean that the length of one’s hair is socially constructed. Basically, Sax is arguing that the influences of social and cognitive factors on gender traits have traditionally been overestimated; in other words, society plays a minimal factor in how a person determines his or her own gender. It is more about the feelings the individuals have inside of themselves and how they sense and want to determine who they are and who they want to be. I agree with Sax’s reasoning here; a person may be born as a male, but can feel female. It shouldn’t matter what anyone else thinks their gender is; it is the individual person that determines it.

Jenkins (2000) argued that most measures of gender variables use self-report methods, how individuals feel about themselves, and thus are heavily dependent on accurate, conscious, awareness of these aspects of self-concept (as cited in Winstead & Derlega, 1993). Therefore, each person defines their own gender. It is the view of the author that determining one’s own gender is of utmost importance, and while it is extremely difficult to negate the pressures of society around us to conform to the norm, it is vitally important that each of us determines our own gender based on that personal feeling and knowing inside of ourselves. Brian Matthews (1998) takes this a step further when discussing the differences between masculinity and femininity. He argued that femininity and masculinity are actual processes, with the definition of these terms based on interactions that occur between the sexes. Therefore, masculinity and femininity are processes that are learnt, negotiated, changed and forged (Matthews, 1998). Later the impact that self concept had on male student achievement was discussed, but it is important to note here that a positive self-concept (and thus having a firm belief in one’s definition of one’s own gender), helped to create a positive belief about one’s self. This in turn could result in academic achievement and social advancement. For the purposes of this paper, I will use the simple and direct definition provided by Dr. Virginia Wolf in Sex Versus Gender (Prince, 2005): genital anatomy is about sex; gender role is about lifestyle (Prince, 2005 p. 29). This explanation simply stated that your sex is based on anatomical parts and your gender is who you feel you are. The main concern regarding the definition of sex and gender is regarding the misperceptions among those who do not
SINGLE-GENDERED CLASSROOMS

conform to society’s sexed expectations. LGBTQ and especially intersex individuals are seen as ‘outliers’, ‘mistakes’, or ‘exceptions to the rule’, “or more often than not, not seen at all” (Jackson, 2010, p. 231). Therefore, a properly, accurate and substantive definition of sex and gender is of utmost importance in order to determine what if any effects result from single-gendered classrooms because it was imperative to take into account the personal feelings and attitudes of the individuals being studied. Furthermore, we saw later the effects to which self-concept plays a large role in academic, social and behavioural effects of male students in single-gendered classrooms. Additionally, I referred to a student’s gender and what they feel those are. Lastly, for the purposes of this paper, unless otherwise noted, when referring to students, this paper will be referring to male students.

2.1 Differences as Learners

Sax (2005), had been a major proponent of investigating the innate disparities in the brains of males and females and as a result, the differences in the ideal teaching standards and differentiated learning approached required to maximize the learning potential for each sex. This illustrated the importance of taking into account the diversity in learning styles required for boys to maximize their achievement potential. Sax pointed to a series of studies conducted around brain reaction to trauma. Researchers who conducted these studies found that when a woman suffered a stroke, irrespective of the hemisphere of the brain where it occurred, there would be on average, anywhere from a 9-11 percent drop in the verbal IQ score. Men on the other hand, had on average a 20% drop in verbal IQ when a stroke occurred in the left hemisphere, but virtually no drop when it occurred on the right hemisphere.

To further this point, Kohn cited tests conducted at Yale University in which males and females where given a battery of psychological tests and researchers scanned brain activity and measured blood flow. They determined that tasks were being done almost equally in both halves of the female brain, but the large majority were only completed in one half of the male brain (Bleach, 1998, as seen in Kohn, 1995). This illustrated scientifically what people have known for years, that men and women use their brain differently and therefore think and learn differently (Bleach, 1998).
It is also important to remember that there are sometimes more differences within gender than between genders. The application of this is that teaching styles must therefore be reflected differently for boys and girls to maximize their success and as a result, coeducational classrooms are harmful to males (Gibb, 2009).

Single-gendered male classrooms could therefore be advantageous if structured in a way as to better suit the needs and learning abilities of male students. The caveat is to find the balance to achieve just that. The idea that boys cannot be boys (Lingard, et al., 2009) is correct in the sense that coeducational schools must find a balance to best serve all students. Additionally, coeducational classrooms do not take into account boys’ natural energy (Lingard, et al., 2009). By being able to tier learning styles, lessons and assessment strategies to the specific needs of male students, based on their ideal learning styles, their ability to succeed will inevitably increase. As we have already seen, everyone learns in their own way. There were certainly some aspects that can work better with most boys, or the average male student, but we have to be cautious of any overarching generalizations.

2.2 Social Aspects

Research (Sullivan, 2008; Jackson & Bisset, 2005; Matthews, 1998) has suggested that schools contributed to the construction of gender (male) atypical subjects as masculine, both through the content of the curriculum and the way it is packaged, and through gendered interactions between teachers and students, and between students themselves (Sullivan, 2008 as seen in Kelly, 1985). To confound this notion however, there was a view amongst parents that pupils receive better academic results in single-sex schools but that co-education provided greater social advantages, particularly for boys (Jackson & Bisset, 2005). Matthews, argued that the longer the process continued on stating and exploiting the differences between masculinity and femininity, and the fewer social interaction that take place between the sexes, the greater the reinforcement of stereotypical ideals and the more difficult it is to relate to the complementary sex (Matthews, 1998). This could in turn lead to sexism and boys having a misrepresented and incorrect view of women. By permitting boys and girls in the same class, this was largely negated. Sexism unfortunately could occur in both all male and coeducation
classrooms settings. Would an all male classrooms that studies work depicting the bravery of female heroines be any less likely than a coeducational class that studies work objectifying women to show signs of sexism? Again, the rules and structures set in place will have a major effect in limiting and eliminating this type of thinking and behaviour.

Matthews (1998) proposed one strong argument against social advantages for boys in all male classrooms. He quoted work by Harris, which argued that in coeducational schools, there were more other-sex friendships. Also, male students were more likely to feel that the coeducational environment would help, rather than hinder, their everyday relationships with the other sex and their chances of happier relationships. (Matthews, 1998). Matthews argued that a male student’s self-concept and self-confidence would actually increase in coeducational schools because of the importance of having relationships with the other sex. This could certainly be feasible as having relationships with both sexes is important for a child’s personal and psychological growth. It helped them become more aware and understanding of the innate differences that separate one gender from another. Conversely, as argued by Park, the increased social advantages presented in single-gendered classrooms revolve around the idea that male students do not have to be concerned with appearance and popularity (Park, 2013). The understanding presented was that male students on average spend considerably less time and effort in being part of a clique, organizing and choosing their wardrobe, makeup and clothing. This in turn, enabled them to focus more attention on their homework and studies. Further, this resulted in higher academic achievement (Park, 2013). Additionally, Gibb substantiates Park’s notion when she indicated that the absence of girls in the school environment creates a climate in which boys felt more comfortable to work hard and achieve highly (Gibb, 2009). The idea here was that it created a more involved classroom environment where male students were competing against one another and utilized their competitive spirit. While this argument provided by Park & Gibbs appeared to have merit, simply stating that boys will work harder and achieve greater results without girls present in their class is a difficult determination to make without any hard data or evidence to back it up. Additionally, I do not agree that single-gender classrooms result in male students not having to put any time into their appearance and popularity. I believe
that cliques and social groups will still be present in single-gendered classroom settings, so I tend to disagree with Park on this point.

Noble (2000) supplemented the idea of male competitive spirit by stating that the structure of classrooms needs to be a place that fosters competition, since male students generally prefer competition. From my own experiences, I know as a student I was always competing against my classmates and myself. “Being wrong is far outweighed by the glorious benefit of getting it right,” (Noble, 2000, 24-25). That chance to show in front of the teacher, your peers and yourself that you did not only succeed, but surpassed expectation was one of the greatest feelings I encountered. The need for a single-gendered class to foster this type of competition seems a little far-fetched. Can an all male classroom promote this type of competition that is lacking in a coeducation one?

In addition, Sullivan argues that in coeducational schools, male students feel pressure to conform to gender norms and are less likely to pursue gender atypical subjects, like English (Sullivan, 2008). On the other hand, “separating girls from boys based on the assumption that only girls distract boys and visa versa ignores the possibility of boys distracting boys and girls distracting girls – sexually and otherwise” (Jackson, 2010, 233). Single-sex schools are inherently based on biologically determinist principles and are structurally sexist because they separate people based on the grounds of biological sex alone (Matthews, 1998). In a study done over a six-year period in Windsor, Ontario, boys from the boys only classes became more aggressive and developed misogynistic attitudes (Greig, 2011). If both staff and students alike were involved in creating appropriate rules and procedures and had an active part in creating goals and expectations, then decreasing the potential of these types of results could certainly occur.

