Sex Segregation in One Jamaican High School: The Perspectives of the Teachers and Students.

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Abstract

Male underachievement has been a pervasive issue in the Jamaican Education System. It has been particularly evident in the annual terminal examination statistics published by the Ministry of Education. This widening gap between male and female academic performance has been the source of countless debates, especially because it has been occurring in an era when Jamaica has attained equity in access to education at the primary level and is aiming to spread this to other levels of the education system. In the absence of a national initiative to address male underachievement, school administrators have had to implement innovative strategies to address male underachievement within their institutions. One strategy that has been explored is single-sex classes in coeducational schools. The literature lacks consensus on the benefits of single-sex education in general and has not explored the use of single-sex instruction in coeducational schools in the Jamaican context. Considering this, the study aims to explore the use of single-sex classes in one Jamaican coeducational institution as a strategy to address male underachievement.

In conducting this inquiry, I utilised a qualitative case study research design. This was used to develop an understanding of why single-sex instruction was utilised, how the program was implemented, and how it was perceived by the teachers and students who experienced it daily. The data was collected by interviewing teachers, conducting focus group interviews with students, administering questionnaires, and observing lessons. After careful analysis of the data, the study revealed that although there were positive outcomes for some male students, there was no conclusive evidence that single-sex classes in coeducational schools improved male academic achievement at the institution. On that basis, it is contended that this study contributes knowledge on this unique strategy of single-sex education in a coeducational school in the Jamaican context. It provides a model that both educators and policymakers can explore for its potential to be adapted before it is adopted by other schools in Jamaica.

Abbreviations

CSEC   Caribbean Secondary Education Certificate

CXC   Caribbean Examination Council

EEH   Expanding Educational Horizons

GSAT   Grade Six Achievement Test

MOEY   Ministry of Education and Youth

NCTVET   National Council on Technical and Vocational Education and

              Training

NEI   National Education Inspectorate

PATH   Programme of Advancement Through Health and Education

PEIP   Primary Education Improvement Project

PEP   Primary Exit Profile

ROSE   Reform of Secondary Education

Declaration

I, Jenese Wray, confirm that the Thesis is my own work. I am aware of the University's
Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work
has not previously been presented for an award at this, or any other, university.

CHAPTER ONE - Introduction

Introduction to this Section

I commence this chapter with a brief overview of chapter one of the research. Here I share my rationale for conducting this study. In doing this, I briefly discuss research that has been conducted on this topic with an emphasis on the gaps that my research intends to fill. I also articulate the relevance of this research as well as the aims and objectives of my study, guided by the literature. Further, I outline the research questions that have guided my study. Finally, I briefly describe the participant groups and articulate the scope and structure of my study.

The Rationale: Why this Study?

In this study, I explore the use of single-sex instruction in a coeducational institution in Jamaica as a strategy to address male underachievement. To determine the relevance of this study it is important to understand the state of affairs in the education sector in Jamaica. Since the 1990s there has been a deepening concern for male underachievement or what has often been referred to as ´the boy crisis´ globally after studies conducted in several countries revealed that females were outperforming males at all levels of the education system (Cobbett and Younger 2012; Driessen and Langen 2013). Locally, policymakers, educators, and the media have engaged in robust discussions not just because of the widening academic performance gap in favour of female students, but also because studies have highlighted male students´ disengagement which results in higher dropout rates (Cobbett and Younger 2012). Additionally, the annual publication of the grade 11 exit examination results indicates that males are underachieving in areas traditionally dominated by females and those previously considered male domains (Jamaica MOEY 2015 and 2018; CXC Annual Report 2018; De Lisle 2018). Further, Bailey (1998), stated that male students were not only underachieving but were also under-participating in education. Although Bailey´s research was specific to the Jamaican context, her view reflected what has been presented in the overall literature as a global crisis, that has become so pervasive that there are global calls for feasible strategies to address the issue.

Furthermore, previous research indicated that there have been various global intervention strategies that have been utilised to address the issue of male underachievement. Notably, there have been pedagogic strategies that target male literacy (James 2007, cited in Driessen and Langen 2013) and in some countries, there have been cases in which a sex-focused curriculum has been utilised (Jackson et al. 2010). In other instances, there were socio-cultural interventions that targeted boys´ disruptive behaviour and attempted to stimulate their motivation (Martino 2008). Most applicable to my study was the use of one 0organisational intervention (Buchman et al. 2008) that focused on the use of single-sex instruction to address male underachievement (Jackson et al. 2010).

Despite the plethora of studies done in this area, research on the effectiveness of single-sex education has remained inconclusive, focussing on advantages or disadvantages for each sex in different research contexts. The conflict in the research findings has persisted whether the researchers explored the effects of being educated in a single-sex school or a single-sex class in a coeducational school. It must be acknowledged this conflict is likely to remain as no one size fits all students in all contexts.

Additionally, single-sex education has been said to provide the best opportunity for academic achievement, especially for female students who tend to perform better than both their male counterparts and females in a coeducational environment (Tiller 2020) and it is argued that they display greater confidence and better academic performance in Mathematics, Science, and Information Technology (Pahlke et al 2014; Dustmann et al 2017). This perspective is supported by research conducted in the Caribbean where researchers found superior performance in Maths among female students in single-sex schools in Jamaica, St Lucia, Trinidad and Tobago, and St Vincent and the Grenadines (Spencer-Ernandez and George 2016).

Research has also found that sex segregation allows students to operate in a calm, non-threatening environment which facilitates cohesive peer relationships (Sax 2010, cited in Hart 2016) and in which they are better able to concentrate (Meyer 2008). Furthermore, teachers have an opportunity to use sex-specific instructional strategies and materials (Sax

2005b; Gurian et al 2008; Hart 2016) that target the differential interests and needs of male and female students. Besides, there are usually more male teachers in all-boys institutions, thus providing access to role models.

Research conducted in the Caribbean and specifically in Jamaica has also indicated that students in single-sex schools have consistently outperformed those who attend coeducational schools (Blair 2013; Spencer-Ernandez and George 2016). The single-sex schools are described as elite (World bank 1993), traditional high schools where students who attain the highest examination results in the grade six exit examinations are educated. Many of these students are taken from private preparatory schools, which implies that many of them are also from a higher socio-economic group.

The benefits of single-sex schools are therefore attractive, and this raises questions about the transferability of these benefits to the coeducational learning environment. The benefits are especially attractive to school administrators and educators who are confronted with the need to find innovative strategies to address their unique school environment. According to researchers such as Jackson (2002), Wills et al. (2006) and Leder and Forgasz (1997), single-sex classes in coeducational institutions offer the same benefits to students as those who attend single-sex schools. However, the literature has not provided conclusive evidence on what these benefits are. Furthermore, although the literature has explored male underachievement and single-sex education in Jamaica, there continues to be no data on single-sex classes in a coeducational school in Jamaica.

Based on the foregoing, the significance of my study is undeniable. It is useful as it contributes to existing knowledge on single-sex education in Jamaica. Besides, with the knowledge that emerges from this study and by offering detailed interpretations of the experiences of the teachers and students in my study, this research provides new and in-depth perspectives on a potential intervention strategy to improve male academic participation and performance. Furthermore, the findings in this study can be useful to both educators and policymakers who can adopt or tailor this intervention strategy to fit the Jamaican school context.

Research Aims

This study aims

- To explore the use of single-sex instruction as a strategy to address male underachievement in one coeducational high school in Jamaica.
- To determine the potential of the sex-segregated classroom in coeducational schools in the Jamaican context.

Research Objectives

To achieve the aims

- Data will be collected from teachers through interviews in which they can describe their experience of teaching in single-sex classes in a coeducational school.
- Students will share their experiences and perspectives on sex-segregated instruction by participating in focus groups, questionnaires, and observation.
- Potential challenges or barriers to utilising single-sex instruction in the Jamaican context will be explored.

Research Questions

This qualitative case study was guided by three central questions.

1. Why has the sex segregation program been implemented by Seaview High School?
2. What were the processes involved in implementing the sex segregation model at Seaview High School?
3. How is the sex segregation program perceived by the students and teachers at Seaview High School?

Participant Groups

Two groups of participants provided details that addressed the research questions that have guided this study. The participants were comprised of teachers and students and the data which they provided was collected by utilising semi-structured interviews, focus group interviews, questionnaires, and observation.

The first group of participants included teachers with whom I conducted in-depth interviews. These educators provided extensive details of their experiences in both single-sex and coeducational classrooms; thus, providing rich data that has resulted in a thorough understanding of the program. The second group of participants was comprised of students who shared their experience in two focus groups as well as by completing open-ended questionnaires. Finally, both groups of participants were involved in my observation of lessons which facilitated another perspective on their experience of sex segregation.

The Study´s Scope

According to Patton (2002), no research design is perfect, there are always trade-offs. Also, Marshall and Rossman (2006) in their discussion of limitations stated that researchers cannot make any confident claims regarding conclusiveness about what is learnt in the research process. These statements indicate that there are limitations to all studies, including mine; thus, I am using this section of the research to share the limitations of my study.

The first limitation of my study lies in the research design. I am aware that my use of the case study research design may be regarded as limited because it does not offer scientific generalisations (Yin 1984, cited in Zainal 2007). It must however be understood that my decision to conduct the study in one geographical location was meant to represent the experiences of those who operate within that specific space. Therefore, this design is ideal as it addresses both the research objectives and the research questions, and it facilitates a

detailed exploration of the complexities of the experiences of the participants in my study. My objective was to provide rich, in-depth data and that has been done.

Secondly, my study is limited in that I focussed on one Jamaican school and the findings may apply only to that school. It cannot be assumed that if the sex segregation program were to be implemented in another school the experiences would be the same. I am aware that research findings may be impacted by the specific research context and other factors such as the socioeconomic status of the students, the resources students and institutions have access to, the school type, teacher quality, students´ academic ability, teacher-student interaction, and parental support. These factors may differ from one school to the next and could potentially impact the students´ and teachers´ experience of the program.

Thirdly, other limitations lie in the data collection processes that I utilised. Firstly, the process of administering questionnaires was restricted to one section of the institution which limited the variety of participants that I had access to. Further, although the participants volunteered to provide relevant details for the study, it cannot be assumed that the full details were provided. Additionally, teachers who participated in the interviews may have withheld information that seemed critical of themselves, or the school and students may have been impacted by the presence of the researcher. My presence could have impacted their candidness or resulted in potentially rich details being omitted.

Finally, another limitation lies in my decision to use purposive sampling in my selection of the participants. This sampling strategy has the advantage of providing rich data from those who experience the program but may not adequately reflect the views of individuals from another setting. Further, by including only teachers and students, the perspectives of other stakeholders, such as parents were not accessed. I acknowledge that this omission was not planned, but the decision had to be made when it became difficult to find parents who were aware of the single-sex program being operated at the school.

I acknowledge that there are several limitations to my study which indicates that there is potential for further exploration of this topic. However, it does not deduct from the trustworthiness that my in-depth exploration of the topic brings to my study.

Organization of the Chapters

The dissertation is organized into five chapters. This section concludes chapter one which outlines the rationale, aims and objectives, as well as the scope of my research. It further identifies the research questions and describes participant groups. Chapter two continues the study by setting the research context. Here I begin by articulating my motivation for engaging in this study. Further, I present background details on the problem of male underperformance in Jamaican secondary schools with a specific focus on pertinent cultural details that will aid in understanding participants´ experiences later in the study. Chapter three presents the literature review as well as the theoretical foundations which support my study. These include research on the issues relating to coeducation as well as the perspectives on single-sex education. Moreover, there is a focus on single-sex instruction as a strategy for addressing the problem of male underachievement.

Additionally, chapter four details the methodology used to conduct the study and rationalises my decision to use a descriptive qualitative case study approach. It also explains how the research site and participants were selected and outlines the tools that were used in data collection. Further, it describes how the data was analysed and establishes the procedures involved in ensuring the credibility and trustworthiness of the data. Besides, I also engage in a discussion of my reflexivity and positionality as a researcher.

Further, chapter five provides a comprehensive report of the findings of the study which emerge from the data analysis process. These findings are organised based on the themes that are drawn from the data and are supported by quotations from the participants in the study. Finally, Chapter six details the conclusion which includes a summary of the findings, the

implications of this study as well as the considerations for future research. The study culminates with my references and Appendices.

CHAPTER TWO - The Research Context

Introduction

As I organise this study, I am influenced by the work of Dikilitas and Griffiths (2017) who stated that it is important to focus on the research context as it influences the outcome of the research. There must be a clear depiction of the setting in which the participants function, as well as of the participants so that the audience can have an in-depth understanding of the real-world problems (Korstjens and Moser 2017) and meaningful conclusions can be drawn from the data. Considering this, I begin by sharing my motivation for conducting this research. I also establish the background of the study by describing the reality of male underachievement in Jamaica. Afterwards, there is an examination of four factors that impact male underachievement. These factors are articulated below.

Firstly, I discuss the family as an agent of gender socialization. In doing so, I briefly describe how the structure of the Jamaican family influences gender socialisation. Secondly, there is a discussion of the school as an agent of gender socialization. In my discussion of the school, I begin with a reflection on the role of education and its relation to gender roles, I then illustrate how the hidden curriculum is used as a strategy for gender messaging transmission. Afterwards, I engage in a discussion of teachers as authority figures which provides a context for details provided by the participants in the study. Fourthly, I engage in further discussion on the perceived effect of the feminisation of teaching on male underachievement.

In the final section of the chapter, I engage in a discussion of masculinity and male privilege in Jamaica. In this discussion, I focus on how boys practise masculinity as well as its effect on male underachievement. The discussion in this section also includes a focus on homophobia and the legal and religious frameworks within which this takes place. Afterwards, I discuss the intervention efforts that have been implemented to address the issue of underachievement in Jamaica.

The Motivation for This Research

My journey as a researcher has been influenced by the perspective of Materud (2001) who stated that "A researcher's background and position will affect what they choose to investigate, the angle of investigation, the methods judged most adequate for this purpose, the findings considered most appropriate, and the framing and communication of conclusions." (p.483-4). Foote and Bartell (2011) presented a similar perspective, arguing that a researcher´s unique combination of race, class, gender, sexuality, the position of power and life experiences, altogether shape the positionality of a researcher. The questions asked, the methodologies selected, and the information considered salient are all connected to the biography of the researcher (Denzin 1986). Furthermore, writers such as Roberts (2009) have called for researchers to indicate their relationship to their study, a call that has influenced the reflexive approach that I have taken in this research. To accept these opinions is to acknowledge that researchers do have a story and its inclusion may be considered a significant component of social interaction. Consequently, in this section, I will share my personal and professional motivation for doing this study.

My decision to conduct this study was inspired by my personal experience as a teacher in two types of high schools in Jamaica; an all-boys school which is located in the urban area, two all-girls schools in the rural area, and a coeducational institution operated by a Christian church on another Island. My interest was further aroused as I observed the panic displayed in the Jamaican media regarding the differential academic performance of male and female students. My observation indicated differences in classroom behaviour, attitude to work, and in some cases, there were stark differences in student interaction with teachers within single-sex classrooms and coeducational classes. It is possible, that the differences observed among the schools may have resulted from the school types, school cultures, or geographical locations. Furthermore, I observed that it was easier to motivate female students as they appeared to have a greater desire to constantly attain high grades. Girls were more competitive, goal-oriented, and focused on mastering examination techniques which were reflected in the external examination results. On the other hand, the boys in my classes were more playful and less focused on academics. The boys were more content with enjoying lessons and school in general than with attaining high scores. This was alarming only because the Jamaican culture focuses greatly on testing.

Furthermore, I observed that parental involvement was limited in all the institutions. In many cases, parents were unwilling to regularly participate in school activities, but they would readily engage with teachers on the topic of subject choice which would ultimately impact their child´s career path. This was especially true for male students whose parents and sometimes teachers, tried to steer them away from the traditionally female-dominated areas, towards subjects such as science and technical subjects.

My experience is also reflected in research conducted by Ellis (2018); Skelton (2010); and Evans (2006) which revealed that boys were more likely to display negative conduct in the classroom than girls. They argued that boys tend to be more disruptive during class activities and were overrepresented as high school dropouts. They tend to be less intrinsically motivated and generally attained lower test scores in school (Hadjar et al. 2014). On the other hand, Jones and Myhill (2004) suggested that girls were often more diligent and conforming. Chevannes (1999) who conducted his study in Jamaica corroborated this perspective, as he suggested that the restrictions involved in the early socialization of girls within the home, prepare them for the rules that govern the classroom; while the freedom young boys enjoy, largely predisposes them to the negative behaviour that is associated with many male students.

Undoubtedly, my experience has influenced my perception of gendered behaviours; however, my engagement with the literature (Osler et al. 2002) has alerted me to the need to acknowledge that there are differences among groups of boys and girls. Not all males are underachievers, and some female students engage in risky or disruptive behaviour and attain low test scores. It is therefore important that a balance is created in examining the achievement of both males and females. By focussing on the underachievement of male students, under-performing females are rendered invisible and by perceiving their positive conduct in the classroom as the norm, anxieties and other psychological issues are not confronted. These varying experiences and observations led to my interest in gender and achievement and fuelled my exploration of single-sex classes in a coeducational environment.

Sex and Gender: Defining the terms.

The exploration of single-sex classes in a coeducational environment involves a significant focus on sex and gender; thus, in this section, the terms will be defined. Sex and gender have traditionally been seen as binary, with everyone belonging to one of two groups: male or female (Hyde et al 2019; Morgenroth 2020). Sex is used to refer to the biological distinctions between males and females. In other words, sex refers to physiological attributes such as genetic composition, chromosomes, hormones, and reproductive anatomy. (Prince 2005; Mikkola 2016). On the other hand, gender sees males and females as social constructs. Specifically, the social construction of the roles, behaviours, and identities of males and females. (Edwards 1989; Thompson 1989; Archer and Lloyd 2002; Lips 2020; Morgenroth 2020). Many persons do not fit neatly into these traditional definitions but believe that gender exists on a spectrum (Lips 2020).

Considering this, it must be acknowledged that the perspectives on these concepts have been changing globally both among policymakers and members of the public (Hyde et al 2019; Schudson et al 2019). Contemporary definitions of sex and gender have become more fluid. Transgender and non-binary individuals are currently more conspicuous in some societies such as the United States where a transgender state legislator was selected in Virginia and in Germany where the court legally recognizes a third sex. (Grierson 2017; Eddy and Bennett 2017, cited in Morgenroth 2020). Although the literature which is referenced throughout the study sees gender as largely binary, with men and women having both opposite and complementary identities, possessing stereotypical qualities such as women being ´caring´ and men being ´strong´, (Morgenroth et al. 2021) my use of gender hereafter recognizes the social identity theory that suggests that individuals acquire identities from their membership in social groups. (Hogg 2016; Stets and Burke 2000). It, therefore, follows that since we construct gender identity and this includes self-categorization, gender is not binary, (LGBT Foundation 2021) but is inclusive of transgender and non-binary.