By diversifying their learning and taking a wide range of subject material and not just “gender typical subjects” male students gain a greater understanding and appreciation of various curriculum areas and not see female typical subjects as just that, but rather as the learning of information required for the advancement of themselves. That coupled with information attained from society, as long as proper structures are in place, can aid males in breaking down potential negative stereotypes. Lee and Bryk (1986) found that effects in educational aspirations, focus on control, self-concept and sex role attitudes favoured single-gendered schools. Not only that, but sex stereotypes have already
affected self-concepts by preadolescence, and these effects are relatively stable from preadolescence to early adulthood (Marsh, 1989). This is extremely important as the time to promote, increase and solidify a positive self-concept is before high school. The need to do whatever it takes so create a positive self-concept environment needs to at the very least start before high school. Boys at single-gender schools were more likely to see themselves above average in gender atypical subjects such as English than those at coeducational schools (Sullivan et al., 2010). By not having to compare themselves with female students (who are generally stronger than men in subjects likes English), there is on average less disparity in academic achievement by males in those subjects and students in turn feel better about themselves and their own achievements. One must take into account however that students in coeducational schools did not see themselves below average, just that male students in single-gendered school had a greater self-concept than those at coeducational schools. Sullivan illustrates quite starkly in her research that high self-concept has a positive result towards learning (Sullivan, 2008). When a male student believes that they are incapable of doing well, then they usually do not do well. Positive attitudes in turn create the possibility of higher academic achievement and single-gendered schools reduced boys disadvantage in self-concept (at least in English) to an insignificant amount (Sullivan 2008).

While there are many social benefits presented in the literature for boys only classrooms, it is the view of this author that there is greater benefit for boys socially to have both genders present in a classroom setting. While it is understandable to argue that boys are able to learn and garner all they need to know about females from media and through non-school related interactions, students spend such a large amount of time in the classroom setting, that having both sexes present would unmistakeably provide male students with the opportunity to observe and interact with females in a way that they would not have anywhere else. There is nothing like firsthand experience and coeducational classrooms would provide that opportunity for boys and hopefully decrease any potential sexist or misogynistic attitudes and views. Additionally, I agree with Sullivan’s reasoning. From my own experiences, I know first hand the impact a positive attitude can have on learning. If I did not think I had the capabilities of succeeding in a subject or on a test, then I usually did not do well. Conversely, if I had an optimistic
attitude, then the results were more often than not positive. Either way, my own self-concept and perceptions played a major role in my academic outcomes, which played a role in my self-perceptions. It is ultimately a never-ending circle, with each one affecting the other. The importance is to create an environment where students and children have positive self-concept and self-confidence in their own abilities first, (before they have a chance to fail). That, coupled with the knowledge that it is okay to not always do well and to take those experiences and learn from them could go a long way in reducing and effectively eliminating any potential of negative self-concept.

2.3 Behavioural Aspects

The case against positive behavioural outcomes resulting from an all boys classroom centre around the idea that having mixed sex groups within a larger classroom setting helps all pupils to learn that boys and girls can contribute equally and differently to the same task. This in turn develops interpersonal skills and increases respect for the other sex (Terry & Terry, 1998). The concern is that in single sex groups, the strength that each sex brings to the lesson would be lost (Davidson & Edwards, 1998). By being able to work closely with both sexes, there is less likely to be the expansion of gender stereotypes and there would be a positive learning experience for both girls and boys. To further that point, Frater (1998) argues that boys and girls do not need to be separated in order to increase boy’s academic literacy. In fact, creating mixed sex literacy groups provides boys with an opportunity to view the positive aspects in which girls work. I believe that boys would be able to see the positive work ethic of girls in a historically gendered atypical subject like English and learn from them and model and apply that knowledge to help raise their own academic literacy.

A case often cited as a major proponent on the positive behavioural effects of single-gendered classrooms is the story of Seattle’s Thurgood Marshall Elementary School. “It used to be a failing school in one of that city’s poorest neighborhoods. Then in September of 1999, the school’s principal, Benjamin Wright, reinvented the school as a dual academy: girls in all-girls classrooms, boys in all-boys classrooms” (Sax, 2005, 1). With single-gender classes at Thurgood Marshall, discipline referrals to the office dropped from 30 a day to one or two (Davis 2002). The principal did indicate that this all
occurred without any additional funding, and without any change in class size. Friend (2007) however argues that we cannot just look at the effects of these changes in a vacuum. Other changes instituted by Principal Wright, such as extending the length of the school year and creating smaller class sizes, many have had an equal or greater impact than moving to single-sex classes.

The argument for behavioural advantages are laid out by a number of authors (Park, 2013; Noble, 1998; Greig, 2001) including Lee and Byrk, who point to increased engagement in school and social organizations (Lee and Byrk, 1986). They argue that being more involved in school programs along with their other male classroom counterparts, provides these students with a brotherhood or family relationship with one another. Male students are then more likely to support and be there for one another with assistance or guidance in studies. This could in turn lead to greater academic achievement and increase behavioural awareness.

One of the major commonalities in boys’ and girls’ schools is that the gender composition of the faculty reflects the nature of the student body. This parallelism provides students with a large array of adult role models of the same sex, which might foster more serious student attitudes and behaviours toward schooling (Lee & Bryk, 1986). Teachers’ attitudes toward male students also seemed to improve in single-gendered settings. Educators seemed to be more excited about coming into school and more eager to work with their students (Park, 2013). Noble discussed the importance of male role models in all-male schools (Noble, 1998) and the positive effects they can have on student’s behaviour. In an all-boys class with a male teacher, students are more likely to aspire emulate their teacher, doing everything in their power to avoid displeasing or disappointing them.” In turn, the teachers work closer with their pupils to maximize their potential as students. Additionally, there seems to be a strong belief that more men in elementary schools could offset or counter male student potential negative attitudes towards school (Greig, 2011) and studies in general.

A study conducted at Cathcart High School in Australia sought to determine in practice any effects of single-gendered classrooms on male student achievement. They focused on the relationship between the students and the teachers who made a concerted effort in this regard. Teachers were encouraged to work on developing good relationships
with boys (Lingard, et al., 2009). This coupled with the suggestion that males are born innately different and thus require a distinctive learning process than females. Boys would therefore start out each day walking around the school playing fields with their teachers. The idea was that as well as getting the boys to burn up some energy, this was also a good time for developing relationships with them. The author found that this had a positive effect on student behaviours during school and on their academic achievement (Lingard, et al., 2009). Bleach notes that even by the age of seven, boys are noisier and find it more difficult to sit still and pay attention than girls (Bleach, 1998).

Perhaps any success of a single-sex school has more to do with changing traditional school structures that impede learning or the increase in interest due to using a novel approach (Jackson, 2010). With all that being said, the consistently high results continued for the following four years (Sax, 2005). A direct response from teachers indicated that there were fewer disciplinary problems in single-gender classroom than in coeducational classrooms. (Laster, 2004). Additionally, Park found that a more positive classroom climate was present in an all male school and this led to fewer disciplinary problems (Park, 2013).

These are just a few examples, but illustrate the importance of understanding the difference in learning required for most boys and most girls. By acknowledging these differences and creating a system that can affect the most students at one, we can see the striking effects that single-gendered classrooms can have on student academic achievement.

The argument for positive behavioural results for boys in single-gendered classrooms appears to be much more documented than the case for coeducation. While Friends ascertains with respect to the Thurgood Marshall case that there would be other mitigating factors involved, the number don’t lie. As long as an all-boys classroom was constructed in a way that both the students and teachers were aware of the rules or expectations, I believe that these could have a seriously positive result for male students, far outweighed by those benefits provided by coeducational classrooms.
2.4 Academic Aspects

Research pointing to positive academic results for single-gendered schools is enormous. From the mindset of valuing differences, therefore, the quest to improve boys’ educational outcomes rests upon acknowledging the existence of differences between boys and girls and then working to accommodate them (Rowan, et al., 2002). Park, who argues in favour of the benefits of single-gendered classrooms, was able to conduct his research unlike any other because his study takes place in the only society in the world where there is a completely random assignment of students to either single-sex or coeducational schools, that being in Seoul, South Korea (Park, 2013). As a result, there are very little if any mitigating factors which could influence male student achievement, as students’ placement is completely random and not based on any factors or influence.

Park (2013) argues that single-sex schooling has a significantly positive impact on male student test scores in both English (3 points) and Korean language (2.2 points), and results in a higher percentage of high school graduates attending four-year colleges as opposed to two-year junior colleges (5.6 points higher). Furthermore, the study illustrates that single sex-education has a positive impact on student achievement irrespective of the fact that the quality of teachers (based on quality and student teacher ratio, etc.) is greater at coeducation schools Additionally, Lee and Bryk found no subject area where achievement for males in coeducational schools surpassed single-gender schools (Lee & Bryk, 1986). The National Foundation for Educational Research in Britain conducted a 12-year study at a co-educational comprehensive school which taught students for much of the time in single-sex classes. It then compared its results with national averages. They found that students on average did about 10 points better than their counterparts at coeducational schools in all subjects (Tsoidis, & Dobson, 2006).

Looking again at the Thurgood Marshall example, academically, male students’ achievement on state mathematics standards rose from 10% proficient the previous year to 73% proficient during the year of gender separation (Davis 2002). During the year of single-gendered classes, 66% of the boys met the target reading score and 53% at the writing standard (Friend, 2007 as seen in Sappenfield and McCarrol, 2002).
SINGLE-GENDERED CLASSROOMS

On the other hand, an experiment done by educators in Windsor, Ontario began to separate students into all boys and all girls’ classrooms from 1966 to 1972. They found that not only was there no greater academic achievement by boys, they had to stop the experiment because when the classes integrated in Grade Four the girls would have been too far ahead of the boys to have compatible groupings (Greig, 2011). This does illustrate a comparative analysis. The girls could have just made far overreaching advancement over the boys, which they did. The boys however did not show any advancement. Further to this point, Marsh argues that while there is the appearance of a positive academic achievement for boys in single-gendered classes, most of the differences could be accounted for on the basis of preexisting variables, such as socio-economic or family background variables (Marsh, 1989).