Background of the study

Male Underachievement in Jamaica: Defining the Context

The importance of the education system to a country´s development and to maintaining sustainable development cannot be underestimated. States are required to meet the learning needs of their citizens (Bailey and Charles 2010) and to among other goals, focus on gender equality and the provision of quality education according to the Millennium Development Goals (MDGs) 2030 agenda. Working towards equity in education has been a part of the Jamaican education agenda for a long time (Tsang et al. 2002; Stennet 2018). The 2012 Report card on Education in Jamaica, which is an assessment of the education system by the Caribbean Policy Research Institute (CaPRI), assigned a grade D (unsatisfactory) for equity in education, citing lack of a clear plan to address male underperformance and differential outcomes between socio-economic groups (Capri 2013). Addressing these disparities is particularly important if Jamaica is to attain equity in participation as well as in opportunities and outcomes as was outlined in the Education for All Monitoring Report 2009 (United Nations 2009). So far, equity in access has been attained at the early childhood, primary through to the grade nine level (Tsang et al 2002; National Development Plan 2009; CaPRI 2013) yet the stakeholders at the Ministry of Education acknowledge the need to overcome challenges in the quality of teaching, learning, and enrolment at the secondary level to improve the standard of education (Jamaica MOEYI 2015).

The Ministry of Education Youth and Information (Jamaica MOEYI) and other stakeholders have revealed the need for the creation of a more responsive learning environment in which initiatives are implemented which target the specific needs of both male and female students (Poyser 2016, Campbell 2013, Cooke 2010). The education system in Jamaica has also faced issues in areas such as inequalities, management skills, and implementing transformation programs. The issues have persisted over the years although the government has increased expenditure on education (United Nations 2011). Between 2004 – 2009 spending on education increased from 5.0 to 6.8 per cent of the GDP (Jamaica MOEY 2012). This was more than the average 5.2 per cent spent by developed nations (CaPri 2012). The World Bank (2020) has also indicated that spending on education in Jamaica has fluctuated over the

years since the 1970s but has remained relatively consistent since 2015 with 5.2% of the GDP being spent on education in 2019. A 2005 World Bank report further indicated that despite the increased spending on education, 30-40 per cent of the grade 6 students were functionally illiterate upon completion of primary school and the Caribbean Secondary Education Certificate CSEC performance was much lower than most other Caribbean nations (UN 2011).

Further, the areas of literacy and numeracy are among the areas that have been of great concern but there have been some improvements, especially among female students between 2016-2018 (Statistical Institute of Jamaica https://statinja.gov.jm/).   Standardised tests administered by the Ministry of Education annually to test the literacy and numeracy of the Jamaican students at the grade four level, justify the concern for male underachievement. Data provided by the Statistical Institute of Jamaica between 2016-2018 indicate that more male students have attained non-mastery during the period (https://statinja.gov.jm/). Additionally, literacy and numeracy rates at the primary school level are determined by utilizing a standardised test to determine whether students are performing at the expected level, as well as their readiness for their grade six terminal examinations. USAID (2003) reported that in general, the students performed below the anticipated levels, although females outperformed males on all the tests. This disparity was evident in both the public and private preparatory schools which have access to more resources. The trend has persisted, indicating that a new approach to teaching boys may be required. An assessment of numeracy and literacy test results between 2011-2017 by the Ministry of Education Youth and Information, showed that females were consistently outperforming males every year. In 2017, a total of 33,562 students from public schools sat the numeracy test. Of the 21,550 students who achieved mastery, 54.8 per cent were females compared to 45.2 per cent of the males. The trend was similar in the 4,365 students who sat the numeracy test from the private schools. Of these students, 54.2 per cent of the females got higher scores than 45.8 per cent of the males.

Additionally, literacy test results over the same period were separated to highlight similar differences between the sexes. In 2017, test results for 49,960 students, (33,680 from public schools, 4,365 from private schools, 32) indicated 53.4 per cent female mastery of the literacy

tests compared to 46.6 per cent of the males (Jamaica MOEY 2018). The results do not specify the context in which these students operate, nor does it provide details of their socio-economic status; but it presents a sobering reality of the state of male academic performance in Jamaican schools and provides some level of justification for the ´moral panic´.

It must also be noted that the increased investment in education, as well as the Education Transformation initiatives, were largely a response to the moral panic which became evident in the media headlines over the years. The last decade has seen headlines in the local news media that stated:

"Wanted – more men in the classroom" (Cooke 2010)

"We need to rescue our boys" (Campbell 2013)

"The CSEC Grade: Time for a change" (Francis 2015)

"Save our Boys" (Malabver 2016)

Similarly, in August 2019, Mr Mark Malabver, Principal of Yallahs High School and Chairman of the Inner-City Teachers Coalition, also called for an education system that is more responsive to the needs of boys.

Male students have struggled in the Jamaican education system for decades (Miller 1992, cited in Parry 1997, Figueroa 2000) and according to the administrative manager for records at Mico University College Child Assessment and Research in Education CARE Centre in Kingston, the organization that is responsible for testing children who are suspected of having learning exceptionalities, the trend of male underperformance has existed since the establishment of the organization in 1981. She stated that it "continues to be that over 70 per cent of the boys that we see tend to be underperforming at their age and grade level compared to the girls. It has been that way as long as our organization has been in existence…" (Hendricks 2020, para. 4). This issue of male underachievement has not only dominated the Caribbean education discourse since the 1990s (Evans 1999; Cobbett and Younger 2012) but has also been a persistent issue in the literature on differential achievement outside of the Caribbean in industrialized nations such as Canada (Gosse and Arnocky 2012), the United

Kingdom (Smith 2003) New Zealand (Gibb et al 2003) Australia (Hodgetts and Lecouteur 2010) United States (Titus 2004), Canada (Martino and Kehler 2006) Malaysia (Majzub and Rais 2010), Kenya (Ng´angá et al 2018) and Germany (Legewie and Diprete 2012).

The literature, however, lacks consensus on a specific definition of male underachievement as well as on the strategies needed to address it. Attempting to define it is arguably as difficult as determining the solutions to this persistent issue. Underachievement has been used in the literature to refer to a wide range of circumstances (Gorard and Smith 2004; Weller- Clarke 2011) and according to Gorard and Smith (2004), it is used to refer to nations, regions, schools, ethnic or social groups, low achievement, lower achievement compared to groups or compared to what is expected by an observer. In this study, underachievement is defined based on the performance of one group compared to another group.

In addition to achievement, the annual Caribbean Secondary Education Certificate (CSEC) statistics published by the Ministry of Education Youth and Information, indicate that any examination of male academic under-performance must also consider male under-participation. This is due to the disparities in schools and examinations. In 2017 17,125 adolescent males were not attending school and 13,162 females. By 2018 there was an improvement with 13,778 males and 11,781 females not attending school.

 Further, in 2016 the adult literacy rate in Jamaica stood at 88 per cent, slightly lower than the rate of the Caribbean at 92 per cent (Wilson-Harris 2016). With the aid of initiatives such as the Jamaica Foundation for Lifelong Learning, as well as The Enrichment Initiative which targets primary level students, there has been improvement (Jamaica MOEY 2017). Although literacy rates have improved on the island, males continue to lag behind females and in 2020 there was an 84.04 per cent literacy rate for males and 93.1 per cent literacy for females, (UNESCO 2020) a trend that has remained steady for many years.

The results of the Jamaican exit exams, Caribbean Secondary Examination Certificate (CSEC) have also indicated that male students under-participate in most subject areas when

compared to their female counterparts. In 2014, of the 35,488 students who sat and passed at least one subject in the CSEC examinations in the public schools, only 15,656 were male students and only 12,942 passed at least one subject. With the inclusion of private schools, 70,496 candidates sat the examination, with 28, 897 of these participants being males. This indicated that socioeconomic status does not positively change male participation in Jamaica. The records further indicated that of the total number of 196,434 subject entries from the public schools, only 81,290 male students sat the examinations (Jamaica MOEY 2014).   In 2015, 34,613 of the registered candidates sat the examinations, with 15,258 being males. Of this number, 12,705 passed at least one subject compared to 17,448 of the 19,355 females who sat the same examinations. The report aptly summarized the results and justified the concern in the following: "As in previous years, the number of subject entries for females exceeded those for the males. Females accounted for a total of 113,849 or 58.4% of the entries compared to 81,071 or 41.6% for the males." (Jamaica MOEY 2015, p. 6). In 2016 there was also a similar trend of fewer male students participating in the secondary exit examinations. 35,312 students registered for the examinations, 15,124 males sat the examination and 12,228 passed at least one subject. On the other hand, 17, 158 of 19,718 females passed at least one subject (Jamaica MOEY 2016).

Additionally, a comparison was done of students´ participation and performance in six Caribbean Secondary Education Certificate (CSEC) subject areas (Additional Mathematics, Mathematics, English Language, Spanish, Chemistry, and Physics) between 2017 and 2019 in Jamaica. Data provided by the Ministry of Education (See Appendix J) did not indicate the number of students in the cohort each year, but it indicated that student participation generally declined over the period examined and there was a consistent trend of male under-participation and lower performance compared to female students in most subject areas. The literature generally suggested that girls tend to dominate English Language and other Arts related subject areas (Leo Rhynie 1989; Thompson 2017; Ellis 2018). The statistics between 2017 – 2019 also suggested that more females than males sat and passed the English Language terminal CSEC examination every year. In 2017, 15,185 female students sat the examination and 11,488 passed while 11, 136 males sat the same examination and 7,135 passed. In 2018, 14,179 females sat the examination and 11,459 of them passed the exam compared to 9899 males who sat the examination with 6,692 passing. Finally, in 2019,

13,837 female students sat the examination and 12,135 passed while 9,657 male students sat the examination and 7317 passed.

In the subject area of mathematics, which is often seen as a male-dominated subject area (Leo Rhynie 1989; Thompson 2017; Ellis 2018), there were 13,698 female candidates in 2017, 13,025 in 2018 but participation fell to 12,466 in 2019. However, in each of these years, fewer than 10,000 male candidates sat the examination and fewer males also passed the examinations. Similar statistics were published for Additional Mathematics, which is administered to students who have an aptitude for mathematics and have completed the CSEC curriculum before the end of high school and wish to prepare for the Advanced level. Female students registered in larger numbers and attained better results in all three years both in Jamaica and the Caribbean region.

Furthermore, studies conducted by researchers such as N´gangá et al. (2018), Hermann and Kopasz (2019) and, OECD (2017) who collected data in Kenya and the OECD countries, also indicated that female students lag behind their male counterparts in Science Technology Engineering and Mathematics (STEM) programs. However, the situation in Jamaica, as reflected in the aforementioned six subject areas, does not depict this trend. Of the six purposively selected subjects between 2017-2019, which included languages and science, female students participated in larger numbers in all subject areas and outperformed the male students in all subjects except for Chemistry. Further observation of students' performance in all thirty-four subjects sat over the three years, indicated male domination of the stereotypical male-dominated areas of Technical Drawing, Industrial Technology, and Building Technology. (Jamaica MOEY 2020).

Finally, it is important to note that the Jamaican context is largely reflective of male underachievement in the Caribbean. The data presented two realities. Males are underachieving and under participating compared to females in the Caribbean. Bailey (2014) has argued that the issue is better described as under participation rather than underachievement. This perspective is well-founded as it is grounded in the statistics provided by CXC. The comparison of male-female performance in the six subjects between

2016-2018 indicated that more girls participated in five subjects including Chemistry, Mathematics and Additional Mathematics which are traditionally male-dominated areas. The male students outperformed the females in Chemistry each year attaining 53 per cent in the first two years and a 58 per cent pass rate in the third year. Despite their higher participation in Physics, males underperformed compared to females who attained 64 per cent in 2016, 60 per cent in 2017and 68 per cent in 2018 (CXC Annual Report 2018).

The UN Statistical Division (2013) and The Education for All Global Monitoring Reports (2009 and 2012) have also confirmed that this disparity in participation exists at all levels of the Jamaican education system. Despite this, females continue to be unemployed at a greater rate and earn lower wages when they are employed (Bailey and Charles 2010; Bellony et al. 2010). Unfortunately, the academic dominance displayed by female students does not change the gender earning gap that is evident in countries such as Jamaica and Barbados (Bellony et al. 2010). The fact is, addressing these issues may require a multi-sectoral and multifaceted approach.

These statistics present a sobering reality of the gap in male-female academic performance and raise pertinent questions about the role that the education system needs to play in addressing disparities in performance.

The Jamaican Education System

The issue of male underachievement has been persistent; thus, it requires a robust and responsive education system that could potentially begin to change the male academic experience by implementing intervention strategies at all levels of the system. An understanding of this system is important for the context of this research.

The Jamaican education system is characterized by diversity, with its four-tiered school system. The system has evolved from an agrarian system that was established to support a small white elite and a black labouring class. However, it has evolved into a more dynamic

Information and Communication Technology (ICT) system (Jamaica MOEYI 2020).   At the Early childhood level, parents have an option between private and public education for their three to five-year-old children, but most students are educated in public infant schools. At the primary level, students are educated from grades one to six but sometimes this is extended to include students from grades seven to nine. When this occurs, the school is referred to as a Junior High or All-Age school. At the primary level, private education is offered in what is referred to as the preparatory schools where students perform significantly better in the grade six exit test than the students in the public primary schools (George 2012).

The primary education level is important as it offers components of the National Assessment Programme at the grade one, grade three, grade four, and grade six levels. The grade six assessment is of significance to my research as it is at the end of grade six that students sit the Primary Exit Profile (PEP) which has replaced the Grade Six Achievement Test (GSAT) to gain admission to High school. When a child is preparing for PEP, parents are allowed to submit a list of five High schools which they would like their child to attend, beginning with their favourite option. This is important because many Jamaican parents regard education as the key to upward social mobility and are willing to invest in extra lessons (Stewart 2015) to ensure their child is admitted to what they regard as the best school. Opinions on the choice of High schools vary and are influenced by societal perceptions which are often influenced by the grade 11 exit examination results.

The Jamaican education system also has different types of High schools, including Technical High schools and private schools but the two main types are the traditional grammar schools and the newly upgraded or non-traditional high schools. There are 150 public High Schools and 42 private preparatory and High Schools in Jamaica.

 (STIOJ 2015 https://statinja.gov.jm/Demo_SocialStats/Education.aspx, Jamaica MOEY 2016 https://moey.gov.jm/). Traditional High schools are institutions that have always been high schools while the upgraded or non-traditional schools were initially named secondary schools but have been renamed high schools (Stockfelt 2016). Traditional high schools are regarded as elitist (Worldbank 1993, cited in George 2012) and the students attaining the highest score in the primary exit examinations are awarded a place in these schools. On the

other hand, those who attain the lowest test scores are awarded a place in the upgraded high schools (Spencer-Ernandez 2011). By separating students based on standardized test results, the Ministry of Education creates a division between the school types from the outset (George 2012; Stockfelt 2016) and leads to the disparities in the examination results attained in the grade 11 exit examinations.

Further, Jennings and Cook (2019) argued that the type of school that children attend in Jamaica is intricately connected to their social status. They found that traditional high schools tend to be populated by children whose parents were from the middle class, some who were highly skilled and others from the lower socio-economic group, while those from the higher professional category whom they referred to as upper class preferred the private schools. Simultaneously, children of parents from unskilled and semi-skilled groups attended upgraded or non-traditional high schools. This perspective reflects the findings of one specific study so it must be acknowledged that many traditional high schools are ranked highly in academic performance; consequently, parents from the upper class often select these public schools. These disparities between school types and students that are assigned to these different types of schools are extensions of other forms of disparities that have occupied a place in Jamaica´s education system as will be discussed in the next section.

Male Underachievement in Jamaica: How did it happen?

The Caribbean has made significant progress in providing equity in areas such as access to education, health care and participation in the labour force (Orlando and Lundwall 2010); school retention, completion and academic attainment of girls have been largely achieved (Plummer et al 2008) but there remains a significant disparity in the academic outcomes of male and female students. It is important to note that like in other countries, female disadvantage existed in Jamaica. In the past, academic excellence was dominated mainly, if not completely by males until 1921 when there was an increase in the levels of female literacy (Miller 1991). In the 1970s female students began to show significant improvement in traditional male-dominated subject areas while they continued to dominate the Arts (Maynard 2002). This has set the stage for the concern for male underperformance that has intensified in recent decades, evolving from a discourse regarding some boys underachieving

to a more general discussion on male underachievement (Younger and Warrington 2003; Peebles 2014). Several perspectives have been purported as possible factors that underly the male trouble which Jamaica continues to grapple with. One of these factors is gender socialisation.

Gender Socialisation

Although gender socialisation is the focus of this section, there must be first a clear definition of socialisation. According to (Elkin and Handle 1989, cited in Hoominfar 2019) the main purpose of socialization is to institutionalise the beliefs and standards of society. Socialization involves a process by which people learn patterns, standards, and behaviours that are acceptable in society. People learn the cultural roles that are expected of them and how to adapt and become successful members of their communities. (Grusec and Hastings 2014). Societal values and roles are not simply transmitted from generation to generation but are constructed by each subsequent generation. (Grusec and Davidov 2015).

Gender socialization is the process through which children learn what it means to be a boy or girl (Basu et al. 2017). In the literature that focuses on the Jamaican context, gender socialisation is explored as one explanation for the differences noted in the behaviour and performance of boys and girls in the classroom (Evans 1999; Parry 2000). This socialization process takes a different shape for men and women and what is perceived as gender-appropriate behaviour is transmitted through various agents of socialization. These include the family, school, peers, and the media. Men and women are taught norms, values, behaviours, and skills that are considered appropriate or necessary to become successful men and women (Lou et.al 2012; Lawson et al 2015; Giddens 2017). The socialization process begins at birth and as children grow and develop a sense of self, they also learn the expected gender roles and gender identities that are associated with being male or female (Stockart 2006). The process involves the communication of gender stereotypes (Leo-Rhynie and Pencle 2002) which are transmitted directly or indirectly by parents and other individuals, mostly adults, who tend to communicate their expectations of their sons and daughters through rules and sanctions (Amin et al. 2018).

The process of learning what it means to be a boy or girl is a continuous process. It is often subtle and seamlessly interwoven into daily interaction. It is evident in the attitude and language used while a child is still in the womb. Lindsey (2016) stated that by using terms such as ´kicking´ and ´active´ to describe boys in the womb and ´quiet´ and ´calm´ to describe girls, mothers begin gendering. After the child is born, he or she is inundated with language and symbols that form the basis of gender identity. For instance, the selection of blue coloured clothing for boys and pink for girls, (Eckert and McConnell-Ginet 2013; Carter 2014; Mikkola 2016) as well as the use of words such as ´strength´ and ´agile´ to describe boys while girls are ´dainty´ and ´fragile´. (Walker 1999; Burke 1989 and 2002, cited in Carter 2014).

For individuals to conform to these pre-determined socially constructed gender roles, they need to feel compelled to fit into the stereotypical model of masculinity and femininity (Chege and Sifuna 2006, cited in Kangethe et al 2014). This view is not always applicable in the Jamaican context. It is in these differences between male and female academic performance, that it is evident that Jamaican children sometimes deviate from the stereotypical perception of what constitutes masculinity and femininity. Boys often become immersed in the rigid Jamaican masculine culture which appears to cause them to persistently trail girls especially at higher levels of education (Bailey 2014). This constitutes a contrast to the historical male domination of the academic domain.