Irrespective of the side of the fence where researchers stand on the topic of the effects of single-gender education, they can all agree that schools must have focus, discipline, involved parents, and caring, knowledgeable teachers who know how to communicate subject matter (Laster, 2004). In conclusion, teachers undoubtedly have the interest of the students in mind. The arguments surrounding whether or not single-gendered classrooms create a positive learning and social environment for students and help facilitate positive behavioural attitudes or not, lies second to a teachers desire to promote student growth and advancement in the classroom and as individuals. Educators choose the profession of working with children to support and promote this advancement. They want their students to succeed. This is the gap, which I hope to explore in my research. Additionally, there has been minimal analysis on this in the Canadian context, with most of the research being done in England and the United States.

The literature so far, while mixed, seems to be pointing in favour of single-gendered classrooms. Most of the literature against single-gendered classrooms discusses the negative attitudes male students can create towards females in general. If proper rules and goals are created and students continue to study works that illustrate the immense importance and the vital role women play in society, then these concerns could certainly be eliminated. Teachers will play a major role in this. As well, a prodigious teacher in a coeducational school is much more likely to create a positive environment to learn than would a poor teacher in a single-gendered classroom. The research for single-gendered
SINGLE-GENDERED CLASSROOMS

schools provide academic as well as social and behavioural benefits for boys and it appears that they are preferably more beneficial than coeducational schools.

This is the gap which I hope to explore in my research. Additionally, there has been minimal analysis on this in the Canadian context, with most of the research being done in England and the United States.

2.5 Research Questions (Key and Sub questions)

The main research question driving this study is: What are the implications of male gendered classrooms from the perspective of the elementary educators who are involved in their implantation, creation and facilitation?

The sub questions that will be considered are as follows:

- From the perspective of educators, what are the attitudes of male students in single-gendered learning environments?
- What are the advantages and disadvantages in working with only male students in an elementary classroom?
- What correlations have educators seen between males in a single-gendered elementary classroom in terms of academic achievement, behavioural differences or social benefits?

Chapter 3: Methodology

3.0 Introduction

In the previous chapters I provided a detailed introduction into my topic of research and presented an in-depth literature examination of the prevailing data currently available. In this chapter, I described the research methodologies applied in this paper. First, I reviewed the general approach, procedure and data collection instruments, including semi-structured interviews with two current practitioners working in single-gendered education in classrooms. This took place before expounding more specifically on participant sampling and recruitment. I then elaborated on the data analysis procedures
SINGLE-GENDERED CLASSROOMS

and outline the ethical considerations I had taken with respect to my area of research. Relatedly, I identified a range of methodological limitations, but I also spoke to the strengths presented. Finally, I concluded the chapter with a brief summary of the key methodological decisions and my rationale into these choices.

3.1 Research Approach and Procedures

This qualitative research study focused on what if any effects single-gendered classrooms have on students’ academic achievement, the behavioural differences (if any are present), and what social implications may result. This paper was a qualitative research study, because it allowed the researcher to learn about the views of specific individuals, in this case, those of teachers and educators who were at the time currently engaged in or had been involved with single-gendered classroom settings in either their implantation, as a participant or as a facilitator. This study was conducted in part by collecting data in the form of a review of current and past literature in the subject area. This in turn enabled for the ability to obtain more detailed information from a limited number of people based on their own personal life experiences (Creswell, 2009, p. 74). The final report included the voices of participants, the reflexivity of the researcher, and the complex description and interpretation of the study and extends the current available literature or signals a call for action (Creswell, 2007, p. 37). Furthermore, qualitative research was an effort to understand situations in their uniqueness as part of a particular context and the interactions present. The analysis here strived for depth of understanding (Patton, 2002, p.49).

3.2 Instruments of Data Collection

The instruments of data collection for this research paper were open-ended semi structured interviews (for interview questions, see Appendix B). This format permitted each interviewee to be asked the same questions but provided opportunities for participants to contribute any additional details they desired or thought to be relevant (Turner, 2010). This created an opportunity for the interviewee to expand on their responses and afforded them the chance to focus on specifics they deemed of utmost importance. It also provided the prospect to hear about the interviewees lived experiences
(Creswell, 2007). This allotted for the personal voices of the participants to be present, and in turn yielded a more accurate understanding of emergent and prevalent themes. It also enabled the researcher to probe the interviewee for further explanation and allowed for clarifying or redirecting questions to be posed based on the flow of the interview. This allowed the interviewee to expand their interpretations and observations in greater detail.

Upon consent of the participants, the questions and responses were recorded so that transcription by the researcher could take place at a later time. They were then analyzed for recurring themes explored in both the literature review see page, 11 and the Findings see page 29 and Discussion see page 49. After transcription, a copy of the interview was provided to the interviewee to allow them the opportunity to reconsider and validate the accuracy of their responses. Simultaneously, it provided another opportunity for them to add any supplementary information that they deemed appropriate. Once verification had taken place, I was able to begin the process of data analysis.

3.3 Participants

In this section, I reviewed the sampling criteria I utilized in establishing participant recruitment. I also included a section wherein I introduced and provided some background information on each participant included in the interview process. A pseudonym was used to protect the identity of the participants, but particular information relating to their current employment placements and their experiences working in single-gendered education was placed at a premium and shared with the audience.

3.3.1 Sampling Criteria

Due to the fact that this paper was an examination into what if any effects resulted from single-gendered classrooms, it was therefore imperative that the interviewees met the following criteria;

Either currently involved with or have been involved in the implementation, creation, direction or participant of single-gendered classroom settings.
This allowed for the participants’ personal knowledge and insight to be provided. It also ensured that the information collected is first-hand accounts and not hearsay. The most accurate information was also only to be afforded by individuals with hands on experience and knowledge of the effect of these classrooms on student’s academic success, social and behavioural implications.

Participants must also have at least 5 years of teaching experience.

This ensured that the interviewees had a multitude and array of experiences that they were able to draw from and that their insight was not minimal. This could have occurred had the participant only been teaching for a couple of years. This also allowed for interviewers to expand on both the positives and negatives of their experiences, as this may not be possible for more those with a shorter track history of involvement.

Ideally, interviewees should have been afforded the opportunity to have educational experience in both single-gendered and coeducational environments.

This allowed participants to draw comparisons and evidence between the two forms of educational practices and thus provided insight into the pros and cons of each form of education and the resulting differences between them.

I aimed to provide maximum variation in sampling because by augmenting differences in the interviewees, the likelihood of the findings reflecting differences or differing perspectives would inevitably increase (Creswell, 2013, 157).

3.3.2 Sampling Procedures

I located prospective participants through contacts my colleagues and I have met in the education industry. I will also be contacting school boards and/or principals and provide them with an overview of my research study and participant criteria and query if they were aware of anyone who may fulfil these conditions. I offered them my information as opposed to having the principals and school boards supply me with participant information. This helped to ensure that the participants were volunteering on
their own accord as opposed to feeling pressure or obligation to participate. I planned on utilizing both the techniques of purposeful and convenience sampling. I employed purposeful sampling because it involved identifying individuals that are especially knowledgeable about or experienced with a phenomenon of interest (Creswell and Plano Clark 2011). In addition, Bernard (2002) and Spradley (1979) mentioned the importance of the willingness of participation, availability, and the capacity to communicate experiences and opinions in an articulate, expressive and reflective manner. I used convenience sampling because I was immersed in a community of teacher colleagues and mentor teachers, who ultimately had contact networks in place that I was able to access to recruit participants.

3.3.3 Participant Bios

For this research study, I interviewed two educators currently involved with teaching in single-gendered classrooms; Daniel and Nathan (these are pseudonyms). I chose these participants because while they are both currently involved in single-gendered education, they also have experience working in coeducational classrooms. This insight proved to be valuable as they were able to compare and contrast the differences, which resulted between the two forms of education.

Daniel had worked as a single-gendered educator for 7 years. He taught physical education to primary and junior students for 4 years and has spent three years as a homeroom teacher in a grade 2 and 3 classroom. Prior to that, he spent 4 years as a primary coeducational educator teaching grades 2, 6 and 7. His work as both a homeroom and physical education instructor allotted him the opportunity to witness the effects firsthand based on his ongoing and daily teaching (as a homeroom teacher) and the results of other homeroom educators. This ensured that he was not influenced by only his own practice but would be able to measure results based on single-gender education from a fully encompassing perspective.

Nathan had been working as a single-gendered educator for 5 years, both as a primacy/junior dramatic arts and drama educator and currently as a primary (grade 2) homeroom teacher. While he has not worked exclusively as a coeducation educator, he
did have invaluable experience working in coeducational classrooms during his practicum placement while attending teacher’s college in university.

3.4 Data Analysis

Data was collected from the transcription of the interviews. Information was stored on my computer and I reread through each interview a number of times to ensure full understanding to tone. Significant effort was made to certify that the central tenants each interviewee was making was noting and recorded. I coded each transcript individually and identified categories of data and the emergent themes within each category. Creswell (2013) discussed the importance of utilizing a process that relates back to the initial question by utilizing a coding system. He then said that the researcher should create categories and themes to make the process easier to analyze. I then synthesized the themes where appropriate. A later stage of analysis was the meaning-making process whereby I spoke to what matters, the significances and the implications, which resulted and the relationship of those to the information previously ascertained from the literature review.

3.5 Ethical Review Procedures

It was extremely vital to have strong ethical procedures in place because it protected the integrity of both the interview participants and the research paper as a whole. The interviewees donated their time, expertise and experiences for this research, and it was of fundamental importance that their information and responses be protected. In order to do this, all contributors were assigned a pseudonym and were notified on numerous occasions of their right to withdraw from involvement in the study at any time and at any stage.