In the Jamaican context, Blum references the hegemonic myth in which agents of socialization reinforce stereotypical myths that present boys and girls as being in constant opposition (Commonwealth Secretariat 2017). By doing this, the agents of socialization provide children with another perspective of ´acceptable´ male and female behaviour in Jamaican culture. These stereotypical perspectives are inherently limiting and imply that if a member of a group deviates from the stereotypical perception of his group, then he or she is too much like the opposite group. This creates one kind of problem, especially for boys who display a ´soft´ or feminine characteristic in a culture that emphasises toxic masculinity and tends to be quite homophobic.

The Role of Education in Gender Socialisation

A discussion of gender socialisation could benefit from a reflection on the purpose of education. According to Biesta (2015), education has three purposes: qualification, socialisation, and subjectification. So far, the discussion has focussed on acquiring education for qualification. Qualification is important because students acquire the necessary knowledge that prepares them for their future careers. However, education is not limited to what happens in the classroom. It is the sum of the student´s entire experience, much of which occurs within a social context. The next section illustrates that education begins in the family where gender roles are first learnt. Together, the agents of socialization engage in teaching children the social, cultural, and religious traditions of their society. However, the reality is that these traditions often reflect the stereotypes that exist in society. Secondly, these lessons are also transmitted in the school environment where there is a reproduction of inequities and stereotypes that have characterised aspects of the education system.

Finally, education is also intended to transform students into active beings who are the authors of their circumstances, rather than remaining the object of other people's actions. This is important as it indicates that despite the influence of external factors, students are expected to be impacted by the learning process. Consequently, many students do not operate based on gendered expectations.

It is important to note that although the following sections illustrate how children learn their gender roles, not all children are equally influenced in the socialisation process.

The Family

Gender socialisation involves children forming their gender identities by interacting with environmental influences (Leo Rhynie 2015) and the family is the first and most important influence in this socialization process (Bandura and Bussey 2004; Blakemore and Hill 2008; Amin et al 2018). The family is responsible for "shaping a child´s personality, emerging identity and self-esteem" (Lindsey 2016, p. 78). Although children eventually learn to form their gender self-concepts and beliefs, it is the parents who initially teach children the

meaning of being male or female (Emolu 2014; Leaper and Farkas 2014; Colaner and Rittenour 2015). It is important to note that parents´ attitude to gender is significant because they model the gender ideals that form the basis of their children´s understanding of gender roles. They have different expectations of their boys and girls and these expectations are internalised by the children (Kangethe et al. 2014; Lawson et al. 2015) who also learn to have different expectations of men and women in their interaction (Hoominfar 2019).

The family in Jamaica is uniquely structured. It is not a homogenous society, so there are different types of families within. (Ricketts 2000). It is a patriarchal society in which males are bestowed certain privileges and socialisation practices differentiate what is valued in males and females. There is also a prevalence of children born out of marriage, many in common-law unions (Mohammed and Perkins 1999; Anderson and Daley 2014). Furthermore, about 47 per cent of households in Jamaica are headed by a single female (Planning Institute of Jamaica 2014; STATIN 2014; Green et al 2019). Smith coined the term "matrifocal" in the 1950s to describe Caribbean families that are dominated by mothers and grandmothers and in some cases, assisted by other female members of the family who assisted with care as well as economic situations when needed (Blank 2013). This creates an image of the varied influences in gender construction in Jamaica.

Gender socialization practices are generally evident in the chores that males and females are assigned such as "doing yard work, cooking in the kitchen, caring for children, working on a presentation for one's boss" (West and Zimmerman 1987, cited in Carter 2014, p.246). Girls are restricted mainly to the domestic sphere and normally receive more encouragement and support (MSI EQUATE 2005).   They are assigned household chores, assist with childcare, and are generally considered easier to take care of. (Leo-Rhynie 2015 and Brown and Chevannes 1995, cited in Clark 2005). They are treated more strictly than boys, are kept closer to home and if they are seen outdoors, are often sent indoors to read a book (Blank 2013). Their participation in the domestic sphere means they are expected to be responsible, disciplined individuals who engage in repetitive, uninteresting tasks (Figueroa 1999 and 2004) without complaint. The skills and attitudes that girls learn from these tasks in the domestic sphere, equip them for the routines of the school (Evans 1999; Figueroa 2004; MSI EQUATE 2005). Sitting still and copying tasks from a board are considered to be more

closely aligned with the restrictions placed on girls in the home and not to the freedoms afforded to boys who are permitted to socialise in the streets, play sports (Blank 2013) and explore their environment with little or no inhibition (Basu et al. 2017).

The Jamaican family values good manners in both boys and girls but it is more closely monitored among girls. These differences in gender roles that are transmitted in the family are best depicted in Chevannes´ (2001 and 2002) Guyanese reference to ´tie the heifer and loose the bull´ which indicates that parents in the Caribbean islands tend to keep their daughters close while boys are allowed greater freedom. It is also notable that parents tend to interact more with smaller children (PIOJ 2014) and appear to be involved to a limited extent in the education of their children (Ricketts and Anderson 2009; Brown and Johnson 2008). In consideration of discipline in the family, boys are more likely to experience corporal punishment than girls (Mondesire and Dublin 1996, cited in Blank 2013) and this corporal punishment is usually administered by the father in the nuclear family. The forgoing indicates that the family is an important contributor to the Jamaican educational experience.

The School

Although gender socialisation begins in the family, the school is also a powerful agent of socialisation that perpetuates socially constructed gender roles. A study conducted by Altinyelken (2015) for USAID indicates that gender socialisation and the gender stereotypes that are transmitted have a significant impact on the educational experiences of boys and girls in Jamaica. The students develop their gender identities through interaction with teachers, peers, the curriculum and by engaging in extracurricular activities. (Kangethe et al. 2014). With regards to peer socialisation, Lindsey (2016) found games to be a significant tool in gender socialisation. For instance, there are distinct gender roles in the games played by boys and girls. Boys tend to play more complex, competitive games with many players which train them to be competitive. On the other hand, girls tend to play hopscotch and jump rope which is said to prevent them from quickly learning to be competitive or to assume several roles simultaneously, a skill learnt in groups. Although the study has made these claims, it cannot be assumed that all boys are competitive or all girls aren´t. Additionally, USAID (2008)

suggested that gender socialisation often leads to a gendered environment in the school setting.

Teachers also influence the academic environment, alter students´ behaviour and ultimately, their culture (Legewie and Diprete 2012) by transmitting gendered messages. Teachers have implicit and explicit expectations of their male and female students which do not only affect them academically but impact their motivation to achieve, attitudes, beliefs, and behaviour (Clarke 2005; Leaper and Farkas 2014).   Socialisation in the school environment is mainly disseminated through the hidden curriculum. (Alsubaie 2015). Lessons are transmitted through the subjects being taught, but many messages are transmitted subtly. The tendency for girls to do subjects such as home science, languages and nursing, subjects that socialise girls towards what is considered feminine, caregiving jobs. On the other hand, boys gravitate towards mathematics, science and technical subjects which are generally considered to be masculine. (Chege and Sifuna 2006; Jha and Kelleher 2006). Single-sex schools, in particular, tend to perpetuate these gendered expectations in that the curriculum tends to include only some subject areas. For instance, many girls´ schools in Jamaica do not offer woodwork and welding and many boys´ schools do not offer clothing and textiles or office procedures. (Bailey 1997).

Additionally, school processes tend to emphasise separation. According to Evans (2006), gender roles are communicated in the separation that is an integral part of the Jamaican school system. This is evident in the way the names are organised in the register, the formation of two lines for boys and girls and the strict rules which restrict boy-girl interaction. Further, the lessons that are transmitted in the schools are often in the textbooks, which represent the differing roles of boys and girls. According to Kerezty (2009) textbooks "represent the everyday life for children ... the hidden curriculum has an identity-forming role, since it mediates the gender-specific expectations, norms, and behaviours, and therefore it contributes to the reproduction of social inequalities in the society. Thus, as part of the hidden curriculum, textbooks might transform, strengthen or diminish the developed and developing power relations both in the classroom and in the society" (p. 3). The depiction of men as astronauts, musicians, and managers while women are depicted as nurses (Robinson 1995, cited in Evans 2001) expose students to a stereotypical and inaccurate view of society

(Leo-Rhynie and Pencle 2002) and one can argue that it influences girls´ pursuit of subjects in the Arts, as well as their domination of careers in these fields. Drayton (1997) did a content analysis of 27 English textbooks. It was found that most of the men were depicted in executive and managerial positions while the women were shown in unskilled jobs. These subtle messages within the curriculum, depict a belief in male superior leadership ability.

Furthermore, the cultural context in which students operate, shape their understanding of gender roles. Research conducted in Jamaica by Evans (2001), Leo-Rhynie and Pencle (2002) Plummer et al (2008) indicates that girls enter school more prepared than boys. They argue that boys tend to be more aggressive and are exposed to more aggressive treatment by their teachers, often due to poorer conduct and less efficient work ethic than girls. This paves the way for the differential performance which has dominated more recent research such as that conducted by Ellis (2018) and Walters and Carpenter (2017). Other studies by Leo-Rhynie and Minott (2008 and 2009) and Bailey and Brown (1998) share important similarities. They portray the Jamaican boy as having characteristics that are resistant to the strict and rule-oriented education system. Even at the primary and early childhood levels, many girls were presented as creative, neat, mature, prepared, and eager to learn. On the other hand, the boys were often found to be more hyperactive, spontaneous, distracted, lacked interest, and preferred to play outdoors. While there are some similarities among Caribbean boys, they found that boys in St Vincent and Guyana entered school with a slightly greater advantage in cognitive skills due to the difference in socialisation and expectations of boys and girls.

Teachers as Authority Figures

In the same way, the Jamaican school is held in high regard as an agent of socialisation, the teachers are also held in high esteem by both parents and children. According to Lambert et al (2001), teachers in Jamaica are highly respected. This is evident in the profession being referred to as a "noble profession". Respect is further evident in parents referring to teachers as their children´s "daytime parents" and there is an annual celebration of a "National Teacher´s Day" (p. 548). Furthermore, parents tend to seek and trust the advice of teachers on areas such as socialisation (Brice-Baker 1996, cited in Lambert et al. 2001).

The authority of the teacher is evidenced in how they manage the classroom. Although classroom management can be quite challenging, educational psychologists believe that this must be handled effectively to "increase students learning opportunities" (Esmaeili et al. 2015, p.1). The teacher´s authority may be understood through Weber´s definition of authority as the probability that a command that is given with specific objectives, will be obeyed by the person or group to whom it is directed (Weber 1978, cited in Haugaard 2018). This is often a challenge as students may display antagonism to having restrictions placed on their spontaneity. The Ministry of Education in Jamaica indicated that the teacher´s authority is necessary to ensure that the learning process takes place (Jamaica MOEY 2011). To facilitate the learning process, the teacher is said to utilise five types of authority.

Firstly, referent authority involves the teacher developing positive relationships with students, often investing emotionally in these relationships by showing respect and affection. Secondly, teachers are also seen as authority figures based on their expert knowledge in their chosen fields. When students perceive them as knowledgeable and well prepared, they tend to show their teachers respect. Thirdly, reward authority is also used to positively influence student's behaviour. In this situation, teachers utilise positive reinforcements such as prizes, responsibility, privilege, or grades to encourage students. Although this is beneficial to students, it can lead to students working only for rewards. Conversely, there is also the use of coercive or punishment authority. Here the teacher uses reprimand, punishment, humiliation, withdrawal of affection and in some cases expulsion from the classroom or school. Finally, the teacher is also an authority figure based on his or her position. The teacher is responsible for all the activities in the classroom. In some situations where disciplinary measures are needed, students may be referred to the principal (Jamaica MOEY 2011; Esmaeili et al. 2015) or the Dean of Discipline in Jamaican schools.

Effective classroom management requires that teachers find a balance among these different styles to promote motivation, communication, and discipline. This is sometimes a challenge for some Jamaican teachers who have historically been intolerant of behaviours such as lying, stealing, disrespect or simply being rude. Lambert et al (2001) have found that Jamaican teachers are more intolerant of indiscipline among female students who in many cases internalise their problems. As the classroom is a site for student development and

educational activities to be executed Pace and Hemmings (2007) have suggested that for meaningful learning to take place, the teacher needs to find methods to persuade students to cooperate. Similarly, the Ministry of Education has suggested that teachers utilise their authority to create a student-focused learning environment. This includes preparing lesson plans, creating a stimulating learning environment that the students have helped to design, incorporating technology into the lessons and utilising varied instructional approaches, including sex-sensitive approaches when necessary (Jamaica MOEY 2011).

The Feminisation of Teaching

Another factor that is shown to have an impact on male academic achievement is the prevalence of female teachers, also referred to in the literature as the feminisation of teaching (Moreau 2019). Feminisation has been discussed as a problem that needs to be corrected due to its perceived adverse effect on male students and masculinisation as the desired goal (Boinet 2014; Sarnou 2018; Polony 2011, cited in Moreau 2019). The term ´feminisation of education has been used to refer to the predominance of female teachers (Parry 2000; Drudy 2008; Watson et al. 2019; Antecol et al. 2015; Martino 2014; Lahelma 2014) as well as the transformation of school cultures into feminised spaces which place greater worth on feminine values over masculine values.

For a long time, feminisation has been examined within the context of its deleterious effect on male achievement (Martino 2008; Sarnou 2018). A boy´s gender identity, in its current state, is argued to be detrimental to his educational achievement in the Caribbean and the female teacher´s sex has often also been blamed for boys´ under-achievement (Skelton 2002; Carrington and Skelton 2003). Although this perspective is prevalent in the literature, it must be acknowledged that there are conflicts in the findings. For instance, research conducted in both the United States and the Netherlands has confirmed the conflicting nature of the literature on the effect of the teacher´s sex on achievement (Chudgar and Sankar 2008; Watson et al. 2019). On the one hand, Carrington et al. (2007) conducted a study in the United States which revealed the benefits of matching students with a teacher of the same sex. On the other hand, the same research also found that in Finland and Australia the teacher´s sex had no impact on student performance. This shows that there are no general

theories that apply to all male students in all female-headed classrooms. There may be a need to revisit other factors such as student´s responsibility in the learning environment.

The debate on the feminisation of education has taken place within the context of the moral panic which focuses on male underachievement (OECD 2005; Skelton 2007). Parry (2000) highlighted that in 1872, 92.5 per cent of the teachers in the Caribbean were male. That situation has changed significantly, and a predominance of female teachers has not only been the Jamaican reality, but it has been the global reality for decades, especially in primary and elementary schools. World Bank statistics confirmed this female domination of education in the Caribbean. For instance, between 1973 and 2019, the number of female teachers ranged from 51 per cent in 1973 to 66 per cent in 2019 in the Small Caribbean States. (https://data.worldbank.org/indicator/SE.SEC.TCHR.FE.ZS?locations=S3). Similarly, the Statistical Institute of Jamaica highlighted a trend of female domination at all levels of the education system between 2013 and 2018. The most recent statistics were recorded in 2018. In that year there were 23, 832 teachers in Jamaica, 19,075 or 80 per cent of whom were females. (https://statinja.gov.jm/Demo_SocialStats/Education.aspx).

Additionally, Parry (2000), conducted a study of three Caribbean nations: Jamaica, Barbados and St Vincent and the Grenadines. The data showed a similar trend of female domination of the classroom in these Caribbean countries. However, St Vincent and the Grenadines had more male teachers in some instances because teachers are regarded as civil servants and can move around in various positions in the civil service. Consequently, a larger number of male teachers were to be seen at the secondary level of education. The study further showed that of the three countries studied, Jamaica had the lowest number of male teachers (Parry 2000). It is important to note, that current statistics reveal that the secondary level is also dominated by female teachers in St Vincent with a similar trend of higher male dropout rate. Between 2015 and 2018, there was an increase in the number of teachers each year, but the trend of female domination has continued (St Vincent and the Grenadines Statistical Digest 2017-2018).

The preoccupation with feminisation must be understood within the general context of the perception held of female-dominated domains. Feminisation is presented as beneficial to girls

because teachers are believed to typically pay more attention to girls and allow them more opportunities for participation (Clarke 2005). This perspective is not without opposition as Evans (2006) found that boys got more attention from their teachers, although this was often disciplinary. It, therefore, begs the question, whether it is the feminisation of teaching or the nature of the students within the classroom, that impact their achievement, Moreover, the prevalence of female teachers is argued to reflect a job that includes a nurturing role with teachers acting as a kind of mother figure for the students, and receive typically low remuneration (Basten 1997; Drudy 2008). The concern for feminisation is particularly important due to the predominance of female-headed households in Jamaica. The implication in this concern is that boys are impacted negatively by the absence of a father figure and the absence of a father in the home means there are no male figures in their lives. The issue with this implication is that it is assumed that the absence of a male teacher or a father figure in the home, deprives boys of positive male influence which can be acquired in other areas of their lives.

Despite the criticisms of the feminisation of education and the suggestion that boys need male role models in the form of male teachers, there haven´t been any suggestions about how these role models would be selected nor has it been proven that male teachers make better teachers for boys. (Riordan 1985; Lee and Bryk 1986; Kelleher 2011). The depiction of feminisation as a problem and masculinisation as the solution (Moreau 2019) due to the number of women in the profession, reflects a wider perception of the female domain as less valuable than male-dominated areas. (Basten 1997).

To address the perceived impact of feminisation there has been a reference to the idea of ´recuperative masculinity politics´ (Lingard 2007; Lingard and Mills 2012) which requires that corrective educational measures be implemented that will address both the attitude and outcomes of male students. For instance, the anxiety about feminisation has led to the call for more male teachers to enter the profession and become role models for these boys (Sexton 2015; Clark 2019) although there is no conclusive evidence that the sex of the teacher impacts performance. This is hoped to encourage boy-friendly schools in which boys no longer view learning as feminine (Carr-Gregg 2004, cited in Martino and Kehler 2006) Male teachers have largely been concentrated in the traditionally male-dominated subject areas and

many are subjected to the stereotypical views, often by their female colleagues, who have bought into the perception of teaching being a female job. The role of a male teacher, therefore, does not subscribe to the traditional perception of masculinity which teaches gender roles by ´real men´ (Martino 2008). By perceiving males as occupying a feminised space, male teachers often do not qualify as ´real men´ (Parry 2000). Moreover, amid these varying perspectives on the role of men functioning as a solution (Clarke 2005; Kelleher 2011) for the issues of boys in school, the question must be asked whether men want the task of becoming role models. Parry (2000) found that male teachers tend to transmit the stereotypical masculine gender characteristics which have been described throughout the literature as being an antithesis to academic performance. Consequently, while male role models may offer the possibility of merit in the male under-achievement debate, there probably shouldn´t be significant reliance on men, who themselves have been subjected to similar gender socialisation and may continue to uphold the masculine values that will be discussed in the next section.

Masculinity and Male Privilege

Masculinity

The practice of masculinity in Jamaica offers an interesting insight into a possible factor that impacts male achievement. Masculinity is constructed based on the gendered messages that are communicated through the socialisation institutions. Masculinity is not fixed or embedded, it is tractable, influenced by political, historical, and social circumstances (Totten 2003; Connell and Messerschmidt 2005; Schrock and Schwalbe 2009; James and Davis 2014). Masculinity is interconnected with the patriarchal culture of Jamaica which involves men dominating both the private and public spheres. (Thame and Thakur 2014). The focus on studying masculinity in the Caribbean emerged as a response to the impact of the second wave of feminism on the region in the 1970s (Reddock 2003). It has however become a common theme in the literature, depicting masculinity revolving around a set of obligations and taboos (Plummer 2013).

Masculine performances are especially heightened when they are in the presence of other men. They tend to avoid any actions that cause them to appear effeminate, soft, gay, or disloyal to their peer groups (Plummer 2013; James and Davis 2014). Notably, young boys aspire to be perceived as masculine and in many cases, their behaviour is policed by their peers to ensure that they meet acceptable masculine standards (Plummer et al. 2008). Although the family and school were discussed as having a significant impact on gender identity, Chevannes (1999) found that it is the peer group that has the most significant influence on a boy's construction of masculinity. Although this influence can be good, it also has the potential to be extremely bad as it often depicts the violent and predatory aspects of street culture (Bailey et al. 1998; Plummer et al. 2008).

The peer group has a strong influence on a boy´s gender identity development (Plummer et al. 2008). The peer group acts as an agent of socialisation with its own set of values and attitudes which are often passed on away from the observation of adults (Chevannes 1999; Plummer 2005) and often in opposition to the authority of adults. For this reason, responsibility for the state of male achievement cannot only be blamed on the family, school, and media. Research conducted in Jamaica by Plummer et al (2008), Chevannes (1999) and Bailey et al (1998) revealed that the peer group engages in policing masculinity. Boys are held to a specific standard that involves risk-taking and non-conformity results in their standard of judgement and punishment. Engagement with the peer group appears to be closely aligned to the rise of hard masculinity. The rise of hard or toxic masculinity and the embrace of the macho culture result in boys rejecting education, anything that is associated with femininity and, in many cases, engage in risky or anti-social behaviour; (Chevannes 1999) in fact, the statistics show that males are the main perpetrators of criminal activities in Jamaica (Chevannes 1999; Leslie 2010; Orlando and Lundwall 2010; Banet Weiser and Miltner 2016; Harriott and Jones 2016). In a report sponsored by the Inter-American Development Bank, Harriott and Jones (2016) found that 97.3 per cent of all persons arrested for murder in 2013 were young males under the age of 35. Addressing youth at risk and finding policy solutions that can address both the violence and economic issues (Orlando and Lundwall 2010) are particularly important. Addressing this issue could result in significant economic growth in Jamaica (UNODC and World bank 2007).

Patriarchal masculinity is also presented as being privileged and hegemonic in Jamaica. It is especially evident in governmental institutions in which there is an overrepresentation of men in government and preservation of patriarchal ideology (Thame and Thakur 2014). Masculinity also plays a significant role in promoting aggression and violence (Davis and deHaan 2011) and can be seen in the focus on hypersexuality in the context of heterosexual relationships while simultaneously displaying low tolerance for homosexual relationships. (White and Carr 2005; Reddock 2011; Figueroa et al. 2015).

Homophobia in Jamaica

Jamaica is one of eighty (80) countries in the world that continues to criminalize homosexuality (Lovell 2016). Homophobia is perpetuated by institutions such as the government, church, law enforcement, law, health care, and popular culture (Charles 2011). It is not only internalised and reflected in daily interactions among individuals, but it is also reflected in the nation´s laws (in Article 76 Jamaica Offences Against the Person Act) which support and, in some cases, reinforce the hostility (Gaskins 2013; Lovell 2016) directed at persons whose relationship is equated with bestiality and thus punishable by law. Sometimes there are also immediate consequences through mob violence (Charles 2011; Raffaella 2014 and Lovell 2016). The homophobic sentiments are not only displayed by men who seek to display their masculinity, but by large segments of the society including by political and religious leaders (Luton 2009). The sentiments are rooted in the Christian beliefs of a largely protestant society that draws its values from interpretations of the Bible (LaFont 2001; Farquharson 2005; Charles 2011).

The influence of the Church must not be underestimated. The biblical teachings have such far-reaching effects that even individuals who do not hold any faith, use scriptures to perpetuate the sexual division. Preachers use the pulpit as a platform from which they cast judgment on what is considered an immoral lifestyle. They reference various Bible stories such as the story of Sodom and Gomorrah in Genesis 19 (Hewitt 2016) to influence the perspectives on homosexual relationships.

The perspectives on homosexuality are quite popular in the dancehall culture which is very influential on the youths. (Gutzmore 2004; Farquharson 2005). The lyrics in many of the

popular songs tend to encourage violence towards anyone who is gay. For instance, "Boom bye-bye in a batty boy head", "Log on and step on chi-chi man" are only two of the songs that indicate the proposed treatment of "battyman or chi-chi man" local homophobic terms. (Plummer 2013). It is within this context that students operate and boys, in particular, are influenced to perform a version of masculinity that may oppose academic achievement. The culture of homophobia can thus be considered to have an impact on students´ opinions of the single-sex learning environment.

Male Privilege

Figueroa´s theory of male privilege offers an important voice in understanding how gender socialisation impacts male underachievement in Jamaica. Privilege is defined as the advantages enjoyed by individuals based on their membership to dominant groups that have more access to resources and power than marginalised citizens (Bailey 1998; Sidanius and Pratto 2001). His theory challenges Miller´s marginalisation theory, which suggests that Jamaican males have been historically marginalised. Professor Errol Miller (1991) theorised that Jamaican males have been marginalised, evidenced by the decline in male participation and performance in education and their decline in occupying the highest paying and most prestigious jobs, especially the white-collar jobs. This theory is problematic and has also been challenged by other researchers such as Chevannes (1999) and Lindsay (2002) who argue that males in Jamaica are certainly not marginalised.

Chevannes (1999) theorised that the main issue is that males under participate compared to females. He believed that men were said to be marginalised because their unemployment tended to be more visible. In reality, girls are more likely to be unemployed but tend to remain at home rather than in the streets. Bailey (1997) also found that men and women have equal access to resources and as there are no policies, legislations or types of stereotypes that discriminate against men, one cannot argue that they are marginalised in Jamaica.

Male privilege is interconnected with hegemonic masculinity and the benefits afforded to men in a patriarchal society (Flood and Pease 2005). Although privilege and advantages are

interconnected, not all advantages or benefits are considered positive (Bailey 1998). Those who are privileged tend to be unaware of their position of privilege (Flood and Pease 2005; Noble and Pease 2011), a position that generally undermines gender equality and reinforces gendered processes (Chappell and Waylen 2013). Hegemonic masculinity appears to be most honoured or privileged; it embraces characteristics of strength that are generally associated with men (Bjarnegård 2013). Male privilege tends to be discussed in contrast to female disadvantage, but it must be noted that gay men are also excluded from these privileges which Connell (1987) refers to as ´patriarchal dividend. ´

Being granted this privilege does not automatically guarantee success among Jamaican males. Figueroa´s (2004) theory, which references Jamaican men, suggests that they have historically occupied a privileged position which included access to more resources, power, and the opportunity to occupy a larger space in the society. Nevertheless, their gender socialisation predisposed them to underachieve while girls continue to enrol in larger numbers at all levels of the education system, including tertiary (Reddock 2010; Stoet and Geary 2020). The clear imbalance in male and female participation in higher education indicates that there are implications for adverse social and economic consequences when large portions of males are ill-prepared to contribute to the labour force (Stoet and Greary 2020). One reason for the high female participation is that they feel obligated to study to access employment (Seguino 2003) and they recognize that they must make greater investments to attain the same financial remuneration as men (McGivney 2004). Additionally, despite the increase in the percentage of female participation in the labour force, some males continue to benefit from their privilege, occupying the top positions (Bellony et al. 2010) in organisations in various industries. They earn higher wages and have a higher rate of employment, despite lower levels of certification and enjoy the benefits of informal activities, some of which are often illegal (Bailey 2014).

The foregoing challenges faced by students in the Jamaican education system have been supported by various intervention efforts. Despite this, the issue of male underachievement persists. There is therefore a need for new and focussed efforts to deal with this persistent issue.

Local Perspectives and Intervention Efforts

Tackling the male underachievement crisis is a brave undertaking due to its apparent intractable characteristic (Myatt 2018). Over the years officials and administrators in Jamaica have expressed concern and continue to call for innovative or fresh ways to address the crisis. One educator, Campbell (2013) has called for the crisis to be addressed with urgency. Public opinion among administrators and academics in Jamaica has expressed the need for more focused initiatives, arguing that the education system may be skewed against boys (Thompson 2017). Former Minister of Education Ruel Reid (2015) claimed that girls are at an advantage as they are given more support at home. This perspective reflects a tendency to blame females for the disadvantages of male students (Parry 1997). Further suggestions include the increase of positive male role models within the school system. This should challenge the hegemonic perception of masculinity and provide benefits to all male students. The dominance of female teachers in the education system (Cooke 2010) has been referenced as a disadvantage for male students; thus, there has been a call for boys to be more included in forming gender policies (Campbell 2018).

The perspectives on the issue vary. Educators such as one former Jamaica Teachers´ Association (JTA) president appear to have accepted the essentialist view that boys and girls learn differently based on natural differences while others such as Donald Reece Chairman of the Ecumenical Education Committee argue that they have the same potential; technological and hands-on methods should be employed to harness the potential of male students in Jamaica and deter them from potential criminal participation (Francis 2015). Further, administrators such as Cooke (2010) supported this position as she did not notice a distinct difference in male and female performance in the high school that she leads.

There was a further belief that males should be exposed to ´ boy-friendly ´ curricula, there should be an intentional de-feminization of the system and males should be included on what Campbell (2013) refers to as the ´gender board´, (para. 13) to facilitate advocacy for issues that benefit boys. This focus on the impact of the teacher´s sex on male underperformance is ubiquitous in the discourse on the gender gap in education. Campbell (2013, para.11) argued that ´recuperative masculinity politics´ may be the best way to address the male disadvantage.

However, while boys´ underachievement must be urgently addressed, his suggestion that privileges that were shifted to girls must be returned to boys, in no way fully addresses the issue of the gender gap. Instead, the responsibility for male underachievement has been shifted to their female counterparts who have been villainized (Parry 1997) during a process that was intended to redress the perceived disadvantage of male students. It implied that boys fail because girls succeed rather than exploring the possibility of a mutually beneficial solution. The strategies to address the gender gap must reflect that all males and all females are not homogenous, each group is multifaceted and indicate that social, political, psychological, historical and educational factors contribute to a more holistic perspective.

Over the years there have been reforms and implementations intended to improve schooling in Jamaica. Between 1997 and 2007 approximately nine projects were implemented to, among other things, improve the infrastructure, the quality of teaching, learning behaviour and improve the numeracy and literacy of students especially those in low performing institutions (Dye et al. 2008). Many of these were implemented at the primary level but were intended to address an underachievement crisis that begins at the primary school level. The gap in male and female attendance in the 1980s and later in the 1990s (Bailey et al. 1996) inspired the need for the Primary Education Improvement Project (PEIP). It was implemented to among other things, bridge this gap (Dye et al. 2008) and prepare students for secondary education.

The deficiencies were also evident in the secondary curricula. Bailey (2004) highlighted that there were issues with the inadequate provision, access, staffing and inequities in resource allocation: all of which impacted the quality of instruction and student learning. The project Reform of Secondary Education (ROSE) was therefore implemented to increase equity, improve learning outcomes and the overall productivity of the students (Knight and Rapley 2007). The justification for this curriculum was that it would provide equitable access to all students in grades seven to nine (7-9) and included a career education that would aid in preparing them for a labour market that is in many cases inequitable. Furthermore, in 2015 the Ministry of Education began training about forty (40) trainers who would in turn train classroom teachers in the differences in how boys and girls learn and the strategies that may

be implemented to address the differences in their academic performance, so they can implement strategies that are intended to close the gender gap (Thompson 2017).

Underachievement in the grade four literacy test, Grade Six Achievement Test (GSAT) renamed Primary Exit Profile (PEP) and the Caribbean Secondary Examination Certificate (CSEC), which is the focus of this study, inspired further transformative initiatives such as the Task Force on Educational Reform (Davis via UNESCO 2004; Dye et al. 2008). Its focus was on the establishment of a learner-centred environment that is both equitable and accessible to students up to grade eleven (Jamaica Ministry of Education 2014). Additionally, the Program of Advancement Through Health and Education (PATH) was established in 2002 and remains in existence until the present. This program is intended to provide educational access to the most vulnerable who would otherwise be unable to attend school regularly. This indicates that Jamaica recognizes the importance of education to its national economic goals (World Bank 2015). However, many of the projects that were commissioned and implemented towards improved academic performance do not specifically target male underachievement (Vision 2030 Jamaica 2009).

Several other strategies were also geared towards the overall development of the education system. These strategies focused mainly on providing support for teachers through training and licensing, professional development, and management training. There is an effort to provide students with greater access to courses, infrastructure improvement to increase access as well as provide students with increased course access and reduction in institutions that continue to operate a shift system (World Bank 2015; Ministry of Education. 2016c).

One initiative, Expanding Educational Horizons (EEH) targeted sex, and male students specifically. The objective of the project was to address male underachievement. Dye et al (2008) stated that both the Gender specialist and participants found that the program had inadequate resources and there was a failure to explain the strategies needed for student improvement. The project, however, resulted in the creation of single-sex classrooms in three coeducational schools, increased employment of male teachers as well as, the establishment of male mentorship programs.

Finally, there has also been a trial of what was dubbed ´Advancing the Education of Boys´ 2013 project which was piloted in Jamaica but was intended to later be implemented in three other Caribbean countries. This project was a broad initiative established to mainly focus on addressing school leadership and intervention strategies that would address the educational needs of boys. The general objective was to implement intervention strategies in one all-boys school and twelve (12) coeducational high schools. They hoped that these strategies would enable underperforming male students to improve their academic performance and, in this regard, address their cognitive and affective needs. (Jamaica MOEY and JIS 2013; Smith-Edwards 2013). This promising project was however short-lived as by 2015 it came to an end when it failed to receive continued Commonwealth funding.

In sum, after the implementation of several projects over the years, parity remains elusive and female academic dominance persists, eliciting the concern of educational policy analysts for male students (Heyneman and Stern 2015).

Summary

This chapter has articulated details of the local context of this study. It has painted a picture of the setting within which the participants operate and has also provided a cultural representation of what influences the participants in the study. The research context has provided the lens through which the literature, research methods and the findings of this study may be viewed. By providing this foundation for the study, the audience is better able to understand statements that are made and the conclusions that are drawn later in the study.

CHAPTER THREE - Literature Review

Introduction

The body of literature on male´ underachievement, indicates a trend that does not only point to male academic underachievement but also male under participation. This has resulted in what is referred to in the literature as a ´moral panic´. ´Moral panic´ is a concept that was first used by Stanley Cohen in his 1972 edition of *Folk Devils and Moral Panics* to refer to the ´irrational´ fear that a group, in this case, underachieving males, are somehow a threat to the values and interests of the society (Cohen 2002). This perceived male disadvantage has been perpetuated by the news media, policymakers, and society in general even as it was criticised in other parts of the literature (Figueroa 2004; Flood and Pease 2005). Given these varied perspectives in the literature, there appears to be a demand for a shift in the pedagogical strategies employed in educating male students (Clarke 2005; Jha and Kelleher 2006; Faria et al. 2012; Jha and Pouezevara 2016; The Commonwealth Education Hub 2017).

Single-sex instruction has been explored as a possible solution to male underachievement (Parry 2000; Anfara and Martens 2008; Sullivan et al. 2010; Pahlke and Hyde 2016) at all levels of the education system (Mael et al. 2005 and O´Donoghue 2018). Studies on single-sex education span various research contexts such as the United Kingdom, United States, Canada, Switzerland, Australia, Asia, Latin America, and the Caribbean (Mulholland et al. 2004; Eisenkopf et al. 2011; Jackson 2012; Blair 2013; Hahn et al. 2014; Dustmann et al. 2018) and have indicated that this type of instruction is offered both in private and public institutions. Despite the extensive research findings that suggested that single-sex education may offer academic benefits to both male and female students, there is also the contrasting perspective that reminds us that simply changing the school or class type from coeducational to single-sex does not result in academic improvement (Smithers and Robinson 2006; Anfara and Martens 2008; Heinesen 2010, cited in Blair 2013) nor do all reforms lead to academic gains (Halpern et al. 2011). The required gains are believed to require further consideration of the quality of the training received by teachers (Jacobs and Leach 2011), the nature of the learning environment (Blair 2011), its ability to meet the needs of the students (Rambla et al.

2008) the socio-economic status of the parents, and the ability of the students (Smithers and Robinson 2006).

Among the viewpoints on single-sex schooling, are researchers who argue that students´ exposure to single-sex instruction mitigates the imbalance in male-female academic performance (Lee et al. 2014), that there are greater academic gains for female students (Evans 2002; Mulholland et al. 2004; Belcher et al. 2006; Gibb et al 2008; Helpern et al. 2011; Blair 2013; Lee et al 2014; Pahlke and Hyde 2016; Dustmann et al. 2018; Kocak 2020), some argue that there are greater benefits for male students (Booth and Nolen 2009; Greig 2011; Hahn et al 2014; Jackson 2012 & 2016; O´Donoghue 2018; Erdoğdu 2020) while others have argued that there is no difference in its effect on male or female achievement (Anfara and Mertens 2008). Other perceptions of the effects of single-sex education are said to range from its impact on students´ academic self-concept which refers to their perception of their academic abilities (Belcher et al. 2006; Ordaz-Villegas 2013; Sari 2017, PISA In Focus 2015) to how it addresses students´ specific learning needs (Gurian 2010; Bristol 2015). Furthermore, the literature indicates that differences in the findings do not only vary based on the research context but also based on characteristics that are controlled for. These variations in research findings on single-sex instruction indicate that there are conflicts in the literature. In other words, there is no conclusive evidence about who benefits and what those benefits are.

The purpose of this chapter is to engage with the literature that considers the benefits of single-sex schooling in general, as well as its benefits as a strategy to address male underachievement. Firstly, the chapter begins with a brief review of the literature on the perception of coeducational instruction. This discussion is important as it describes the context in which the disparities that inspire sex segregation have flourished. Here there is a focus on the issues that are believed to impede male academic performance within the coeducational environment. Secondly, there is an exploration of the performance gap between male and female students that exists in the coeducational environment. Thirdly, the factors that are said to impact gendered education are articulated. In this section, there is a review of the literature that examines the role played by the school, the teacher´s sex and other factors which include the differing learning styles and academic self-concept of the

students. By examining these issues that surround sex-segregated education within a coeducational environment, a foundation is created for engagement with extant literature on single-sex instruction as a possible solution for academic underachievement. Fourthly, there is engagement with literature on the dominant discourses that frame the concept of male underachievement. In this section, there is a review of the findings from international studies on single-sex instruction followed by the benefits and drawbacks of this method of instruction with a specific focus on research conducted in various research contexts. The section will illuminate the contested nature of the research findings as I explore the perspectives on who benefits, as well as the cognitive and non-cognitive effects of single-sex instruction as it is presented in the literature. Finally, I will focus on the literature that makes a case for single-sex education as a beneficial strategy for male academic achievement. After exploring the arguments that represent decades of interrogating this strategy, I have to conclude that the strategy has shown significant effects in some contexts and has not proven to be beneficial for the global ´boy trouble´.