I informed the participants that there were minimal risks associated with participation in the study. There could be an instance where a question invoked an emotional response from a participant. In order to mitigate any occurrence of this, I continued to assure interviewees throughout the interview process that they had the right of withdrawal and the ability to refrain from answering any questions they might not be comfortable for them.
Furthermore, I allowed all participants the opportunity to review the transcript to clarify or retract any of their statements and I provided them with a final copy of the research paper before submission to again determine if they wanted to make any changes, provide clarifications or withdraw their information and responses from the process. Lastly, participants were asked to sign a consent letter (Appendix A) giving their permission to be interviewed as well as audio-recorded. This letter provided an overview of the study, addresses, ethical implication and specified expectations of participation.

3.6 Methodological Limitations and Strengths

One of the most prominent limitations of this study was the relatively small sample size. Similar to many qualitative studies, restricting the number of interviews included in the research helps to provide a more in-depth analysis and understanding of a certain phenomenon, but limited the generalizability of the findings of the research. By only being permitted to conduct one interview per person, the scope of the research was inescapably limited. Having the opportunity for follow-up interviews would have allowed for transcription and coding to be done and themes analyzed. I would then have been able to delve deeper and be more focused in specific follow-up interviews. This could however be mitigated by asking for clarification during the process on interviewee responses. Additionally, due to the lack of participant observations, the voices within the paper will come directly from interviews and not through observations or surveys. This as well limits the scope and breadth of the research. Other limitations to consider included the scope of the literature review, the selection of my questions as a researcher, possible qualitative measurement bias or research interpretation as I document my findings.

Lastly, while extensive efforts had been made by this researcher to make unbiased and informed conclusions, the influence of my own personal ideology inevitably persisted in any analysis of the literature and my interview data and the conclusions generated were not be solely based on the data.

With respect to the strengths, the significance of interviews as opposed to other means of research (such as surveys), did allow for a more in-depth and personal response. The permission of follow-up questions allowed for greater clarification and understanding into the views of the interviewees. In this way, interviews validated interviewees voice
and lived experiences. As well, because of the personal interactions with the interviewees, I will be able to adapt my questions based on the responses and mood of the participants. I was able to support this by reading interviewees facial expressions, tone of their voice and their body language.

3.7 Conclusion

In this chapter, I identified the key methodological research approach and the procedure, which I conducted in this study. I identified the ways in which I collected data and the mode in which it was analyzed. Furthermore, I acknowledged the means and types of individuals I considered for participation in this study and how and why they were chosen. I indicated the methods I implored in analyzing the data received during the interviews, the ethical review procedures and the overarching strengths and weaknesses prevalent within all of this. In chapter 4, I will be able to report the research findings.
Chapter 4: Research Findings

4.0 Chapter Overview

After conducting extensive research and a thorough literature review process, my research question had evolved, developed and culminated to now be: *What are the implications of male gendered classrooms from the perspective of the elementary educators who are involved in their development, creation and implementation?* To investigate this topic further, a supporting list of sub-questions that were considered included: (a) from the perspective of educators, what are the attitudes of male students in single-gendered learning environments? (b) What are the advantages and disadvantages in working with only male students in an elementary classroom? (c) What correlations have educators seen between males in a single-gendered elementary classroom between academic achievement, behavioural differences or social benefits? I chose to interview individuals with direct access and involvement in these types of classrooms because they are the ones with the greatest firsthand knowledge and expertise. I also attempted to find interviewees who not only had knowledge and experience with single-gendered education, but those as well who had involvement in coeducational education. This would permit them to draw on experiences from both circumstances and be able to more accurately compare and contrast the differences in both the education provided and the outcomes which resulted.

In keeping with the overarching research questions, sub questions, and overall theoretical framework in mind, 6 major themes emerged after interviewing the participants. These included:

**Theme 1: Differences between male and females as individuals in their interest and as learners**

- Biological differences (needs)
- Different interests
- Differences as learners and academics strategies – narrow focus add
- Behavioural differences

**Theme 2: Creation of community amongst male students**

- Similar interest
Theme 1: Differences Between Males and Females as Individuals in Their Interest and as Learners

4.1.1 Biological Differences

This sub theme focussed on the inherent biological differences between males and females and the resulting educational consequences. The information gathered in my literature review points to stark comparisons biologically between males and females. Kohn (1995), cited tests conducted at Yale University in which males and females were given a battery of psychological tests and researchers scanned brain activity and measured blood flow. They determined that tasks were being done almost equally in both halves of the female brain, but the large majority were only completed in one half of the male brain (Bleach, 1998, as seen in Kohn, 1995). This illustrated scientifically that men and women use their brain contrarily to one another and therefore think and learn differently. This idea was substantiated and presented in my first interview when Daniel said, “obviously boys and girl’s interests are very different which can be seen with marketing and any other research that goes on.” He ascertained that even society acknowledges the differences biologically between males and females and he as an educator would be remise if he did not take that into account in his professional practices.
It was imperative to comprehend at the very primitive level that males and females are inherently distinctive. Only by this understanding was it possible to create the best possible learning environment and situation for male students in a single-gendered class. Leonard Sax (2005), made this explicitly clear when he stated that researchers found that while the areas of the brain involved in language and fine-motor skills such as handwriting mature about four years earlier in girls than in boys, the areas of the brain involved in geometry and spatial relations mature about four years earlier in boys than in girls. Sax argued that when it came to learning geometry, the brain of the average 12-year-old girl resembles the brain of the average 8-year-old boy. When it came to writing poetry, the brain of the average 12-year-old boy resembles the brain of the average 8-year-old girl.

This formed the basic understanding and underlying layer of single-gendered education. There was difficulty by educators best support students in a coeducational classroom setting with so many different needs and interests. Only by fully understanding, comprehending and recognizing these facts, can educators create the best possible learning environment for students and tier their lessons and teaching styles to the specific interest of male students.

4.1.2 Different Interests

Taking into account underscoring biological differences between males and females, we then investigated the variances within those interests. Educators understood the extent those discrepancies, foster and hone them to create the best possible learning environment for students. Daniel explicitly reiterated this point on a number of occasions. He discussed how it affected what curriculum he taught and the way in which he presented it to his students in class. For example, he stated, “In math we did a lot of things with implements that boys would like, such as dinky cars for measuring... In language we would discuss areas that appealed more to boys. We would read about superheroes, more books about cars and more nonfiction books.” Daniel understood that in a coeducational classroom, an educator has to teach to the middle in order to have lessons that incorporate a wider spectrum of interests, but in a single-gendered class, the educator can narrow that focus to cater to the fascinations of only the male students.
Nathan concurred with this reasoning when he said that he wants to cater his teaching to the way he believes boys learn best. He expanded on this by stating, “[teaching single-gender], might [include] a lot of tactile activities or hands on activities. Giving the boys an opportunity to present their work and do a lot of collaborative work as well independent work, meaning, just really differentiating that learning experience so that the boys are able to produce their best work possible and present their best work possible and not just conform to let’s say the most convenient type of learning that might be best for the teacher in the context of a larger classroom that is coeducational.” Nathan makes two very important points here. Taking into account that boys have different interests than girls, it can then be understood that boys like to get their hands dirty and be an active participant in the learning process through hands on engagement. This idea was supported by the research of (Lingard, et al., 2009), when they ascertained that single-gendered male classrooms could be advantageous if structured in a way as to better suit the needs and learning abilities of male students. Coeducational schools must find a balance to best serve all students equally. Conversely, at single-gendered schools, educators were able to directly focus on the specific interests of the boys.

The second point, which was expanded on in greater detail later, was the notion that a single-gendered classroom provided a more straightforward educational platform for educators. By enabling male students to structure and present their work in a way that was convenient to them, it made the job of the educator more fluid, as they only had to focus their attention on a limited set of interests. This was supposed by Sax (2005) and Daniel when he stated, “It was just easier to narrow down [the interests] when all you have are boys in the class. You don’t have to reach in the middle so much because their interests are for the most part very similar.” As a result, the educator can create more detailed and focused lessons and spend more time and consideration on topic areas that are of greater interests to the boys.

4.1.3 Differences as Learners and Academic Strategies

Taking into account underscored biological differences and varying interests between males and females, we were then able look at the extent to which this affected the students as distinctive learners and the best academic strategies which resulted.
Daniel commented that one of the ways he supported and created his language curriculum was to take into account the boys specific interests, “because boys typically have shorter expansion spans. They like to read about animals and actual events and so, yeah, [we would read] many more books that would cater to them.” Daniel understood and recognized their differences as learners in order to find information and material that were appealing to them. Nathan concurred with Daniels’ process when he said, “[my] teaching practices would differ (in a single-gendered classroom), in that I can cater directly to the best learning practices, the best teaching practices that would address the learning needs of the boys in the classroom, whether that would entail more tactile hands on activities or opportunities for the boys to work together to accomplish a task. That differentiation allows us to cater directly to the best learning experiences possible and the best ways that the boys learn.” These points further illustrate that boy learners like to be involved hands on in the learning process and that they prefer collaborative and group work to “seat work, or pencil and paper work” as said by Nathan. They need to be up and mobile and physically engaged in the learning process. This was again supported by the research of Lingard, et al., (2009), where they argued that coeducational classrooms do not take into account boys’ natural energy, their need to be up and mobile. This point was argued further in the research by Bleach (1998), who noted that even by the age of seven, boys are noisier and find it more difficult to sit still and pay attention than girls. In a single-gendered classroom however, the focus was on these male students, so the educator was better able to meet the specific needs of their students.

Daniel went on to comment further that during his own professional development, he came across a book called “who me a reader”, which was a government document, and he said, that “[it] was about boys in particular who struggled with reading and brought to light the fact that they should have different reading materials than girls and in particular, for kids who are struggling with reading, that reading should be differentiated for them.” This is another reminder of the need to differentiate for all of our student’s individual needs, but more appropriately in this case, the differences between males and females.
4.1.4 Behavioural Differences

A case often cited as a major proponent on the positive behavioural effects of single-gendered classrooms is the story of Seattle’s Thurgood Marshall Elementary School. It used to be a failing school in one of that city’s poorest neighborhoods. Then in September of 1999, the school’s principal, reinvented the school as a dual academy: girls in all-girls classrooms, boys in all-boys classrooms (Sax, 2005). With single-gender classes at Thurgood Marshall, discipline referrals to the office dropped from 30 a day to one or two (Davis 2002). The principal indicated that this all occurred without any additional funding, and without any change in class size. Nathan discusses a similar experience when he said that “single-gender education classrooms really provide a safe…and a comfortable learning environment for boys in my case, where students are able to not have to worry about what a girl might be thinking or what might be cool or not.” In the research, Sullivan (2008), argued that in coeducation schools, male students feel pressure to conform to gender norms and are less likely to pursue gender atypical subjects. Nathan goes on to provide another relevant example when discussing the social conscious of taking part in a music class. He said that “music class in a single-gendered school might have music or singing or choir as being an incredibly cool and popular club whereas in a coeducation school, the choir might be considered something the girls are supposed to do and the boys should be out on the field playing sports. Furthermore, in a single-gendered classroom, boys really have the opportunity to take part in all of those activities without placing judgement on the nature of a particular subject.” This exact point was supported by the research when Park (2013), who argued that there were increased social advantages presented in single-gendered classrooms, which revolved around the idea that male students did not have to be concerned with appearance and popularity. In addition, they spent considerably less time and effort on being part of a clique. Males did not need to worry about the social stigma of certain courses or extra-curricular activities. They were able to take part in activities that they were interested in and have to worry less about taking part in gender specific ones. This argument was further substantiated by Lee and Byrk (1986), who pointed to increased engagement in school and social organizations. They argued that being more involved in school programs along with their other male classroom counterparts provided these students
with a brotherhood or family relationship with one another. Male students were then more likely to support and be there for one another with assistance or guidance in studies. This in turn led to greater academic achievement and increase behavioural awareness.

Daniel takes the idea of behavioural differences between males and females to the next step, “words with little girls are used more often where as with boys it is more physical for the most part. They’ll end up hitting each other or doing something physical and I think because we could have all the boys in the same class, the issues were alleviated to some degree. He says that because these boys had male teachers, they were able to relate directly to the male students on their level by directly relating on their own experiences. They therefore had a greater awareness and understanding in how to deal with any behavioural issues that may be presented with these students.

4.2 Theme 2: Creation of Community Amongst Male Students:

4.2.1 Comfort

Understanding that for the most part males have similar interests and go through related experiences, helped to support the creation of a more inclusive classroom community. Daniel said, “I found mostly the boys were excited to come to school and the parents would convey that just because of their comfort level in class knowing that most of the kids in the class were dealing with the same sort of problems whether it be academic or social. It helps them achieve better at any rate.” Most importantly, it makes them feel like they are not alone. Nathan also concurred when he said, “I think that when a boy gets up to present something in something like language, having a group of girls, standing or sitting in front of him might add an element of nervousness or anxiety whereas if a boy is more comfortable with the group of guys he has gotten to know in a single-gendered classroom that idea of presenting might allow him to actually present work in a different manner…without being distracted or having anxious feelings.” It was therefore evident that both of these educators saw the emotional and social benefits of single-gendered education. They believed that a single-gendered classroom fostered individuality and was open and mindful of their feelings and interests in a way not possible in a coeducational classroom. This was as well corroborated by the research where Gibb (2009), argued that the absence of girls in the school environment created a
climate in which boys felt more comfortable to work hard and achieve highly. The idea presented was that it created a more involved classroom environment where male students were competing against one another, which was reinforced by their relationship to and familiarity with one another. This allowed them to be individualistic and portray their exact thoughts and feelings without fear or anxiety of the opposite sex.

Daniel took this point to the next level when he said that the single-gendered classroom “brought those little boys together, because they worked together and at this school because of the nature of the school, a lot of them were in the same class for 5 years in a row from grade 1 to grade 5 and remained in a single-gendered class. The other classes continually were shuffled based on academic need and therefore [the continuity] brought them together. It helped them become in a way more caring towards the people within their own class.” The familiarity of being able to work with the same students year after year allowed those boys to develop a mutual understanding and respect of their peers, strengths and weaknesses and a familiarity amongst the students. The work of Park (2013) agreed, having found that a more positive classroom climate was present at all boy’s schools and this in turn led to fewer disciplinary problems.

4.2.2 Greater Simplicity In Teaching Practice

Having students with similar interests and as Daniel said, “not having to teach to the middle”, creates a situation where an educator was able to be more precise and focussed with their teaching practice. Daniel commented that it was easier for him to narrow his focus with the students because they were all male. He was able to take information that he was passionate about and teach that to his students who were more receptive because his teaching style was geared directly towards their needs. Nathan similarly noted that when he was in school, he did a lot of seat work or pencil to paper work. He said that he would have liked to have had more opportunity for hands on learning. As a result, he used resources that were of interest to him and therefore an interest to his students. “We use any number of resources and programs. Resources we might use are technology such as iPad’s and computer labs. In math class we might be using a lot of manipulatives; unifix cubes, base 10 blocks, number discs and charts. In language we might be doing anything form gallery walks and collaborative work and
brainstorms on large chart paper to your traditional pencil to paper seat work and quick writes. In science class with the unit on structures, instead of just having discussions about structures, you would have experiences and experiments that are more hands on such as using blocks to build a structure and then using a fan to blow that structure over to see how you can best build up a structure with a strong foundation. So it really ranges from subject to subject.” Due to the fact that he utilizes resources that he has experience with and is interested in using, he was able to devote less time to lesson plan construction and has to make fewer modifications and amendments to future lessons, which in turn created a great simplicity in his teaching practice.

4.3 Theme 3: Positive Effect on Personal Teaching Practice:

4.3.1 Professional Development (Access and Limits)

With any work in any field, professional development was vital to promote personal growth and facilitates the opportunity to be the best they can be. Nothing is truer than in the education profession, where new studies and articles are constantly being published and innovative and more effective means of teaching are being established. While there seemed to be opportunities for informal professional development, these opportunities do not seem to be overly accessible. Daniel discussed how “having moved [to this school], there weren’t many resources in the public school board anyways. I know at the time we were the only primary classes in Peel that had single-gendered classes, uh grade 2 and 3 and private schools obviously they are out there but at the Peel public school there weren’t many, so find resources wherever you can. I found myself Googling a lot of things looking for articles about what works and what doesn’t and yeah, you can find resources that way. This illustrated the difficulties he faced finding firsthand and concrete literature and had to go out and locate information on his own.

Nathan had “not taken part in professional development that is specific to single-gendered education.” In addition, he did not express the belief that these [formal] professional development opportunities are readily available. He also wouldn’t know where to go and look to find these opportunities. He talked about the lines of communication between himself, the other teachers and administrators with respect to his
own professional development, but there seems to be minimal options from what he has experienced.

Daniel on the other hand sought out professional development on his own. He discussed “One book in particular, it was called Boy Writers and I remember it just sort of embraced the fact that boys are going to write about guns and killing and those types of things…but we encourage them to write about whatever they want.” This one example illustrated how Daniel was able to take this new knowledge and amend his teaching to best suit the interest of his male students but that this information was not easily accessible and he had to locate it on his own.

Daniel’s only mention of formal professional development was a result of him and his school “actually host[ing] a single-gender symposium. Anybody at this school was encouraged to present on any topic related to single-gendered education. So I did a presentation on competition. Myself and another teacher on healthy competition with boys, uh what did we call it, anything you can do I can do better was the name of this workshop that we presented. We talked about classroom management strategies, math strategies, language, anything involving any sort of competition. Mind you, not to discourage anybody else, but internal competition with yourself to try and do better the next time.” If they had not hosted this symposium, he would not have taken part in any formal professional development. It was sometimes frustrating when all you want to do is provide the best learning experience for your students, but the fact that he is going out to look for development opportunities on his own, show his desire and resolve to be the best educator he can be.

4.3.2 Teacher as Positive Role Model/Relationship Builder

Students learn best when they are engaged, can relate their learning to their everyday life and just as importantly, feel a connection to their educator. Having an all boys class taught by a male teacher can certainly accomplish this. Not only does it have a positive influence on the male students, but also on the educator. This was supported by the research of Lingard, et al. (2009), during a study of a high school in Australia which sought to determine in practice the effects of single-gendered classrooms on male achievement. They focused on the effects of the development of a positive relationship
between the students and the educator. The students and teacher would start out each day walking around the school playing fields in order to burn up some energy and create an opportunity for developing relationships with one another. This was found to have a positive effect on student behaviour and academic achievement.

Daniel as well spoke to the fact that he found it easier to build relationships with both the parents and the students and the positive effect it had on him. “Obviously, you want to do what’s um, what’s best for students in your class so you spend more time getting to know the students in your class. I found that I was building relationships with parents. Maybe it was a little easier because I was a male myself.” He went on to say that “it affects more than your teaching practice because it affects you, because the character you portray to those kids because they need male influences, in this area anyway. It was important to him to not only provide an effective learning environment for those students, but to also be a positive influence on them. This was supported by the research of Noble (1998), who discussed the importance of male role models in all-male schools and the positive effects they can have on student’s behaviour. In an all-boys class with a male teacher, students were more likely to aspire to be like their teacher, doing everything in their power to avoid displeasing or disappointing their teacher.” In turn, the teachers worked closer with their student to maximize their potential as students.