The Coeducational Debate

 The views in the literature on coeducational schooling vary from country to country and in some cases, they are impacted by people´s religious or political experiences (Sari 2017) or the socio-political context in which they operate (Parry 2000; Park 2018). The genesis of coeducational schooling varies, and in some cases, varying perspectives on its establishment have been offered. For instance, coeducation has been a part of the school system in the United States, since the early nineteenth century and was initially viewed by outsiders with scepticism. Despite this scepticism, it was thought that girls gained greater opportunities in the mixed environment (Rogers 2016). Coeducation became widespread later in Europe. After World War 11, many nations such as France (Roger 2020) and Poland (Dormus 2019) established some level of coeducational education (Eurydice 2010 and 2012) with its main objective being to provide equal access to education for boys and girls and to foster some level of gender equality. Other places such as Australia (Wills et al. 2006) and the Caribbean have also had a long history of coeducation. Jamaica, in particular, started the secondary school system with a single-sex school, but the other four institutions that were established afterwards were coeducational. These schools were established at the bequest of colonial

bureaucrats to educate the sons of colonial masters. However, later, various denominations took the reins, facilitating greater access to schooling for male and female students including whites, free blacks, and brown people (Mordecai and Mordecai 2001).

Coeducational schooling is the predominant form of schooling in the Caribbean. In Jamaica, primary schools and most secondary schools educate boys and girls together, and this structure has been illuminating the stark differences in both the participation and performance of the sexes that have occupied a central place in the Caribbean education discourse (Evans 2002). A lot of research has been done in this area, but the findings have been contradictory and inconclusive (Parry 2000; Aragonés-González et al. 2020) fluctuating between female advantage and male advantage, depending on the research context (LePore and Warren 1997; Mahony 2012; Sari 2017; Marsh 1989 cited in Koniewski and Hawrot 2021). One of the criticisms of the coeducational environment is its susceptibility to gender intensification. This term was first used by Hill and Lynch (1983) to indicate that adolescent boys and girls tend to experience pressure to conform to culturally sanctioned gender roles. (Priess et al. 2009). They spend more time thinking about themselves in gendered ways and are influenced by others who make gender-typed demands of them. (Sravanti and Sagar Kommu 2020). This perspective is however challenged by researchers such as Karpiak et al. (2007) and Jackson (2002) who found no differences between gender roles in single-sex and coeducational schools.

Further, the coeducational environment, in some cases, is presented as uniquely challenging to female students. Mahony (2012) describes it as socially and academically damaging to girls who are sometimes verbally abused and sexually harassed by boys who tend to distract their female counterparts with their louder, more boisterous behaviour (Greig 2011) in the coeducational environment. It impacts their achievement, self-esteem, and subject choice. These ideas must be discussed with caution as there is a growing body of literature that challenges whether coeducational learning reinforces the gender gap in subject choice (Sullivan, Joshi, and Leonard 2010; Halpern et al. 2011; Schneeweis and Zweimuller 2012; Park, Behrman, and Choi 2012; Booth, Cardona-Sosa, and Nolen 2013, cited in Park 2018).

The co-educational learning environment is described as less competitive for the girls in the study conducted by Robinson and Smithers (1999) in which they argue that many boys do not work hard enough. Further, in this environment, there tends to be underachievement in subject areas such as math and science, an absence from positions of authority and in some cases an increase in gender-stereotyping among female students (Burgess 1990). Proponents of single-sex education claim that girls are timider in a coeducational environment. They are less likely to participate in class discussions and display decreased self-confidence. (Saygili 2012, cited in Sari 2017).

The coeducational environment is also presented as excellent training for male students to assert dominance while girls are said to develop resistance strategies. (Mahoney 1988, cited in Leo-Rhynie and Pencle 2002). This perspective furthers the view that a coeducational environment perpetuates gender-role stereotypes (Jha and Kelleher 2006) and other stereotypes in terms of subject choice (Smyth 2010; Favara 2012) rather than being a site where students learn to develop positive attitudes towards each other and work together (Atherton 1972 and Hale 1929, cited in Anfara and Mertens 2008; Fabes et al. 2018).

The perceived disadvantages of coeducational learning are probably most evident in the proposition for the increase in students access to single-sex instruction. Studies on single-sex versus coeducational institutions have largely focussed on academic performance (Mulholland et al. 2004; George 2012; Hahn et al. 2014; Garcia-Garcia and Vasquez 2016; Spencer-Ernandez and George 2016; Pahlke and Hyde 2016; Dustmann et al. 2018). The studies that have looked at student performance and school types (Parry 2000; Mael et al. 2005; George 2012; Pahlke et al. 2014; Pahlke and Hyde 2016; Okafor and Mokwelu 2018) have yielded conflicting results, indicating that the findings in this area cannot be unquestionably accepted (Harker 2000). One can however argue that the merit in the perceived superiority of single-sex instruction lies in some of them being highly selective, often private institutions that recruit students from higher socio-economic backgrounds (Thomas 1996, cited in Robinson and Smither 1999; Koniewski and Hawrot 2021). The differences between the school types in the Caribbean and Jamaica, in particular, are not always based on whether they are single-sex or coeducational. Instead, the differences are largely based on whether they are traditional grammar schools that host students who attain

high test scores in their grade six exit exams and non-traditional schools that host students who attain lower test scores. (Evans 2000; Stockfelt 2016).

Amidst the shortcomings highlighted, the question remains whether a case can be made for coeducation. Proponents of coeducational education argue that it is a normal environment that prepares students for the outside world (Robinson and Smithers 1999), and it provides an environment in which boys and girls can exchange views (Robinson and Smithers 1999). Studies conducted in Barbados, suggest that coeducation is popular among male students and is described as possessing the advantage of preparing students for future occupational and interpersonal roles. (Payne and Newton 1990). Although the forgoing perspectives are dated, they seem to compare to contemporary perspectives in the literature that suggest that this environment facilitates socialization, unlike the single-sex environment which they regarded as violent, especially all-boys schools (Dormus 2019). The divided theories on coeducation challenge this perspective, suggesting that while girls are at risk of sexual violence, boys who are often the perpetrators, are sometimes impacted by physical violence and bullying. This does not mean girls do not participate in these activities. They are thought to exhibit more verbal and psychological forms of violence. (Pinheiro 2006).

The literature also indicates that there is no uniformity in the effects of the coeducational environment and single-sex environment on students´ achievement. Pahlke et al. (2014) conducted a meta-analysis that included data from 184 countries and found superior performance on the part of boys and girls in single-sex schools, yet when they controlled for random assignments in mathematics, there were no significant effects for students in single-sex or coeducational schools. Similarly, Campbell and Sanders (2002) cited studies conducted in the United States, Australia and Great Britain that found no difference in math or science performance based on school or class type (Wood et al. 1997). Leder and Forgasz (2020) found short term gains in favour of girls, Carrington (1993) found no difference between the school types in Barbados, a comparison which doesn´t seem fair since there is only one all boys and one all-girls school remaining to be compared to all other institutions on the island. Additionally, George (2012) found no difference in math achievement in Antigua based on school types and Garcia-Garcia and Vasquez (2015) found no difference in the performance of boys from single-sex and mixed classes in Catalonia but found a slight

difference in the performance of girls when scores for foreign languages were considered. The conflicts in the findings may have been impacted by the period in which the studies were conducted, the country context or characteristics controlled for, but that is arguable. What is not arguable is the greater preoccupation with single-sex schooling as a strategy to correct the issues that are regarded as persistent in the coeducational environment.

Finally, while the literature is not as preoccupied with coeducational schooling as it is with single-sex education, the perceived shortcomings of coeducation are illuminated to strengthen the case for new pedagogical approaches, especially for teaching boys. The gap in sex performance is impacted by the socialisation practices on the school site which further impacts students´ academic self-concept and subject choice. Furthermore, in some cases, it fails to address the variegated learning styles. It is these issues that have led to the perception in some parts of the literature that single-sex schooling may be worth pursuing as a strategy for academic improvement.

The Gap in Students´ Performance

The Role of the School

The literature has shown that the school is more than a site for the dissemination of academic knowledge. It is also said to play a central role in gender socialisation (Eckart and Tracy 1992; Kangethe et al. 2014; Molla 2016). This is a particularly important role in the students´ educational experience as it aids in identity formation. The role of the school is magnified in the study because of the vast amount of time children spend in school (Klein et al. 2007). Chapter two has provided details that indicate that the school occupies an important position in disseminating stereotypical behaviour. This behaviour is sometimes modelled by teachers who in some cases further facilitate gender biases in the school environment by assigning stereotypic labels and organising the students based on the same principles (Bigler et al. 2013).

In executing its responsibility, the school has been presented as restrictive and unaccommodating of the needs of male students in the Jamaican context (Figueroa 1996 and 2000). Although teachers may attempt to meet the needs of these male students, the teachers are often influenced by their knowledge of what it means to be a ´boy´ or a ´girl´ (MSI Equate 2005; Bristol 2015). Teachers often have specific, stereotypical expectations of male students (Figueroa 1998 and 2010; Chevannes 1999 and 2001) and Jamaican teachers, for instance, have been found to often portray low expectations of both the behaviour and academic performance of their male students (Jha and Kelleher 2006), resulting in the continuous display of traditional masculinity by these male students (Figueroa 2000). The idiosyncrasies of the male students tend to be less accepted as they are believed to result in less conforming behaviour (Figueroa 2000) which often leads to disproportional disciplinary measures being meted out to them (Husband 2012). Additionally, boys are then ´forced´ to adapt to a school system which is presented in the literature as being better able to respond to the needs of female students who tend to enter school already equipped with the skills needed in the classroom such as the ability to sit still and follow instructions (Leo-Rhynie and Pencle 2000; Figueroa 2000; Bailey 2004).

The Impact of the Teacher´s Sex

In addition to playing an integral role in students' learning, teachers have also been associated with the differential educational achievement of their male and female students (Bassi et al. 2018). Some researchers have blamed the gap in academic performance on the prevalence of female teachers (Kelleher 2011; Moreau 2019; Skelton 2002; Carrington and McPhee 2008; Ramsook et al. 2016; Moreau 2019) while other researchers such as proponents of ´recuperative masculinity´ (Lingard and Douglas 1999) have argued that many boys do not have a father or other positive male figure in their lives and could benefit from a teacher of the same sex. Furthermore, male underachievement is believed to be impacted by teachers being more attentive to their female students and less accommodating of boys, whose academic disadvantage in areas such as English is exacerbated by their perception that English is a ´feminine´ subject (Mitchell 2004, cited in Watson and Kehler 2012). The argument that female teachers in some way have a deleterious effect on boys´ schooling, fails to recognise the decades of male dominance of education under the tutelage of female teachers. It must also be noted that aspects of the literature highlight contrasting perspectives

although this is tinged with negative. Male students are presented as recipients of more attention from their teachers. According to Sadker and Sadker (1994), a few popular boys in the class often demand most of the teacher's attention by shouting responses while others gain more negative attention because of their disruptive behaviour. Additionally, high achieving boys and boys in mathematics class tend to receive more attention than females, and low achieving boys have been found to receive the least attention from their teachers (Bağ et al. 2014; Zakkamaris and Balash 2017).

Additionally, proponents of the argument that the sex of the teacher has an impact on student achievement have criticised female teachers for presumably being incapable of adequately inspiring male students as they are said to be unable to act as effective role models (Jha 2012) or of handling male disciplinary issues which are believed to impact male underachievement (West 2002). This perspective of matching teachers to students of the same sex has been corroborated by researchers such as Muralidharan and Sheth (2016) and Francis (2008) who found that female teachers worked more effectively with female students and male teachers with male students. These perspectives have also been challenged by researchers who have argued that more male teachers are required to act as role models for boys, mainly because many boys lack a father figure in the household and because it is felt that men understand boys more than their female counterparts do (Faulstich-Wieland 2013). Opinions on the importance of this type of relationship seemed positive in some instances. For instance, in one study that was conducted in Australia schoolboys were said to value the influence of their male teachers (West 2002) while a study that was conducted in Trinidad and Tobago found that the male teachers had a positive perception of their position as role models in education (Joseph 2016).

Although many researchers and policymakers have suggested that one of the solutions to male underachievement is to increase the number of male teachers, who may then become role models for these boys (West 2002; Watson et al 2010; Joseph 2016), they tend to focus on the stereotypical view of males as disciplinarians and ignore the possibility that many of these male teachers also regard "traditional ´macho´ or ´laddish´ behaviour" (Skelton 2002 p.78) as cool. Based on the literature there is certainly no conclusive evidence on the effects

of recruiting large numbers of male teachers (Skelton 2003; Majzub and Rais 2010, Martino 2008; Malaby and Ramsay 2011).

Many female teachers agree that while there is a role for male teachers in the lives of male students, female teachers also have an important role and are also role models for both male and female students (Jha 2012; Ramsook et al. 2016). Their argument rejects the criticism that female teachers are not disciplinarians and they need to adopt more masculine, authoritative characteristics (Norman 2013; Blom, Abrell and Wilson 2011, cited in Ramsook 2016; LaFountaine and Kamphoff 2016). It must however be acknowledged that studies that make these assertions tend to focus on females interacting with boys in male-dominated settings such as in sports.

 Further, there are many perspectives on the impact of female teachers in the coeducational classroom, suggesting that more male teachers are to be found in the all-boys setting. While this may be so, feminisation of the teaching profession appears to be in various school types and the literature does not conclusively display a pernicious effect on all boys who perform or who operate in this system. This raises questions about whether the focus on the teachers´ sex has facilitated inadequate exploration of other factors such as the teacher´s qualifications and his or her ability to engage students, especially in a single-sex environment that facilitates more targeted teaching and learning (Lingard et al. 1999; Martina et al. 2005) as well as the general learning environment.

Differential Learning Styles

Differential learning styles have also been explored in the literature for their impact on male academic underachievement. Studies in differential learning styles are no longer restricted to psychology or medicine but have been expanded to include other areas such as management and education (Yemane et al. 2017). Learning styles refer to how and the conditions under which individuals understand, process, and recall information (Youcef 2016). Students have varying learning styles and Felder and Henriques (1995) have found these styles to be closely aligned to the variegated teaching strategies employed by teachers. It has also been argued

that if these styles are accommodated, they could result in improved male academic performance (Yemane et al. 2017).

The essentialist theory is one theory that has been explored in the literature; that advocates for differential teaching strategies to address biological differences between male and female students.   The theory has been challenged for its focus on brain differences which Halpern et al. (2011) regard as not only unsubstantiated but have argued that the theory presents misinformation regarding neuro-behavioural science. Although the theory is flawed, it is necessary to briefly explore an existing, and in some circles, an important perspective in the body of literature. Some researchers have argued that the essentialists´ perspectives, are not only weak and unwarranted but are simply a method used to drive the establishment of single-sex schools (Eliot 2009 and 2011; Fine and Duke 2015; Sherwin 2015). This criticism responds to the essentialist perspective which suggests that there are fixed and innate cognitive differences between male and female students (Gelman and Taylor 2000; Gelman 2005). Based on this view, the brain is ´hardwired´ to learn in a specific way and the specific biological difference is argued to require sex segregated classrooms as coeducation only benefits female students (Sax 2005 and 2008). The issue with this latter statement is that it presents males and females as homogenous groups, with no ability to influence how they learn. It must be considered that all boys are not the same, many of them are doing well while others underperform for a variety of reasons. Furthermore, there are differences within sexes, and there are gender differences that result from the social factors that influence gender construction. Therefore, the essentialist perspective is incapable of fully encapsulating the differences between all male and female students (Figueroa 2010).

Learning differences have also been explored in other parts of the literature which indicate that researchers have continued to argue, for instance, that students learn by being involved in the learning process. Their intelligence is based on their experience rather than on being innate (Teixeira 2001, cited in Cavas and McCloughlin 2009). To ensure improved academic outcomes, these experiences are expected to be supported by appropriate teaching strategies employed by the instructors to match the learning styles of the students (Chen et al. 2014). According to Elliot (2011), the learning styles may be categorised into three distinct types: visual, auditory and kinesthetic learners. Although these are presented as a general reference

to male and female students, Elliot has concluded that these learning needs may be best addressed in a single sex rather than a coeducational environment (Gibb et al. 2008; Pahlke and Hyde 2016). The suggestion is that the learning environment that is ideal for boys may not meet the needs of girls (Sax 2005); thus, instructors are required to create a more sex-responsive environment in which teaching strategies are adapted to meet the differential learning needs or learning interests of male and female students (Hughes 2006, Watson et al. 2010). Boys are believed to require teaching strategies that accommodate their need for movement (Gurrian and Ballew 2003) and space which could result in the reduction of aggressive or inappropriate behaviour (Bonomo 2010). Given the current global demand for new boy-friendly pedagogical strategies, separating male and female students, and utilising specific teaching strategies may be an important strategy that teachers can employ. (Mulholland et al. 2004; Martino et al. 2005; Bristol 2015).

Another important perspective on gendered learning styles is expressed by those who generally challenge the learning style theory. Kirschner (2017) called for a general halt to the propagation of learning style theories because he claims that there is a difference between how persons prefer to learn and what leads to efficient learning and by focussing on these differing styles, distinct groups are created. Further, controversies surround the theory because it is said to have failed to lead to academic attainment (Mayer and Massa 2003 and 2006; Price 2004; Pashler et al. 2008) and although there are many ways to test learning styles, proponents of the theory have failed to provide evidence that indicates that teaching students according to the assigned categories aid in improved learning (Newton and Miah 2017; Rohrer and Pashler 2012). Instead of focussing on learning styles, educators probably should focus on the individual learning differences of the students (An and Carr 2017).

Academic Self-Concept

Academic self-concept also occupies an important role in the discussion on differences in male and female academic performance. Its importance lies in the fact that it occurs within a wide context that considers students´ varying environmental experiences which either negatively or positively impact academic success and ultimately their academic self-concept (Jenkins and Demaray 2015; Folastri et al. 2017). Academic self-concept refers to a student's

belief in their ability to learn and to participate in school-related tasks (Shavelson et al. 1976; Sullivan 2009; Wilson et al. 2014;). As students develop their academic self-concept, they learn to distinguish between their capacity to learn and understand in general and their ability to perform in school. Researchers such as Dijkstra et al. (2008), Marsh (2008) and Wilson et al. (2014), have explored the possible origins from which students´ academic self-concept is derived. They argue that it is derived from social comparisons which involve students comparing their academic ability to that of their peers while others compare their ideas or opinions. For other students, it is derived from the rigour of the course content. Students who engage in these comparisons arguably have higher academic self-concepts, while those who are placed in academically competitive groups, tend to suffer a decline in their academic self-concept as their performance may decline in a highly challenging environment. Additionally, a student´s academic ability is said to be connected to his or her academic self-concept (Marsh 2008). Students who have a history of attaining academic success, tend to have a higher academic self-concept (Marsh et al. 1999; Marsh 2011; Grygiel et al. 2017).