Daniel did also take into account the fact that the socioeconomic area in which the school is situated may have had an effect on his relationship with the students. He even commented that “on a side note numerous times I would be called dad or grandpa or somebody just because, I don’t know, I think that subconsciously these kids sort of saw that and needed it and I didn’t take offense to that.” He understood that especially the area in which his school is situated, that these students required the positive male influence more than most. He said that he thinks his influence could be only a result of the socioeconomic situation of these students and maybe not other factors. I would have to disagree because the male teacher-student relationship is apparent irrespective of personal, economic or social situations. It just makes for a tighter knit community when both the educator and the students have similar interests and learning styles. The educator can know through training and their own experiences what worked for them as students and then they can reiterate that positive teaching model to their students.
4.4 Theme 4: Outcomes of Single-gendered Education:

4.4.1 Student Academic Achievement

The research suggests a positive academic result of single-gendered education. In a one of a kind study in South Korea, where students were randomly and equally distributed to either single-gender or coeducational high schools without taking into account any other factors or influence. Park (2013) found single-gendered schooling had a positive result on language scores and graduation rate. Both of the interviewees supported this idea because of their own experiences witnessing a positive trend in academics from their work within the single-gendered classroom. Daniel noted that his school began to look at the idea of single-gendered education “because of EQOA scores and the fact that boys literacy scores were dropping and were much much lower than the girls literacy scores. It was an initiative that the principal took on to help try and curb that downward slope for the boy’s literacy scores.” He said that he school was “tracking [academics] through EQAO… as well as report cards with the single-gendered classes. There was success from one year to the next on [boys] literacy score in particular and they were going up.” The school recognized the problem of lower literacy and EQAO scores of the boys compared to the girls. The principal had conducted research in single-gendered education and she believed that there was a benefit to experiment with this type of classroom, which in turn there was.

Nathan similarly noted that he “thinks that single-gendered classrooms do a fantastic job of allowing students to perform their best academically and get the most out of their learning experience at school. I think the old school word would be distraction. Single-gendered education classrooms eliminate the distraction. Boys aren’t distracted by girls and girls aren’t distracted by boys. But I think if you look at it from the other side of the coin, its not so much of less of a distraction, but more of an ability to cater to both the academic needs and progress and the social emotional needs of the boys.” He then goes on to discuss some specifics of academic progress he has witnessed, positive academic attainment from watching students grow from year to year. Those students who stay at school it’s, I think that in general it’s our goal to see academic growth. Comparatively to what that growth would have been like at a coeducation school its tough to say, but I have
definitely witnessed academic growth from students… I have had specific conversation with teachers saying, “my gosh, its amazing to see so and so’s growth over the years and its really clear that this learning environment has paid dividends”.

The research also supported positive academic attainment. Tsoldis & Dobson (2006), in their work, reference a 12-year study conducted by The National Foundation for Educational Research in Britain, which examined a co-educational comprehensive school, which taught students for much of the time in single-sex classes. It then compared its results with national averages. They found that students on average did about 10 points better than their counterparts at coeducational schools in all subjects. Furthermore, Lee & Bryk (1986), found no subject area where achievement for males in coeducational schools surpassed single-gender schools. These are all examples provided validation for increased academic results from being part of a single-gendered classroom.

4.4.2 Student Behavioural Progress

Daniel made a couple of mentions in his interview on the positive effects that he believes single-gendered education has on student behaviours, “the respect they are forced to show male role models just inherently within their culture, I think that made it easier for some of the boys anyway, some of the aggressive boys to relate to the male teachers they had…I think curbed some of the negative behaviours that they were showing previously.” Their cultural heritage coupled with having a male teacher was imperative for them to negate some of their previous negative behaviours. They were able to relate to this educator and looked up to him like a role model. This was supported by the work of Greig (2011), who argued that there seems to be a strong belief that more men in elementary schools could offset or counter male student potential negative attitudes towards school.

Daniel did acknowledge that single-gendered classes are not for everyone and that behavioural problems are not always negated by being in a single-gendered classroom. “Nothing works for everybody. For some students, after maybe half a year it wasn’t working for them because either they were sort of becoming an alpha dog in that boy’s class and that was not what we were trying to do so they would be moved back into a regular stream a regular mixed class.” The important thing to note here was that once the
dynamic of the classroom was compromised, it was imperative to make a change right away. From the previous theme of classroom community, the effects of a single-gendered classroom work best when everyone, students and educator have a mutual understanding and respect for one another.

When asking Nathan whether or not there are differences in student behaviour in being in a single-gendered class, he emphatically declared “Absolutely! A boy’s behavioural changes or growth have been quite evident over the years.” He then goes on to talk about the structures in place at his school that foster this behavioural success. “There is a great support network at our school, we call it the Academic Success Team and they help to develop strategies to best support a boys social emotional learning and behaviour and from year to year we do see boys grow behaviourally in a very positive manner in our single-gender education classrooms and our school”. The benefit of having multiple minds helping to dictate policy and assisting in the creation of the best possible learning environment for the students is facilitated by the fact that they are also directly involved in the education and care of these students and therefore understand the specific needs of these particular students.

Daniel continued that “behavioural, I think…I think it made a difference because let’s be honest typically behaviour problems start with most males in schools. I think that stats have shown that office referrals typically are boys that end up at the office for the most part and I think that the behaviour was curbed because the boys and girls were separated.” This was supported by the research of Laster (2004), who argued that a direct response from teachers indicated that there were fewer disciplinary problems in single-gender than coeducational classrooms.

### 4.4.3 Student Social Progress

Unlike academic and behavioural benefits, there appeared to be a split on the social benefits of single-gendered classrooms. Nathan points to the “social emotional progress. In a comfortable and safe environment where boys don’t have to think about or deal with competing with girls, that is going to allow them to grow socially and emotionally, especially in their formative years in a comfortable and safe learning environment that is free of competition between genders.”
Daniel did acknowledge that there could be social benefits and he cited an example from one of his classes. “A case I remember is a kid was being bullied, which happens everywhere, but because its sort of a microcosm of a class you have all these little egos, these little male egos, in one class some of the boys were being bullied and others were become more of a bully because of the nature of the class and so that way I guess social factors are part of that the problem that it did start to arise with some kids”, but with respect to “differences in social development…um. You know what? no. there was like I mentioned before, there were minimal gains in terms of collaboration and kids working together and being more of a community, but for their social development I don’t think it was a hindrance or a benefit. Honestly I don’t think it makes a difference. Not here anyways.”

Conversely, Nathan thought that the social benefits far outweigh both the behaviour and academic benefits as single-gendered education “creates a comfort zone where they are able to perform academically. I know I keep going to the social emotional, but I really think it plays into the academics.” He expands on this to say that “single-gender education classrooms really provide a safe learning environment and a comfortable learning environment… without placing judgement on the nature of a particular subject.” The research was also fairly split on the notion of social benefits, but Noble (2000), did argue that single-gendered education was socially beneficial because it fosters competition as a preferential form of male student learning.

4.4.4 Parent Teacher Relationship

Of the aspects that I never realized was going to have any effect but was talked about by both educators on numerous occasions was the positive relationship which resulted from being in a single-gendered class. Daniel said that “I found that I was building building relationships with parents. Maybe it was a little easier because I was a male myself and the importance of the character you portray to those kids because they need male influences in this area anyway.” When asked about what parents thought of their children being in single-gendered education, Daniel also noted that some “parents loved it. I think that they could see that their kids, their little boys anyway were a more excited about school than they had been in the past. Lots of them told me that and then,
moving on as those kids got older, you know their parents would come to me and say how they wished I was able to be their teacher again. Obviously, in a perfect world that doesn’t happen all the time but it makes you feel good as a teacher and it is rewarding to know that parents appreciate what you’re doing for their kids.” These parents saw firsthand the social, emotional, behavioural and academic benefits for their children. This was also a positive for Daniel and his teaching practice because these parent’s positive responses was a confirmation of the work he was doing both as an educator and a proponent of single-gendered education.

Nathan as well discussed the relationship with his school parent community as being “very involved.” He talked about the ongoing relationship were they “have a couple of instances of parent teacher conferences throughout the year. Parents had access to our email address to be in constant communication if there is a question, comment or concern that they have, so the parent community is quite heavily involved and in a very positive manner.” He believed that parents played an active role in the loves of their children.

It made perfect sense that parents are involved in the learning process for their children. It is a partnership between the educator and the parents. If one partner ws not holding up their share of the responsibilities, then the child suffered. Are these benefits however a result of being in a single-gendered classroom as opposed the parents themselves? Nathan wasn’t convinced. When asked if he thought his relationship with the parents would differ being in a coeducational classroom, he said “I think it would differ less being in a coeducational classroom and differ more between private school, independent and private school.” On the other hand, Daniel works in a public school with a low social index factor, and did have a positive relationship with the parents. It can therefore be derived that this positive relationship was attributed to single-gender classrooms and not be a result of the independent school, which Nathan believed it could have been.
4.5 Theme 5: Roadblocks to Single-gendered Education:

4.5.1 Lack of Available Training, Resources and Information

Both of the educators interviewed had never had previous experience or training in working in single-gendered education classes before they were placed in these situations. Daniel noted how he was teaching physical education, and then one year the administration split the males and females in the class to make it single-gendered. Nathan also noted that in his undergrad teaching program he did all of his placements in coeducational classrooms and only got a job in a single-gendered school, not because of his qualification working with boy only classes, but there was an opportunity that came up that “stemmed from meeting a principal at a job fair…things clicked and that was my foot in the door at my current school of employment.”

With respect to professional development, Daniel said that “I found myself reading a lot of literature about it.” He had to go out and find his own literature on best practices for single-gendered education. There was no documentation or training provided to these educators that was sponsored by the school, school district or province. He went on to say that “there weren’t many resources in the public school board anyways I know at the time we were the only primary classes in Peel that had single-gendered classes…[so] there weren’t many so I had to find resources wherever I can. I found myself googling a lot of things looking for articles about what works and what doesn’t and yeah you can find resources that way.”

On the other hand, while Nathan has not taken part in any formal professional development programs, his training was more ongoing and took place within the school itself. Everything from “discussion in the staff lounge, to a weekly meeting about how things are going in certain subjects with certain students or a conference with other teachers on what units they might be working on and best practices that are occurring within the classroom. Both formally or informally, those discussions are constantly ongoing and happening quite a bit.”

He was fortunate that his school has the resources and availability of educators to afford this type of training and literature. This could be the case and point where the social and economic status of the school plays a role in the availability of information.
4.5.2 Negative Attitudes and Perceptions

One of the main points stressed by Daniel with respect to the roadblocks he has faced has to do with the negative attitudes and perceptions people may have about single-gender education and the lack of information and resources available, which we have touched on earlier. He said he has faced roadblocks from parents, other teachers and administration. “I remember the first situation here, there were 2 moms that didn’t want their child in single-gender class and they were quickly moved out which was fine.” He understood the importance of maintaining a positive classroom climate. If parents would not want their children to be in a single-gendered classroom, then their children may bring those negative attitudes into the classroom, which could disrupt the whole classroom climate.

In addition, “one of the teachers just thought it was a waste of time to have these single-gendered classes so one of the obstacles there is to have teachers buy in to that fact that maybe this is beneficial.” Daniel did not go into specific details regarding the reasons surrounding the teacher’s feelings, but he did say that “the biggest obstacle was the fact that some teachers just didn’t like it or teachers were just opposed to [single-gender education] and working with those teachers to help them see that for certain students there is a benefit. This is where the lack of training and resources come into play. Without this knowledge and data to support single-gendered education and having these results provided to educators, pre-existing stereotypes are going to prevail.

He said that even though that in “this school in particular I think it was helping, you have to have teachers that agree with it. The difficulty remains that in a public school where you have administrators and teachers who come and go so freely its hard to find teachers who are committed for let’s say 4 or 5, 6 or more years to stay the course with that program. I think that would be a benefit.” Due to the lack of continuity especially it is hard to maintain a positive attitude about this type of education without cold hard facts and data supporting it.

4.6 Conclusion

The aforementioned themes outline a number of important points. Firstly, males and females are biologically very different from each other, as a result, they posses
different interest and have varied learning styles from each other. Ultimately, both of the educators interviewed are in support and have seen firsthand the benefits of single-gendered education. Daniel stated, "It helps them achieve better at any rate. I think a lot of times students sort of affectively domain how they feel and get kicked to the curb a lot of times because teachers in general are so focused on teaching the curriculum and finishing the curriculum. You know, I think a lot of people forget to be people and they are not in it for those kids.” At the end of the day, that is hopefully why we all become educators, to help students because the best and most informed individuals they can be.

Not only that, the research also suggests a positive result for the educator as well as the student in single-gendered classes. Park (2013), argues, that teachers’ attitudes toward male students also seemed to improve in single-gendered settings. Educators seemed to be more excited about coming into school and more eager to work with their students. It therefore is beneficial on both ends of the spectrum. The students can learn from and relate to their male educator and the teacher has an easier and more fluid time working with the students.

Nathan said it best when asked to sum up his advice to a new teacher looking to teach in a single-gendered classroom. He said, “keep and open mind and know that you are going to fail at lessons and tasks, and know that they are going to make you a stronger teacher and a stronger educator and to use your successes to build on those great strategies and lessons that you plan and to take your failures so to speak as a bump in the road and as a learning experience and to know that your job everyday is to make a difference in the lives of students. Everything else is secondary to that. Your job is to be the best educator you can be. Other than that is secondary.” Our goal as an educator is to create a positive and long-lasting effect and love for learning onto our students. It doesn’t matter whether that be single-gendered or coeducational. However, if we can make the learning more enjoyable and create a better environment for our students in a single-gendered setting, then it is our duty to at least try it out. If it doesn’t work for all students, so be it, but for those it does, it can make all the difference in the world.
Chapter 5: Discussion

5.0 Overview of the chapter

This chapter highlights the research findings and their significance in relation to the literature. The study investigated the topic of single-gendered education, by utilizing a variety of mediums from expert advice, analysis and research, which can be found in the literature review of chapter 2. This chapter presents a critique of the implications of these findings for the educational community, as well as for me as an educator and as a researcher. Specific recommendations for practice that have resulted from these findings are presented to encourage the enhancement and support for single-gendered education with an educational context. The concluding discussion draws upon areas for further research to continue to advance and enrich the quality of single-gendered education.

5.1 Overview of the Key Findings and Their Significance

Following interviews with two educators and a thorough literature review, a rigorous analysis revealed five principal themes that underscore the effects of single-gendered education: (1) differences between male and females as individuals, in their interest and as learners does indeed exist, (2) the creation of conducive and constructive community amongst male student’s in single-gendered education settings ensued, (3) the impact and positive effect on the educators’ personal teaching practice, (4) the resulting outcomes of single-gendered education, and, (5) the roadblocks which limit and prohibit the implementation of single-gendered education.

The first theme, which was the understanding that males and females are biologically different from one another, and as a result have different interest and learning styles. Not only should we have focused our teaching, on the specific interests of male students, but we should have taken this education a step further and considered the needs of each individual student. This further served to remind us that in order to create the best possible learning experience for our students, we are required to understand the specific learning needs and interest of each individual student and develop lessons plans that relate to and meet these individualistic abilities. Simultaneously, we must utilize material and manipulatives and present information that is of interest to our students.
The second theme, the creation of a positive classroom community, illustrated the importance of forming a safe and inclusive education environment. This was accomplished by focusing on and taking into account the individual strengths and weakness of the students in the classroom, in order to facilitate a space of mutual respect and understanding of both the differences that make each individual unique and the similarities that connected us together. With this in place, students were more willing to step out of their shell, try something new and push their comfort level and boundaries to a place they would have not in a coeducational classroom environment.

The third theme, was the positive effect on the educators’ personal teaching practice. This connected with the second theme, but looked at the effect single-gendered education has the educator. Male teachers especially, feel as though they were better able and prepared to teach students in a single-gendered male class because they had similar experiences and could relate firsthand to what those children were going through.

The fourth theme, the outcomes of single-gendered education, served to illustrate the positive results of this form of education. It looked at the positive correlation in academic achievement, the decrease in social anxiety and increased comfort these students seem to have had within the classroom, and additionally, the decreased negative behavioural occurrences that these students had encountered. One very important fact to keep in mind however, is that while this type of educational system has the potential to be extremely beneficial for many students, it may not be beneficial for all students.

Finally, the fifth theme, the roadblocks to single-gendered education, served to demonstrate that although there was documented proof illustrating the substantive academic, social, and behavioural benefits that resulted from single-gendered education, there was still going to be opposition. This could have been for any reason from a lack of awareness, understanding and training on single-gendered education or merely the fear of change. These negative attitudes stemmed from anyone from parents to other teachers and even administration. Nevertheless, educators that are for single-gendered education must work with and through all of these facets in order to create the best possible learning environment for their students.
5.2 Implication

The findings of this study drew attention to the important implications for educational reform. The study had two major implications for the education community as a whole.

Practitioners and policymakers who uphold educational philosophies should not discount the positive effects that single-gendered education had for student’s academic success and personal wellbeing. The potential to overlook these has severe consequences, particularly for students whose learning is hindered by their lack of social and emotional development. This is in line with Noble (2000) and with Lingaard et al. (2009), who highlight single-gendered education pedagogy and its resulting benefits for students.

By and large, this study should serve as a reminder to policymakers and curriculum planners that single-gendered education has resulted in the development of well-rounded, grounded, informed students. Consistent with the finding of Sax (2005) and Park (2013), the participants of this research study recognized the value of single-gendered classrooms for academic, social, emotional and behavioural development and learning advancement. Furthermore, interviewees substantiated the value of its implementation within a school community and ethos and the abundant gains that resulted for students in this community setting. The study also provided novel insight into the need for substantially more training and education opportunities into the benefits of single-gendered education are required for educators, parents and students. It also exposed the issues related to the developing a growth mindset and understanding in order to encourage practitioners to embrace the challenges inherent in, but ultimately the benefits, which would result in implementing the concepts of single-gendered educational pedagogy. Policymakers need to be mindful of the implications overlooking this invaluable aspect of student learning within the educational policy and practice.

This can only result however from an increase in and consolidation of information sessions, workshops and educational opportunities of parents, educators and administrations by those with an expertise in single-gendered educational research and by those involved in the creation, development and implantation of single-gendered classrooms.
5.3 Recommendations

The implications of the present study point specifically to several recommendations for ministries of education, school administrators, and teachers. Two major recommendations are outlined below:

(1) Greater opportunities for single-gendered education must be provided. It would be in the interest of school boards and administration to offer parents the option of enrolling their children in public single-gendered classrooms. While they may not necessarily be a need or numbers to offer this at every school, they should be available at a minimum of one family of schools in each district. This would allow interested parents, and those who believe in the value of single-gendered education to have their children take part in this form of education, without it becoming an erroneous effort to attend. Having these opportunities available in fewer that one school in each district may hinder the prospect and make it difficult for children to take part in single-gendered education because of issues such as transportation or travel costs.