Self-concept has also been shown in the literature to be of great importance in student academic achievement (Camprara et al. 2008). The formulation of this academic self-concept often involves students incorporating gender stereotypes into their self-concept (Marsh and Yeung 1998; Wolter and Hannover 2016; Veas et al. 2016) which indicates the significance of the gender socialization process in academic achievement (Sinclair et al. 2019). Gender stereotypes are biased expectations that affect how males and females feel about themselves (Schneider 2004). For instance, girls are said to display a positive self-concept based on the social belief that girls are better at reading and language tasks (Retelsdorf et al. 2015) while boys are said to be convinced of their skills in mathematics (Tobin et al. 2010; Wolter and Hannover 2016). The literature generally revealed that male students tend to have a higher academic self-concept than their female counterparts. Female students often have a lower belief in their ability and expectancy that they will succeed in subjects such as physics or mathematics (Guo et al. 2015; Folastri et al. 2017; Jugović 2017). In looking at the effect of stereotypes on academic self-concept, it is important to note the age of the students who are impacted. Some of the literature appears to indicate that as children get older, they are more likely to endorse these traditional stereotypes (McKown and Weinstein 2003; Martinot et al. 2012) which tend to influence subject choice.

Others such as Sullivan (2009) found that single-sex schooling positively impacts students´ self-esteem, self-concept and motivates them to participate in sex atypical subjects compared to in coeducational institution where there is greater pressure to conform to gender stereotypes (Marsh and Yeung 1998; Jackson and Smith 2000; Shapka and Keating 2003). In this environment, girls are said to be more focussed and capable of completing tasks on time as they are away from the distraction of their male counterparts (Streitmatter 1998; Hughes 2006-7). Furthermore, they have the confidence to pose and answer questions without being impeded by boys (Evans 2002).

Like other parts of the literature, the benefits of single-sex schooling in improving academic self-concept are in some ways contested. On the one hand, Stannard (2018) found that single-sex schooling closes the achievement gap and accommodates the preferences of students. On the other hand, Law and Sikora (2020) found that students in a single-sex environment, do not have a higher self-concept in mathematics than their counterparts in the coeducational schools nor do they significantly outperform them. Furthermore, they found no difference in the career expectations of students in the single-sex environment compared to those in the coeducational schools.

A similar observation was made in a South Korean study, where boys and girls did not show any great difference in their performance in Maths and English: however, interestingly, although more boys enrolled in science classes, girls were more likely to enrol for Mathematics and other science subjects in the coeducational environment than in the single-sex schools (Park 2018). The contrasting findings indicate the complexities involved in finding the right solution to problems in schooling and demands a consideration that the research context influences the findings; thus, the benefits of each school type must be examined based on the context within which it operates.

Gender Differences in Subject Choice

The forgoing in highlighting the lower academic self-concept especially in specific subject areas prepares us for the literature that indicates that although women have made significant

progress in reversing the gender gap in education (Brenøe and Zölitz 2019), female students continue to be under-represented in Science Technology Engineering and Mathematics (STEM) (Guiso et al. 2008; Legewie and Diprete 2014; Else Quest et al. 2010, cited in Eisenkopf et al. 2015; Park et al. 2018). Much of the research on the gender gap in subject choice has focussed on female under-participation in Science Technology, Engineering and Mathematics (STEM), but there are also varying perspectives on male under-participation in non-science areas (Park 2018). The literature on the gender gap in participation in STEM indicates an imbalance in specific fields in STEM. For instance, the male-female ratio among college students in the United States in the fields of Biology, Chemistry and Mathematics is now 1 to 1 while it was found to be 4 to 1 in the fields of Physics, Engineering and Computer Science (Cheryan et al. 2017; Cimpian et al 2020). Furthermore, the girls who earn degrees in these areas earn more than their female counterparts in non-STEM areas, but many choose to work in education or healthcare rather than in a STEM occupation (Beede et al. 2011).

There has also been a similar trend in Jamaica. According to UNESCO (2020), Jamaica has not yet decided on a definition for STEM. Although girls have been making strides in academic achievement and groups such as Women in Engineering have been established on the campus of the University of Technology there have been calls for more women to enter STEM (Jamaica Observer 2019). Both the Minister of Culture, Gender, Entertainment and Sport (Jamaica Observer 2018) and the Minister of Technology (Jamaica Observer 2019) stated that in 2016 only 10 per cent of the students enrolled in Engineering at the University of the West Indies were women and 18 per cent were enrolled at the University of Technology. This indicates a need for greater female participation although the Minister of Technology claimed that when women enter this field, the attrition rate tends to be high. Despite all of this, it must be acknowledged that in some cases, the decision to focus on non-STEM fields of study is based on the student's decision to focus on what they feel they are good at, rather than on an area that will help them to succeed (March and Hau 2004).

In recent decades, significant value has been placed on STEM due to its impact on economic growth (Mumford and Smith 2007; Birch et al. 2009); consequently, there is a need for greater female participation in STEM in secondary schools, as well as in degree programs at the university level (Birch et al. 2009; President´s Council of Advisors on Science and

Technology 2012, cited in Park et al. 2018). In this regard, there has been some improvement, although there is still a significant gap between male and female participation in science (Park et al. 2012). For instance, in 2013 about 58 per cent of the STEM degrees in OECD countries and Australia, were earned by women, less than 30 per cent in engineering and less than 20 per cent in computer science (OECD 2013). Further, supporting data in other literature, indicates that female participation in Biology yielded 53 per cent Phds, 29 per cent in Mathematics and 32 per cent in the physical sciences (Penner and Willer 2019). Females have been found to study biology in larger numbers (Park 2018) than any other science subject. Additionally, according to a study conducted in the United States by Eddy et al. (2014), a large percentage (60%) of those studying biology at the undergraduate level were females but fewer females pursue the subject after this level of study.

The literature has not been clear in depicting the reasons for these gender differences in subject choice. There have been some contrasting explanations provided regarding the reasons for the differences in subject choice. Firstly, girls are influenced by external socialization factors such as parents and teachers who do not encourage them to participate in STEM (Reinking and Martin 2018). Brenøe and Zölitz (2019) found that peers also have a significant influence on female students´ subject choice while boys, although influenced by gender stereotypes as well, are less likely to make choices based on their peers. Girls are said to be less confident in their maths abilities (Sax et al. 2015) and the physical sciences in general (OECD 2010; Eccles 2011); they also have other options in areas dominated by females (Bredea and Nap 2019), they place value on areas that facilitate work-life balance (Diekman et al.2016), and in some cases, they have different career goals (Morgan et al. 2013). Other researchers have suggested that there are no clear reasons for gendered differences in the interests displayed nor in the reasons for these differences being maintained (Maltese and Cooper 2017; Brenøe and Zölitz 2019). It is however clear that female ability has not been highlighted as a reason for the gender difference in STEM (Kahn and Ginther 2017; Kollmayer et al. 2018). Understanding the causes of the imbalance in gender participation in STEM and finding solutions to the issue are important as the continued under-participation of women in STEM perpetuates the gender wage gap that exists worldwide (Beede et al. 2011; Blau and Kahn 2017; Card and Payne 2021). It also results in a loss of talent and reduction in productivity as many competent female students shy away

from STEM career fields (Weinberger 1999, Carnevale et al. 2011 cited in Breda and Napp 2019).

Additionally, the Programme for International Student Assessment (PISA) studied OECD nations and found that both high and low achieving girls have a lower academic self-confidence in mathematics than boys. They tend to perform well on tasks that are like those they had encountered in school but failed when they are required to think like scientists (Parker, Parker and Van Zanden 2018). These broad perspectives on the female psychological approach to science are largely stereotypical and fail to encompass a possible array of explanations for the female students, such as explanations that involve the role of the teachers, society, the selection processes employed (Eisenkopf 2015) and the students themselves in their perception of STEM.

There has also been a suggestion that single-sex institutions can operate as a site where the subject choice imbalance especially for girls and academic performance for boys can be addressed. The establishment of single-sex instruction is believed to counteract the stereotypes that impact students´ subject choice (Law and Sikora 2020) in schools. In this environment, girls are more confident and more likely to participate in and perform well in areas such as maths, chemistry, and physics (Gibb et al. 2008; Panizzon et al. 2018; Cools et al. 2019). This type of school is believed to promote gender equality and it encourages both boys and girls to pursue gender-atypical subject areas and girls, may be exposed to many females who teach STEM; an exposure that can provide necessary role models and encourage female students´ participation in science (Riordan 2015, cited in Law and Sikora 2020). Further, it reduces competition between male and female students, as well as gender role expectations by reducing the pressure placed on students to participate in traditional subject areas (Watson 1997; Cherney and Campbell 2011). Additionally, Hughes (2006-7) whose study focussed on the United States, suggested that many of the issues in education can be addressed if parents are given the option of single-sex instruction in public schools, rather than as private schooling.

This position on these perceived benefits of single-sex instruction has been challenged by the expectancy-value theory which suggests that regardless of the school type, women tend to dominate life sciences but under-participate in the physical sciences (Justman and Mendez 2018; Law and Sikora 2020). This is evident in studies conducted in places such as Kenya (OECD 2017; N´gangá et al 2018; Hermann and Kopasz 2019), Australia (Law and Sikora 2020) and Netherlands (van der Vleuten 2016). On the other hand, boys tend to gravitate towards the physical sciences, normally with a greater level of confidence, that may be due to the stereotypical perception that STEM is the male domain, a perspective internalised by boys who tend to persevere in these subject areas (Marsh et al. 2019), even in instances when they produce sub-optimal results (Penner and Willer 2019).

Although the literature seems to focus largely on the female under participation in STEM, it also highlights that male students under-participate in non-science subject areas. This under-participation is mainly based on gender role expectations and not on their perceived competence. There is a perception that boys´ preference for STEM in some ways results from boys´ superior ability in these subject areas (van der Vleuten et al. 2016); however, the point is being cautiously highlighted as it must be acknowledged that there is growing literature that indicates that ability or prior achievement does not solely determine students´ educational choices (Riegle-Crumb et al. 2012). Factors such as gender discrimination and unequal access to resources (Ceci and Williams 2011) and familial involvement in the scientific field (Sikora and Pokropek 2012) are also influential factors. Boys´ involvement in what is regarded as ´feminine´ or non-science areas is as important as the preoccupation with girls´ limited involvement in traditionally male-dominated fields. This does not only challenge the traditional gender stereotypes and cultural beliefs, but it changes the narrative and provide children with a new perspective on what is ´feminine´ or ´masculine´. Additionally, males who pursue non-traditional areas will possibly no longer have their male identity or sexuality challenged based on their educational choices (Perra and Ruspini 2013). A failure to address these areas will result in a reinforcement of children´s stereotypical ideas of ´masculine´ and ´feminine´ fields of study (Geerdink et al 2011).

Single-Sex Schooling: What the Research Shows.

Considering these perspectives on the issues that impact academic achievement, it is important to peruse the views on single-sex schooling. The literature on single-sex education is diverse and appears to focus mainly on its academic impact and to some extent non-cognitive effects such as opportunities for socialisation between the male and female students (Mlama et al. 2005; Smyth 2010; Wong et al. 2018), competition within specific groups (Lee et al. 2014) and other social effects such as crime (Jackson 2016). The diverse nature of the research on single-sex education is reflected in the lack of consensus on its benefits (Smithers and Robinson 2006; Halpern et al. 2011). Despite the lack of consensus on its psychological or academic benefits, there continues to be an increase in the number of single-sex schools in countries such as the United States (Bigler and Signorella 2011; Williams 2016). Literature that attempts to establish the efficacy of single-sex education versus co-education is hampered by methodological issues such as those that find it challenging to support differences in cognitive ability or attitude. These issues arise because other factors may impact students, such as innate ability, economic background, individual motivation, and the school choice made by parents (Jimenez and Lockheed 1989; Signorella et al. 2013; Bigler et al. 2014).

Positive Perceptions of Single-Sex Schooling

The diversity in the methodology used and things controlled for are further reflected in the diversity in the findings in the literature. This is evident in the continued global debate on single-sex schooling that shows no indication that there will be any conclusive determination of its effect (Gordillo 2017). In this regard, it can be acknowledged that there is no paucity in the data on single-sex schooling, whether we examine entire single-sex schools or single-sex classes within coeducational schools. The global debate on its benefits continues with many studies focussing largely on its effect on students´ self-esteem, attitude to various subjects, academic outcomes, social outcomes or a general comparative outlook on single-sex and coeducational schooling (Anfara and Mertens 2008; Koniewski and Hawrot 2021). This is important because a focus only on the achievement component adds little value unless there is further focus on the social and cultural context in which they operate. Single-sex schooling

has been found to reduce gender stereotypes, in countries such as South Korea (Lee et al. 2014); however, in other areas, researchers have found that gender stereotypes are exacerbated in a coeducational environment reflected in, for instance, subject choice (Smyth 2010; Favara 2012). This implies that single-sex schools are more suited to reducing these stereotypes and facilitating students´ exploration of both academic and extracurricular activities (SERC 2013) without considering what is inherently male or female (Okafor and Mokwelu 2018). This is reflective of Lee and Lockheed (1990) whose studies of developing countries Kenya and Nigeria, although dated, indicated that single-sex girls´ schools are sometimes underfunded, resulting in poorer performance compared to all boys or government-funded coeducational groups. Despite this, the study revealed the underlying benefit of single-sex schools being able to eliminate stereotypes relating to subject choice, especially in mathematics.

The description of the schools in Lockheed´s study contrasts with the contemporary study of Okafor and Mokwelu (2018) whose study included 280 students selected from all government-funded schools in Awka South L.G.A. Nigeria. In this study, single-sex schools were found to be more effective at facilitating good academic results. This may have resulted from the absence of behavioural issues such as bullying that is associated with coeducation, as well as the increased opportunity for female students to develop both their confidence and leadership skills (Smyth 2010). Furthermore, the classroom dynamics are different, especially for girls who can avoid male domination of class activities (Mburu 2013) and eliminates the distraction created by boys in the coeducational environment (Sullivan et al. 2010).

Studies of single-sex schooling have also suggested that it increases students´ motivation and impacts achievement by facilitating the teacher´s ability to tailor instruction to meet the specific learning styles of the students. Furthermore, single-sex schooling is believed to reduce sexual harassment of female students, sexism in teacher-student interaction and prevents students from distracting members of the opposite sex (Riordan 2015; Bigler et al 2014, cited in Koniewski and Hawrot 2021).

Additionally, single-sex institutions also provide a safe environment where female students can communicate without being ridiculed by their male counterparts. Additionally, they receive more attention, which tends to lead to increased self-confidence and participation in non-traditional subject areas. It has been documented that teachers interact differently with their male and female students. For instance, a female teacher corrects the male students with greater frequency while the male teacher corrected both males and females with equal frequency (Jones and Wheatly 1990). Stennard (2019) whose report focussed on single-sex schools in the United Kingdom, highlighted its benefits for female students. In addition to several of the perspectives previously mentioned, he stated that girls in single-sex schools are more likely to take risks and innovate, show leadership skills, to perform well in examinations and later in the job market.

Proponents of single-sex schooling also argue that the single-sex environment eliminates distraction and facilitates students´ achievement. It also eliminates the emphasis on socialisation between boys and girls which tends to be to the detriment of academics. (Vail 2002; Gurian et al. 2009). Aspects of the literature further this perspective by suggesting that boys are a hindrance to the academic progress of girls by overshadowing and short-changing them in the classroom (New York Times April 11, 1999, cited in Campbell and Sanders 2002). Although the study focuses on single-sex instruction, it is worth acknowledging that even in the coeducational environment, girls are also perceived as having an impact on the outcome of all students even in maths where male students generally attain higher scores (Hoxby 2000, Lavy and Schlosser 2011, Ciccone and Garcia-Fontes, 2014). This perspective implies that girls are very influential in the classroom atmosphere and would therefore perform well both in the coeducational or all- girls´ classroom.

Other researchers, Gurian et al. (2009), see the single-sex classroom as a positive environment that is beneficial to both male and female students. Firstly, single-sex schooling exposes students to tailored pedagogical approaches (Gurian 2010; Jackson 2010; Hayes et al. 2011) teachers can tailor pedagogical structures to meet the needs of these varying groups and students may be grouped according to varying ability, interests, and stages of development. This theory implies that commonalities are generally based on sex, negating the similarities that may exist within coeducational groups. Moreover, some students

perform better in single-sex classes while others perform better in co-educational classes (Isensee and Vasquez 2012, cited in SERC 2013).

Single-sex schools or classes are also said to reduce incidents of sexual tension and flirtation between male and female students, resulting in a greater focus on academics, rather than on the perception of members of the opposite sex (Gurian et al. 2009). This perspective requires a broader consideration of how students construct friendships and romantic relationships as it implies that romantic relationships are only formed in a coeducational environment. In Jamaica, there exists a perception, albeit unresearched, that single-sex institutions facilitate same-sex relationships (Grindley 2012). This belief is further reflected in the work of Dale (2017 and 2018) who stated that coeducational institutions protect students from same-sex relationships and that of Li and Wong (2018) who argue that those who attended single-sex schools favoured same-sex romantic relationships. The latter conducted a study involving a group of 249 college students who had attended co-educational high schools and 207 who had attended single-sex schools in Hong Kong and controlled for a variety of factors including personal and socio-economic status. As is customary in the literature on single-sex education, contrasting ideas are presented in the study conducted by Wong et al. (2018). He stated that there is a need for detailed evidence-based assessment to support these claims as well as a consideration of whether school type has a strong influence on students´ romantic relationships.

Aspects of the literature on single-sex education also suggest that the classroom environment and the gender composition of the classroom or school greatly influence student performance (Hughes 2006-7; Wilson 2013), at different points and in different research contexts. Although Dustmann et al, (2018) claimed that when a school switches status, for instance, from coeducation to single-sex, progress is made, there doesn´t appear to be any conclusive indication that simply changing a classroom setting from coeducational to single-sex, automatically leads to positive student outcomes. It could also be argued that other factors such as the classroom atmosphere can impact students´ performance. For instance, student-teacher interaction (Thompson 2017) and peer effects (Hoxby 2000; Burke 2013). Further, in instances when it is believed that the interaction between students is impacted by the sex composition of the school, the effects of single-sex schools and single-sex classrooms within

coeducational schools may have differing effects (Jackson 2016). What is required may be carefully crafted strategies that target students´ need to make the sex segregation effective. This may include determining ´which boys? ´ are at risk rather than treating boys as a homogenous group as well as exploring factors such as social class (Richardson 2005, cited in Zyngier 2009). Additionally, there cannot be equal expectations of all single-sex schools as they do not provide a learning environment that effectively meets the learning needs of all students equally (Hollinger 1993, cited in Campbell and Sanders 2002; Jackson 2016).

Disadvantages of Single-Sex Schooling

Single-sex schooling is not perceived positively in all sections of the literature. For instance, researchers such as Halpern et al. (2011) are convinced that single-sex schools have not been able to demonstrate any positive outcomes. Similarly, Hughes (2006-7) compares sex segregation in schooling to the United States Brown v. Brown racial segregation ruling of 1954 which suggested that any form of segregation is inherently unequal. This theory is flawed in its implication that sex segregation and racial segregation have commonalities. Sex segregation in schools or classrooms has been implemented globally mainly to improve the educational circumstances and ultimately the economic circumstances of both male and female students. Despite this, the theory is supported by Halpern et al. (2011) who agree that sex segregation exacerbates gender stereotypes as the separation teaches students that gender is one significant way in which division takes place; this leads to further group biases.

Single-sex classes are also said to facilitate an increase in the potential for gender stereotypes and biases (Pahlke and Hyde 2016). In other words, male and female students are deprived of the opportunity to work together in a supervised environment. Therefore, they spend less time socialising with their peers of the opposite sex (Datnow et al. 2001; Hilliard and Liben 2010; Halpern et al. 2011). The students spend extensive time in same-sex groups which result in sex-typed behaviour (Martin and Fabes 2001), especially boys who may engage in disruptive behaviour in all boys´ groups (Fabes et al. 1997) and reduces their chances of developing a wider range of behaviours and build more cooperative relationships (Gaertner et al. 2001). Implicit in these perspectives is the belief that students only have opportunities to

socialise with the opposite sex in school. They also fail to acknowledge that students at a certain age already tend to socialise in same-sex groups, and it would probably not be completely accurate to suggest single-sex instruction inhibits social interaction. Furthermore, institutions that offer single-sex classes within a coeducational institution, offers opportunities for interaction in settings such as in the family, neighbourhood, church, or volunteer organizations (Hughes 2006-7).

Other critics of single-sex schooling argue that separate is "inherently unequal" (Anfara and Martens 2008, p. 53). The conflicting arguments regarding the benefits and drawbacks of sex segregation have been ongoing for decades and a decision to establish single-sex instruction should consider the specific context and needs of the students being instructed. Critics also advise that the plethora of positive data on single-sex education should be viewed with caution. This is because the nature of the research is not only highly contextual but there are a variety of additional factors to be considered such as students´ ability, selection bias and teaching style (Anfara and Mertens 2008). Although the differences between groups of students must be acknowledged, there must not be a divide that results in the teaching of gender stereotypes; instead, strategies may be employed that address specific students´ needs or interest.

Competition has also been explored in the literature on single-sex instruction and like other aspects of the literature, findings on competition are also equivocal. Competition is regarded as an important factor in areas such as one´s academic track and career choice (Busar et al. 2014). It is said to benefit students in mathematics but not in English in one Swedish school (Ahlin 2003) while others such as Self (2009) see no benefits in competition and suggest a more cooperative learning environment. Researchers argue that female students respond less favourably to competition while males are attracted to increased competition (Gneezy et al. 2009; Niederle and Vesterlund 2011). In the context of the single-sex environment, SERC (2013) found that single-sex education made boys less competitive and more collaborative while Lee et al. (2014) found no evidence that single-sex schooling reduces the gender gap in competition. The contrasts in the findings may have resulted from the difference in research sites, Connecticut, and South Korea, as well as on the selection process for participants in

these studies. For instance, students in South Korea are randomly assigned to schools in their district, either single-sex or coeducational school.

The variations in the findings of the studies on single-sex education are well documented. Boys and girls may be exposed to the same educational environment and have a different response, yet exposure to same-sex classes sometimes appear to elicit improved performance (Black et al 2013; Ooserbeek and Van Ewijk 2014; Lu and Anderson 2015). Rather than conclusively addressing whether this type of schooling can address the ills of the global education systems, the varying studies raise further questions that emerge from the lack of consensus among researchers, even in the same research context. These findings may be the result of less-than-optimal studies; uncontrolled studies and in some cases, studies that focussed solely on academic outcomes (Pahlke and Hyde 2016). There needs to be consideration of factors such as socioeconomic status, family circumstances, school type and prior achievement (Smith 1984) which all have an impact on educational outcomes. These factors have the potential to be of greater importance in determining the benefits of single-sex schooling. To consider the efficacy of the type of school, there should be verifiable evidence that its benefits outweigh those of the coeducational school (Smith 1984; Helpern et al. 2011) and an examination of a variety of factors may be the most effective strategy.

Single-Sex Education: A Brief Comparison

Single-Sex Education in The Caribbean

Single-sex education has had a long history in the Caribbean and varies in how it has been explored over the years. In the last decade, the literature on this topic appears to be sparser than in the previous decade, but the belief in the potential benefits of single-sex schooling mirror what exists in the body of literature. Attendance at single-sex schools in the Caribbean is largely beyond the control of the students (George 2012; Eisenkopf 2015).   In countries such as Jamaica and Trinidad and Tobago, students are assigned by the Ministry of Education, to both single-sex and coeducational secondary institutions based on a voluntary list of five preferred schools selected by parents, as well as their performance in exit examinations sat at the end of primary school (Jackson 2012; Blair 2013; Spencer-Ernandez

and George 2016). In this regard, it could be argued, that a list of preferred schools facilitates students´ involvement in their school choice, but George (2012) cautions that by indicating that despite this apparent involvement, students are not randomly assigned to single-sex and coeducational institutions. Instead, they are grouped based on ability with those achieving upper 80s and 90s being placed in the high school listed as their first choice (MOE 2018), usually, one of the top-performing elitist traditional schools (World bank 1993) and those scoring lower grades are placed in non-traditional high schools (Spencer-Ernandez and George 2016; Stockfelt 2016). The referenced studies limit the comparison between school types to students´ performance in mathematics, but they reflect the trend in students´ assignment to schools annually. For instance, George (2012) largely focused her research on mathematics in two Antiguan schools, which limits the components studied that can be compared. An important finding in this study was that socioeconomic status may play a significant role in academic performance in the school types in Jamaica (Sanjay et al.2005; George 2012). Similarly, Leacock et al. (2007) had a similar description of Barbados. There was however an interesting observation that the students who entered high schools in Barbados with top scores, tended to perform optimally in the Caribbean Secondary Examination Certificate CSEC examinations, raising the question of whether the school type impact students- achievement or must there be serious consideration of socio-economic status, school quality and certainly the students´ prior academic achievement.

Another study was conducted by Jackson (2012) in Trinidad and Tobago. This took an uncommon and interesting approach by focussing on the comparison of those who chose to attend single-sex and those who chose to attend coeducational institutions. No significant differences were noted based on school type. What was discovered is that the student´s choice had a positive effect on educational outcome. This means students who had selected single-sex schools tended to experience positive educational outcomes which may also be because students who attained the highest test scores were often assigned to their preferred schools, which was often a single-sex school.

Many of the contemporary studies on single-sex schooling in the Caribbean focus on Trinidad and Tobago; however, it bears striking similarities to Jamaica and other English - speaking countries in the region. There are fewer single-sex schools than coeducational

institutions, yet these few schools which are old and affiliated with various churches, have consistently maintained the highest performance (Blair 2013). For this reason, there is a call by officials and the media for more single-sex schools to be established in Trinidad and Tobago (Parry 1997; Golbert and Gilbert 1998). Some researchers in the Caribbean support the idea that single-sex education addresses educational issues such as male under-participation and subject choice (Evans 2002) and most have also appeared to focus on achievement outcomes; especially in maths achievement in the Caribbean (George 2012; Spencer-Ernandez and George 2016). This subject area is intriguing to researchers because low achievement in mathematics has been a perennial problem in the Caribbean, evident in the Caribbean Secondary Examination Certificate results (CSEC 2018) and has long term implications as a country´s economic growth and advancement hinge on a solid foundation in math and science (Carnevale et al. 2011). Furthermore, underachievement of any kind has the potential for human capital issues (Evans 1997).

Students in single-sex schools in the Caribbean tend to consistently outperform students who attend coeducational schools (Spencer-Ernandez and George 2016). This has been confirmed in studies conducted in Antigua and Barbuda (George 2012), Trinidad and Tobago (Jackson 2012 and 2016) and Jamaica (Spencer-Ernandez and George 2016). These single-sex schools in Jamaica are regarded as prestigious and many of the students who were previously educated in private preparatory schools tend to attend these schools. According to Prime Minister Holness (2015) of Jamaica, students who attend these schools have access to the best schools and teachers.

Further studies on school types in the Caribbean, tend to focus largely on the academic outcomes in these schools, rather than on the selection process. Through the assessment of literature on the efficacy of single-sex schools, it has become clear that there may be a need to seriously consider the selection process, rather than simply the effect of school types on academic achievement. If school type were the sole area of significance, one could simply change the sex composition of a school to attain academic benefits. Studies have however proven otherwise. For instance, Barbados has converted almost all single-sex schools to coeducational schools; they have retained one all girls´ school and one boys´ school since the 1980s. While this gives parents an option in school types, they do not offer superior academic

performance to the coeducational schools (Spencer-Ernandez and George 2016) possibly because the schools that were transformed have maintained their original prestige.

An examination of the studies conducted by George (2012) and Spencer-Ernandez and George (2016) indicate a significant gap in students´ performance in Mathematics in coeducational institutions. One could argue that the findings are restrictive as they focus on one subject area - mathematics. The inclusion of several nations and a large sample, of almost 300 students in George´s study and all school types in Spencer-Ernandez and George´s study, gives credibility to the findings.   Their focus on student's academic performance in mathematics in Jamaica, Trinidad and Tobago, Barbados, St Lucia and St Vincent and the Grenadines (Spencer-Ernandez and George 2016), and maths and English language in Antigua (George 2012) revealed that both boys and girls in single-sex schools were the top performers in all countries except in Barbados where students in co-ed schools generally outperformed both all girls´ and all boys´ schools.

Although the referenced literature has indicated that students in single-sex schools in the Caribbean, overall, outperform their counterparts in mixed schools, there is no conclusion that the school type is responsible for this performance. Various researchers have found that the student-teacher relationship has a significant impact on students´ academic performance (Thompson 2017), the selection process that place students in single-sex versus coeducational schools (Spencer-Ernandez and George 2016), the primary school type that students attended, parents´ educational and occupational level and the type of family students are from (George 2012) also have an impact on student performance. Further, researchers argue that the single-sex environment should not be perceived as superior to coeducation (Jackson 2012; Park et al. 2013) due to the inadequacy in verifiable research findings of this nature. Research conducted by Jackson (2012) found that there are no benefits for males yet, in contrast, females in single-sex schools benefit from single-sex instruction. According to George (2012) when students are grouped in these institutions, there is a level playing field. The issue with this perspective is that it creates the impression that students from all socio-economic backgrounds have equal opportunity. It explains what happens within, rather than between school types. Additionally, it fails to recognise that students who can afford private schools are placed in these elite schools in larger numbers than those from the working class

especially those from the inner city. Therefore, researchers may also need to consider teacher quality and investment of resources in schools in their examination of school types.

Single-Sex Education in Selected Countries Outside of the Caribbean

South Korea presents an interesting contrast to single-sex schooling in the Caribbean, yet there are similarities in important areas. While there are fewer single-sex schools in the Caribbean than coeducational schools, South Korea has implemented an equalization policy that involves equal numbers of all school types at both middle school and secondary school levels (Hahn et al. 2014; Hahn and Wang 2018). In many countries, the students who attend private and public schools are often separated by ability and the socio-economic status of the family; however, in South Korea, there is equality among all school types and students are randomly assigned to schools (Hahn et al. 2014) therefore creating a ´mostly´ level playing field. The term ´mostly´ is used because like other aspects of the literature, some researchers have found that students in the private schools, whether single-sex or coeducational, outperform those in the public schools and among school types, boys only schools were the top performers (Hahn et al 2014; Dustman et al 2018). Among the perspectives, is a dissenting view that the positive effect of single-sex schools is minimal (Sohn 2016). One cannot, however, negate the benefits in various research conducted in South Korea, although there doesn´t appear to be logical explanations for the existing differences. It raises questions about whether research methodology impacts the findings in this setting where there is equal investment in schools and teachers are randomly assigned, reducing possible questions of teacher qualification.

The study that was conducted by Hahn et al (2014), included all high schools in Seoul over ten years. This may be considered a vast sample, but his study focussed solely on measuring achievement based on students´ ability to matriculate into the national university. Besides, one must consider that teachers in private schools enjoyed motivational factors such as longer tenures (Cho 2013), which possibly explains the superior performance of private schools. It can however be argued that parents´ investment in these private schools, as well as their tendency to invest financially and emotionally in their children, add to the cultural capital of the students in these schools.

Single-sex education has also been a long-standing component of the education system in Australia (Campbell et al. 2009). It has been said that the number of single-sex institutions has been reducing but many of these institutions have been marketing themselves as a potential choice for successful academic outcomes (Dix 2017, cited in Law and Sikora 2020). This system is similar to what exists in the Caribbean in that some of the single-sex schools are Catholic, but it is mostly different from that of the Caribbean, as the schools are usually fee-paying private schools - similar to most of those in the USA. These schools are concentrated in large urban areas and the students are more likely to enrol in science than the disadvantaged students (Teese 2007; Ainley et al. 2008). An important aspect of this school type is its intake of students who tend to be from a high social status (Sikora 2014) and their parents have a significant impact in shaping the cultural capital as well as beliefs on areas such as religion and equality (Campbell et al. 2009). Besides, the students in the single-sex schools are largely different from their mixed school counterparts in several ways, such as in terms of the parental characteristics, students´ self-concept and availability of qualified teachers (Sikora 2014). The fact that students in these single-sex schools tend to come from privileged backgrounds and attend well-resourced schools that attract qualified, for instance, mathematics teachers, sets them apart.

The impact of well-resourced schools on education cannot be underestimated whether they are financed by affluent parents, the government or both. According to Mojapelo (2018), adequate resources must be provided in all schools to assist learners to perform optimally. This should include, among other things, a well-resourced library that supports both teachers in their lesson planning and students in achieving greater access to information. Furthermore, access to resources means an institution can improve the quality of the academic programs being offered, utilise contemporary teaching methods and maintain staff levels (Marriott 2018). It must also be acknowledged that, as was discovered by Ramaligela, Gaigher and Hattingh (2014) who conducted their study in Africa, well-resourced institutions may also fail to achieve good academic outcomes if the teachers are not trained to utilise these resources. Consequently, it is contended that resources at the disposal of qualified teachers could offer significant academic benefits for students.

Available resources have not been the focus of the literature on single-sex education in New Zealand. There, single-sex schools are governmental institutions, available to low and middle-income students. Students being from a lower income group and attending a public school does not impact the fact that students in single-sex schools outperform both boys and girls in coeducational institutions. One study highlighted that the boys and girls in single-sex schools outperformed those in the coeducational schools. However, as with the global trend, boys in the all-boys schools did not perform as well as their all-girls counterparts (Jha and Kelleher 2006). This presents a contrasting context, yet it raises questions regarding the central issues that impact male academic performance.

Boys Only: Making a Case for Single-Sex Education for Boys.

The previous sections indicate the varying perspectives on the effect of single-sex education. Despite this, it must be acknowledged that large portions of the literature contend that single-sex education can improve male academic outcomes. According to Jaminez and Lockheed (1989), whose study suggest that single-sex schooling is extremely beneficial to female students, it cannot be ignored that historically, single-sex institutions were established to meet the needs of male students because they were believed to be most deserving of an education (Riordan 2002; Meyer 2008; Salomone 2003, cited in Mansfield 2013). Considering this, any assessment of the efficacy of this type of schooling must therefore consider the context of the specific institution and acknowledge that single-sex education is not meant to address the academic needs of all boys because not all boys are underachieving.

 It has been established in this paper that female students tend to outperform their male counterparts in most subject areas and at all levels of the education system (Younger and Warrington 1996; Clark et al. 2008; Ullah and Ullah 2019). Clarke (2005) summarised the alarming nature of the ´boy trouble´ in Jamaica by highlighting that the sex gap in achievement exists at all levels of the education system, especially at the secondary and tertiary levels. He further highlighted that male students are four times more likely to commit suicide than females, they were more likely to be drug addicts and to be diagnosed with Attention Deficit Disorder (ADD). The term ´boy trouble´ is used to refer mainly to what has

become a global concern for male achievement. The literature depicts a worsening crisis as female students continue to outperform their male counterparts. Whether this gender gap in academic achievement is blamed on the teacher´s sex, socialisation, personal characteristics or other factors, the literature depicts a widening gap between male and female students in some subject areas (Clark et al. 2008; Jackson et al. 2010; Majzub and Rais 2010). It can be argued that the literature failed to show similar concern when male students were outperforming females. Despite this, it must be acknowledged that the widening gap in academic achievement has both social and financial implications for the society. The sex gap in achievement has implications for Social Development in a society (Asadullah et al. 2019); thus, there needs to be new strategies and new perspectives implemented to address the issue. Single-sex schooling is one strategy that has been presented as a possible solution to closing the achievement gap.

The challenges faced by male students are addressed by Wilson (2013) who argue that there are twenty-eight (28) barriers to boys´ learning and these may be addressed in the single-sex environment. Although his study was conducted in the United Kingdom, it addresses concerns that are present in other research contexts. Wilson´s position is that, among other things, male students are impeded by their tendency to be hyperphysical and sometimes spirited during playtime, they sometimes regard writing activities as unimportant and reading as feminine. In some instances, there are inhibitions in lesson planning, which means that the needs of the male students are not met. In addition, they are often impacted by teacher bias; teachers who have different expectations of male and female students (Gentrup and Rjosk 2018; Muntoni and Retelsdorf 2018). Wilson (2013) further stated that the teaching style and learning preferences of the students are often not in sync, and sometimes there is the absence of a positive reward system that encourages student performance. Finally, male students are sometimes impacted by the ´laddish culture´ as well as how they are grouped in classes. These groups are formed based on sex rather than, for instance, based on ability which may result in groups of disaffected students being in the groups. His reference to the ´laddish culture´ is context-specific, but aids in the general understanding of the issues faced by males in the education system. The term ´lad, was initially used to refer to white working-class boys who rejected the education culture ((Willis 1981) and was later extended to include middle-class boys (Francis 1999, cited in Houtte et al. 2018). ´Laddish culture´ has been implicated in the widening achievement gap between male and female students in the United Kingdom

(McLellan 2004). It is based largely on anti-intellectualism (Jackson 2006; Houtte et al. 2018), rejects academic work (Jackson 2002), undermines the formal education system which is perceived as feminine (Jackson 2002) and embraces the macho culture.

To address the previously mentioned issues faced by male students, there needs to be an implementation of context-specific strategies that will encourage and motivate male students towards improved participation and positive academic outcomes. Single-sex schools and single-sex classes in co-ed schools (Jackson 2002) have been proposed as a possible strategy to address boys´ underachievement (Mulholland et al. 2004) and there is a perception that regardless of its effect, parents should have access to this kind of education, along with detailed information about its efficacy in improving achievement (Pahlke et al. 2014). While this type of schooling has not proven to be a panacea for ´male troubles´, there appears to be some benefits to educating boys within this environment. Given this, it can be argued that although students are different and there is no single strategy that meets the needs of all males or all females, single-sex classrooms offer some benefits to improve male participation and achievement of some male students.

Sex segregation is well-documented in the literature, and it generally shows that the segregation of male and female students doesn´t have to be absolute. Various strategies have been used, such as adjoining boys ´and girls´ schools may share specific classes or they may establish single-sex classes in a coeducational environment (Smithers and Robinson 2006). Much of the literature has focussed on comparing the effects of single sex versus coeducational instruction with a significant focus on academic outcomes. The academic outcomes were found to be significantly different for male students who are educated in single-sex schools, as opposed to single-sex classes in coeducational schools (Lee et al. 2015). This difference was attributed mainly to increases in study time among male students in single-sex schools in Seoul.