One in each family of schools would still enable children within each school community district to take part in these classrooms. Furthermore, school boards should offer at least one single-gendered class per grade per family of schools. This would also safeguard that students who are enrolled in single-gendered educational classes can remain within these classes and will not be required to transition between single-gendered and coeducational classes from one year to the next. School boards should by no means at all ever make single-gendered education a mandatory practice for any students at any time, but should provide information, literature and educational sessions to parents and students they may be interested in this form of education.

(2) Teachers should be provided with more training and education with respect to single-gendered classrooms. Consistent with the acknowledgement of both of my interviewees, there needs to be a concerted effort by policymakers, ministries of education and professional associations to work collaboratively together to create ongoing education sessions, workshops and professional development opportunities where educators, administrators, parents and students, have the opportunity to learn about single-gendered education, its benefits and limited and whether or not it would be a fit for themselves, their children and students. Examples of these can be in the form of town hall
meetings, information sessions or workshops. These should be ongoing and take place at least bi-annually, as research in this the area of single-gendered education is constantly ongoing and new teaching practices, strategies and techniques are always being updated and evolved. Most importantly however, this information should be consolidated and made easily accessible for anyone looking for additional information to access. This can be done in hardcopy format available in school libraries and online in a centralized database system.

5.4 Areas for Further Research

Inasmuch as the present study has served to expand upon the extant literature, it has also highlighted the need for further study. In future research endeavours, it is recommended that a greater emphasis be placed upon determining what are the best education practices for single-gendered classrooms. Similar to coeducational education, teaching practices are ever evolving with increase knowledge an understanding into how students learn best, but it would be beneficial to determine what are the specific teaching practices that factor into creating the best environment for single-gendered classrooms. Research by Lingaard et al. (2009) has already documented the fact that it is important for boys and their male teachers form relationships with each other outside of the classroom, but it would also be pertinent to look at what are the characteristics and types of educators that can best support students in single-gendered classroom environments. This could only further support students in this classroom setting.

Furthermore, administrators and educators at single-gendered male and female schools should coordinate with one another in establishing and supporting coeducational social experiences. Best practices for this cross gender integration should be studied to ensure that male students in single-gendered classrooms continue to have ongoing social interactions with females to support their ongoing behavioural and social development. This is essential to produce the most well rounded individuals possible. For students in single-gendered classrooms located within coeducational schools, educators should allow for programs, such as extracirriculars located within the school premises to be coeducational in nature as well.
The present study is important because it gives substantive insight into the academic, social, emotional and behavioural benefits educators have to values and the necessity of creating a safe and inclusive classroom environment. This can be accomplished by focusing on and taking into account the individual strengths and limitations of the students in the classroom, but also acknowledging their differences in order to facilitate a space of mutual respect and understanding of both the distinctions that make the student population unique and the parallels that connect them together. Single-gendered educator can support all of these initiatives by assisting and allowing the administrators and educators with their overall lesson and unit construction, implementation and facilitation by creating a much narrower focus and taking into account students individual interest and strengths. The research presented in both the literature review of chapter 2 and the findings of chapter 4 illustrate specific examples of the substantive benefits for students, which result from single-gendered education.

As educators, we owe it to students to explore and investigate all available means to best reach and teach our students and create the most conducive and advantageous education experience for them. Single-gendered education is one initiative that has been proven to be beneficial for students. It helps to create a classroom community, fosters a sense of understanding and appreciation and supports students in their academics, social, emotional and behavioural growth. This research can support the fostering and nurturing of students to help them realize the best potential within themselves. That is the goal of our educational system. Single-gendered education is merely one tool to support this endeavour, but it has the potential and power to revolutionize education for future generations and produce students that are better educated by relating to their specific learning styles, better prepared for their post-educational life, and more importantly, more well rounded individuals who have a greater understanding of the world around them and are thus more prepared to be upstanding, conducive and effective members of society and human beings on this planet.
Appendix A: Letter of Consent for Interview

Date: ________________
Dear ________________,

I would first like to start by thank you very much for donating your time, knowledge and expertise to my research study. I am a graduate student of OISE, University of Toronto, and am currently enrolled as a Masters of Teaching candidate. I am conducting my research on the single-gendered male classroom and what if any effects result from such a situation.

I am writing this report on this study as a requirement of the Masters of Teaching program, the end result of this will be the MTRP (Masters of Teaching Research Paper), which is the major requirement for this program. My research supervisor will be Kenneth McNeilly. The purpose of this requirement is to allow us to become familiar with a variety of ways and means of conducting research. My data collection consists of 30-45 minute interviews, which will be audio recorded. I would be grateful if you would allow me to interview you at a place and time convenient to you. I can conduct the interview at your office or workplace, in a public place, or anywhere else that you might prefer.

The contents of this interview will be used for my assignment, which will include a final paper, as well as informal presentations to my classmates and/or potentially at a conference or publication. I will only use your name (or anything else that might identify you) in my final paper, oral presentations, or publications, with your signed permission at the bottom of this form. The raw data from our interview will remain confidential. The only people who will have access to the raw data will be my research supervisor and myself. You are free to change your mind about participating in this study at any time, and to withdraw even after you have consented to participate. You may decline to answer any specific questions. I will destroy the audio recording after the paper has been presented and/or published (which may take up to five years after our interview). There are no known risks or benefits to you for assisting in the project, and I will share with you a copy of my notes to ensure accuracy. I will send you a final copy of the research paper before publication.

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

Yours sincerely,
Researcher name: Lorne Birnbaum
Phone: 647-339-3936
E-mail: lorne.birnbaum@mail.utoronto.ca
Course Instructor’s name: Kenneth McNeilly
Contact Info: kenneth.mcneilly@utoronto.ca
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 refrain from answering any question within the interview and that I may withdraw any responses at any time before publication of the study without penalty.

I have read the letter provided to me by Lorne Birnbaum and agree to participate in an interview for the purposes described.

Signature: ______________________________________

Name (printed): ___________________________________

Date: ______________________
Appendix B: Interview Questions

Before we begin, I would like to thank you for donating your time, knowledge and expertise. All data collected from our discussion here today will assist in completing my research for my Masters of Teaching Research Project (referred to as the MTRP in our program), and information that you share here today will be kept in my confidential and secure care. Any personal identifiers that you may use within the interview will be removed from the record and any references I make to your contributions will be mentioned under a pseudonym to protect your identity and personal interests.

The interview should take approximately 35-45 minutes to complete. I would like to record our conversation so that I might refer back to this interview with accuracy as I continue my research. Do I have your consent to do so?

I would also like to remind you that you have the right to withdraw from the interview at any time; up to the time my work is published. If you have any questions or concerns, or feel a need to contact me after the interview, you may do so at the phone number or e-mail address provided on the consent form. Lastly, for the purposes of this study the term sex and gender will be considered interchangeable. Do you have any questions before we begin?

Section 1
Background of Respondent

1. a) What is your name?
   b) What grade do you teach?
   c) For how many years have you been employed as a full time teacher?
2. For how many years have you worked in or with a single-gendered classroom?
   a. For how many years have you worked in or with coeducation classrooms?
3. Can you describe the community in which your school is situated (e.g., diversity, socioeconomic status, overall demographics)?
4. How did you become involved with single-gendered classes?
SINGLE-GENDERED CLASSROOMS

Section 2
Teacher practices (What/How?)

5. What is your vision for a single-gendered classroom? Is this similar or different from any classroom that you can remember from your own experiences as a student?

6. What are your goals for your students with regards to their academic achievement, social development and behavioural socialization?

7. How do you think your teaching practice differs in a single-gender classroom than in a coeducational one?
   a. Was it helpful? Why was it helpful? How did it influence your practice?

8. To what extent do you believe that single-gendered classrooms affect students’ academic attainment?

9. To what extent do you believe that single-gendered classrooms affect students’ social development?

10. To what extent do you believe that single-gendered classrooms affect students’ behaviour socialization?

Section 3
Beliefs and Values (Why?)

11. What do you think students can gain from single-gendered classrooms?

12. What resources do you use to facilitate working in a single-gendered classroom?

13. Have you undertaken any professional development in this area? How readily available are such professional development opportunities? Have you ever shared any aspects of your success or obstacles with your colleagues, whether on a formal or an informal basis? If so, in what context? And how did they respond?

14. From your work as an educator, have you noticed any differences in students’ academic attainment from working in a single-gendered classroom?
   a. Why (or why not) do you think there is a difference?

15. From your work as an educator, have you noticed any differences in students’ social development from working in a single-gendered classroom?
SINGLE-GENDERED CLASSROOMS

a. Why (or why not) do you think there is a difference?

16. From your work as an educator, have you noticed any differences in students’ behavioural socialization from working in a single-gendered classroom?
   a. Why (or why not) do you think there is a difference?

Section 4
Influencing Factors (Who?)

17. To what extent have you faced obstacles or challenges when working in a single-gendered classroom?

18. What kinds of feedback have you had from people outside of the classroom regarding your practices teaching in a single-gendered classroom?

Section 5
Next Steps (What Next?)

19. What advice would you give a beginning teacher looking to teach in a single-gendered classroom setting?

20. What goals do you have for your students in single-gendered classrooms?

21. In your experience thus far, what results have you seen?
REFERENCES


SINGLE-GENDERED CLASSROOMS

*Educational Review, 63*(2), 127-141.


SINGLE-GENDERED CLASSROOMS


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