Single-sex instruction has also been explored as a feasible solution to the perception that males and females have different learning needs (Gurian 2010; Jackson 2012; Pahlke and Hyde 2016). It must be understood that there is no quick fix for male underachievement, or

this would have been addressed in the plethora of studies conducted worldwide; however, aspects of the literature suggest that by addressing differential learning needs through sex segregation, there may be significant achievement gains (Gibb et al. 2008). Moreover, teachers may need to be trained to recognise and utilise appropriate teaching strategies that close the achievement gap ((Thompson 2017).

Addressing the differences in students´ learning needs is greatly dependent on teachers creating a ´boy friendly´ curriculum. This curriculum attempts to address the feminisation of school by utilising teaching strategies that are considered most responsive to the needs of male students (Lingard et al. 2009). For instance, utilising hands-on activities and incorporating charts, graphs, and symbols into instruction (Gurian and Stevens 2005). Additionally, it involves engaging pedagogies that are not only intellectually stimulating but also socially supportive (Lingard et al. 2002). Critics challenge these theories, arguing that a ´boy friendly´ curriculum has the potential to exacerbate gender stereotypes (Johnston and Sheehan 2016). These perspectives have not been fully explored in the research so various strategies must be explored to address what is considered a worsening global problem. Considering this, the argument is not being made that all boys everywhere will have a positive response to this curriculum. The success of a ´boy-friendly ´ curriculum is likely dependent on the social context in which the lesson is being delivered and the single-sex classroom allows for greater flexibility in developing sex focussed pedagogy (Parker and Rennie 2002).

Some researchers have discovered that students enjoy better learning outcomes in homogenous groups (Hoxby and Weingarth 2006; Ding and Lehrer 2007, cited in Jackson 2016) which may be due to the reduced time teachers´ spend planning lessons for two separate groups (Jackson 2016). Teachers are therefore better able to tailor lessons that target the specific learning needs of the students (Martino et al. 2005; Riordian 1990; Trickett and Trickett 1982, cited in Jackson 2012). This strategy was employed in Trinidad and Tobago where the Ministry of Education converted twenty (20) low performing coeducational schools to single-sex schools in 2010 and in Seoul where teachers were able to adopt specific teaching and disciplinary strategies in all boys´ schools that were inapplicable in coeducational schools where teachers also taught female students (Lee et al. 2015).

This project in Trinidad and Tobago yielded positive outcomes for both boys and girls at no financial cost. Both groups scored higher on standardised tests and were found to have a greater likelihood of completing secondary school and qualifying for tertiary education. With regards to the boys, they took more advanced coursework, scored higher in national exams and experienced fewer teenage arrests. These positive results are attributed to two factors: peer effects which involve classroom interaction as well as changes in teachers´ behaviour (Jackson 2016 and 2019). In these contexts, teachers were better able to focus their instruction on one specific sex, while removing any social classroom dynamics that had any pernicious effect on the class (Jackson 2016). Similarly, teachers in one Australian context were able to make adaptations in areas such as reading material, classroom tasks and learning time which appeared to benefit the students (Mulholland et al. 2004) while there were specific ´boy-friendly´ activities such as sports-related themes, incorporated into the lessons taught at the Ontario middle school in the study conducted by Greig (2011).

The importance of a ´body-centred´ teaching-learning approach should focus both on the academic effect of schooling, as well as on the social aspect, such as attendance. Evans (1999) and Thompson (2017) in their ethnographic studies referenced the importance of the teacher-student relationship to positive student outcomes. Boys in Thompson´s study felt that their principals didn´t show interest in their concerns, did not empower or care for them and thus they felt uncomfortable expressing their opinions. Correspondingly, Evans found high levels of absenteeism of male students and a teaching-learning process that did not respond to male needs. This may result from the use of traditional teaching methods and materials, instead of more innovative strategies and tools such as technological devices. A more targeted approach to improving student-teacher interaction could reverse the ills noted by Evans (2001); such as, non-conforming boys, boys who were placed in low ability streams and negative evaluation which sometimes involve corporal punishment. The Caribbean teacher must separate him or herself from the ´patriarchal authoritarianism´ (De Lisle 2018, p. 457), a remnant of the oppressive past which values obedience, submission, and timidity ´ (De Lisle 2018) and embrace a post-colonial strategy (Connell 2014d) that is more inclusive and will result in male motivation.

Furthermore, Single-sex boys´ schools and classrooms offer a space that has been created specifically to meet the physical and intellectual needs of boys. In many ways they are shaped by the environment in which they operate; they build relationships, influence and are influenced by it (O´Donoghue 2018). The boys operate in this unique environment, learning to work together with individuals of the same sex who instinctively understand them (Gurian et al. 2009). It further creates a space that, for instance, accommodates boys´ need for movement (Gurrian and Ballew 2003) and facilitate their need to play by providing a space in which written tasks can be adjusted or reduced and opportunities to compete are provided, as boys tend to be competitive (Cashdan 1998).

Boys are also often presented as having a greater need for physical activities. Sommers (2013) in her study of American based schools cited that rough play inspired the moral imagination of boys, whose language, literacy, and engagement in school are directly impacted. Consequently, the decision to reduce or remove recess in places like Philadelphia and Atlanta is regarded as misguided and detrimental to boys whose natural inclination to play is being ignored. Given this, one can argue that such a specific need may be addressed in an all-boys environment, without impinging on the interests of female students. Although these strategies may not be all-encompassing with the ability to address the needs of all boys, at all times, it is contended that some strategies may be used to target groups within the larger group of male students.

Additionally, single-sex schools are believed to relieve students from the pressure of adhering to gender role expectations. Thus, in an all-boys ´school, they are more likely to have a positive attitude towards studying the humanities and thus choose to study subjects such as literature and drama which are typically female-dominated subject areas (Norfleet et al 2003; Solomone 2008; Gurian 2009). Furthermore, they are allowed to operate in an environment occupied exclusively by their male peers, away from the intimidation or distraction of female students (Parry 2000; Vail 2002). Elsewhere in the literature, the teacher´s sex has also been highlighted as having an impact on male academic performance (Parry 2000; Martino and Keyler 2007).

It has also been argued that in the context of the United States, African American boys could benefit from male role models as they are more likely than other groups of boys to be suspended (Catalyst Chicago 2010, cited in Bristol 2015). According to Myers (2009), if this intervention were implemented at the kindergarten level, it could have a significant impact on male achievement. Despite the difference in the research context, male students in the Caribbean could potentially benefit from a similar initiative. Guyanese boys have been found emulating negative macho role models to fill the void left when there is no male figure in the home (Hunte 2002, cited in Jha and Kelleher 2006) while boys in Jamaica pursue negative masculine identity (Figueroa 2000). Although there are portions of the literature that regard the recruitment of male teachers, as beneficial to male students (Dee 2005; Ouazad 2008), critics question whether these men are willing or capable of carrying out these roles (Brockenbrough 2008). Their portrayal of heteronormative masculinity (Martino and Kehler 2006; Lingard et al. 2009) and being placed in an influential position which they are unprepared for may lead to more negative learning and social outcomes (Johnson 2005). The act of placing a male teacher within the classroom does not automatically correct the issue of male underachievement. Instead, the strategies that are implemented by the teacher who Skosana and Monyai (2013) described as a catalytic agent are likely to propel student achievement in the desired direction.

Similarly, another study conducted by Greig (2011) focussed on two things: implementing a ´boy-friendly´ curriculum and increasing male role models. His study presented a largely successful strategy, as the institution recruited male teachers and exposed the boys who were mainly from female-headed households to male influence at school. Although it was presented as a success, the limitation lay in the inclusion of only white middle school students and ten teachers (Martino 2008; Coulter and Greig 2008).

Additionally, Lee et al. (2015) found that sex segregation is beneficial to male students. This is evident in the positive differences noted in the academic performance of male students in single-sex male classes compared to those in the coeducational groups. Single-sex classes are said to reduce the opportunities for teacher´s gendered expectations and offer a sense of freedom that is thought to be absent from the coeducational classes. For instance, freedom to choose to study literature or to express themselves without being scrutinised by the opposite

sex and in some cases, students were allowed to choose to study in a single-sex classroom (Mulholland et al. 2004) that provided a feeling of motivation and empowerment. The boys who participated in the study conducted by Lee et al. (2015) interacted freely with their teachers and there were usually fewer disciplinary measures than when they were in coeducational groups. Additionally, the boys asked and responded to more questions when they were separated from the girls.

The suggestion that a more male-centred curriculum should be utilised to improve male achievement does not regard boys as a monolithic group. Bristol´s (2015) perspective is quite pertinent in suggesting that to implement this targeted pedagogy requires that teachers first understand the complexities of gender, even as they examine the stereotypical learning materials that are often available.

There is an important conversation to be had regarding gender complexities and stereotypes in the school environment because these stereotypes are influenced by all stakeholders: parents, teachers and peers and they also form the basis for the development of strategies to address issues of gender inequities (Mollaeva 2018). Students internalize gendered perceptions of performance and motivation, resulting in boys displaying higher belief in their math competence while girls have a higher belief in their language competence (Glienke and Burg 2006; Wigfield et al. 2002, cited in Kollmayer et al. 2018). These stereotypes impact both students´ performance and motivation in the learning environment resulting in more girls attaining secondary school qualifications (OECD 2014) but later in the labour market, the difference is reflected in the differential wage earnings in favour of males (OECD 2012 and 2015). Research conducted by the OECD has called for a reduction in stereotyping to address both male and female educational needs.

The complexities of gender stereotyping within the learning environment are compounded by the subtle way in which these stereotypes are sometimes presented. Researchers such as Kerkhoven et al. (2016) and Islam and Asadullah (2018) blamed the stereotypes on the hidden curriculum which tends to be very pro-male, depicted in the predominantly male visuals in the textbooks and the stereotypical depiction of the females in traditional jobs. The

biased portrayal of each sex tends to have an impact on cognitive development. For instance, the female sex that is usually silenced or disempowered in the textbooks may result in female students becoming passive and disempowered while males may improve their self-esteem. This is so as children tend to internalise without challenging messages that are conveyed (Kelly and Nihlen 1982; Hamid et al. 2008; Islam and Asadullah 2018). This is especially problematic as the school is considered to be the institution responsible for disseminating social knowledge, influencing attitudes, and thus promoting change (Nonaka et al. 2012) yet it operates as a paradox (Chisamya et al. 2012; Fernandes 2014), implicitly transmitting biases within the learning environment (Sperling et al. 2016). In this regard, it can be argued that there needs to be an examination of teacher bias, as well as the effect of a masculinised environment (Farris et al. 2009, cited in Bristol 2016).

Finally, studies conducted in Australia have indicated that male-focussed initiatives can have a positive impact on boys´ education. In 2002 the *Boys: Getting it Right* initiative, presented what is believed to be a positive example of recuperative masculinity politics (Mills et al. 2007). The inquiry focussed on the social, cultural, and educational factors that impact boys´ education, as well as the strategies needed to address these factors. The study indicated that there is a need to address boys´ differing learning needs; reflected in, for instance, differing linguistic styles than that of girls. There is a belief in the literature that boys are impacted by poor pedagogy (Trent and Slade 2001; Jha and Pouezevara 2016). They sometimes find the school environment to be boring and because girls tend to be treated better, they often develop a feeling of disaffection (Trent and Slade 2001). It is therefore important that a curriculum is delivered that meets the specific interests of boys, in terms of its content and lesson delivery. It needs to be responsive to boys´ need for explicit teaching and a structured, hands-on approach to teaching that involves detailed instructions regarding the recipe for success. Moreover, male students could benefit from a good relationship with their teachers. This could be achieved by engaging in focussed activities that aid in boys building a good rapport with their teachers who are, hopefully, attuned to male needs. (Mills et al. 2007).

Conclusion

The literature on single-sex education is vast and varied. It represents the need for the continued pursuit of a solution to the global issue of male underachievement. This is likely to remain elusive due to the variations in the research contexts and findings in the literature. Furthermore, it must be acknowledged that one size doesn´t fit all. Despite this, the pervasive and worsening male underachievement issue demands that attempts be made to address the issue.

There are varying methodological strategies that have been employed to determine the efficacy of this type of schooling. Most of the studies appear to have focussed on academic outcomes while fewer seem to have explored the non-cognitive effects of single-sex schooling. The studies have also represented the concerns in various countries worldwide. In the Caribbean, where my study was conducted, there has been a significant focus on the effect of single-sex education on academic achievement. The most recent studies have focussed greatly on Mathematics. This focus creates a space for a study that utilises a case study approach and takes a broad look at the effects of single-sex instruction. That is, both cognitive and non-cognitive effects.

Although the literature covers educational systems worldwide and has controlled for a variety of factors, experts have been unable to determine who benefits from single sex education. In some parts of the literature, single-sex instruction is believed to benefit boys, while others argue that it benefits girls. Considering that neither boys nor girls are a monolithic group, it can be argued that within each group, individual students benefit. There is a lack of consensus within the literature, and this will possibly always be the case. There may be a need to look at other factors beyond sex, to determine the effects of single-sex education. Students enter the classroom with different social experiences and prior performance. They are taught by teachers of differing quality and who approach teaching with differing objectives while utilising varying strategies. Additionally, single-sex instruction is utilised in differing contexts, and this may need to be considered while assessing its efficacy. Consequently, the following section will reveal the examination of single-sex instruction

within the Jamaican context, utilising the case study approach for a broader and deeper understanding of the specific context.

CHAPTER FOUR - Methodological Framework

Introduction

This chapter provides details of my approach to designing this research. I begin by engaging in a description of the research location to provide context, introduce the sex-segregation program and paint a picture of the location. Secondly, I provide details of the overall design by first providing a rationale for the qualitative descriptive case study approach. Thirdly, I describe the data collection instruments used to gather the data. In this section I focus on the semi-structured interviews which provided detailed responses that added breadth and depth to the data, focus group discussions that provided feedback from individual participants and gave insight into group perspectives. I also discuss the use of observation through which data that may have been omitted from interviews was ascertained. The final part of this section focuses on questionnaires that provided the opportunity to gain a variety of perspectives from a large number of teachers and students. Fourthly, details of the processes involved in preparing for data collection, as well as what occurred both within and after the field will be outlined. Afterwards, I provide details of the ethical considerations that have guided the data collection process as well as engage in a reflection on my positionality. Finally, there is an outline of the strategies for data analysis and for ensuring the trustworthiness of the study.

A Description of the Research Location

Seaview High School

The research was conducted on the campus of a fifty-one (51) year old coeducational institution that I have decided to refer to as Seaview High School. It is a government-owned institution that is located in an urban area in Jamaica. It was initially referred to as a secondary school but was later upgraded to a High school nineteen years after it was established. This differentiation is significant in the Jamaican context as the names indicate the level of prestige associated with an institution, as well as the perception of the quality of the education being provided. The renaming further influenced the school´s culture and the resources it had access to.

The school sits on a hill that overlooks the busy town in which it is located. There were over 2200 students enrolled at the institution and they were taught by 113 teachers. These students were exposed to a wide variety of subject areas, taught from grade 7 to the sixth form level (grades 12 and 13). Although it is a government-owned school, Seaview High School has had a close connection to the Anglican church which was instrumental in helping the government acquire land to construct the school. This relationship is important as the church is believed to aid in the moral and spiritual upliftment of the students.

Like all Jamaican schools, the school days at the institution began with devotion, which refers to the time spent singing, reading the Bible, and praying. Devotion was organized differently daily. Two days per week the students participated in general devotions, with all students and staff in attendance; one day they met in year groups, on another day they met for devotions in their homerooms which were single-sex classes, and on the fifth day, all the male students met for devotions while the females met in a separate group. After devotions, students moved to their classrooms with varying levels of urgency.

At Seaview High School, the students were exposed to a variety of clubs, competitions, and sporting activities, many of which they excelled at, for example, performing arts and tennis. Teachers at the institution attempted to cater to the learning needs of the students by modifying the curriculum offered at each grade level. This includes the Reform of Secondary Education (ROSE), Caribbean Secondary Education Certificate (CSEC), E-Learning and National Council on Technical and Vocational Education and Training (NCTVET) curricula. An assessment of the student´s academic performance by the National Educational Inspectorate 2015 highlighted that overall, students´ performance in national tests was unsatisfactory. Their performance in the core subjects: Maths and English remained well below the national level. It was also highlighted that large numbers of the cohort failed to sit the examinations indicating that an issue of under participation existed at the school. The challenges did not appear to be related to the students´ prior performance, as they entered the institution with higher results than the national average during the years assessed (2009-2013).

It was those academic challenges that led to the establishment of the sex segregation program. The program was introduced by the school´s principal who believed that male students had different learning styles and wanted to allow them to compete with their female counterparts. Besides, by targeting their learning differences, teachers believed the boys would not be embarrassed by their peers. The program was also meant to target the behaviour of the male students, who were said to behave well when there was a teacher in class. Discipline was most evident when male students were participating in practical subject areas. The boys enjoyed those subjects very much and, on some occasions, they remained in class during the breaks and after school had ended.

Additionally, the students at Seaview High School were from diverse economic backgrounds. According to the inspection conducted in 2015 by the National Education Inspectorate, a group responsible for assessing standards in the education system, most of the parents were self-employed or artisans while a minority are professionals mainly in the hotel sector or government and private organisations. This economic situation was reflected in over 700 of the students being on the Programme of Advancement Through Health and Education (PATH) which provided them with free school meals.

The foregoing took place in an immaculate or well-kept physical environment. This may be because many garbage bins were strategically placed on the campus. This cleanliness was also evident in the classrooms where minimal trash could be seen at intervals. An important observation at this institution was that although the students were generally not incredibly quiet on campus, many of them tried to maintain discipline inside of the classroom. In situations when indiscipline was displayed, discipline was administered by the Dean of Discipline, principal, or teachers. Furthermore, leadership at school appeared to value the safety of staff and students. This was evident in the presence of several security guards and the use of security cameras at various locations on campus. These security guards monitored the two entrances as well as the general campus. In sum, Seaview High school offers the ideal environment for my study which is described below.

The Research Approach

Why Qualitative Case Study?

The qualitative research approach was particularly suitable for this thesis because it facilitated the interpretation of a social phenomenon, to understand the meaning social actors attached to their particular social environment (Silverman 2010; Bratlinger et al. 2005, cited in Gast and Ledford 2018). This approach is contextual, in that it uses the natural setting in which the events occurred. It allowed me as a researcher to enter the research context and gain insight through first-hand experience on-site. Furthermore, it also provided insight into existing problems and unexamined areas (Gorman et al. 2005). Considering this, it can be said that the qualitative case study approach supported my decision to collect data in a naturalistic setting (Laumann 2020) and provided a detailed description of the experiences of the teachers and students as they experience the sex segregation program. Further, it allowed me to gather data using several data collection instruments and provided an in-depth description of the case being studied.

Additionally, Gast and Ledford (2018) stated that qualitative case study research does not generally focus on attempts at testing hypotheses or making generalizations. Instead, it focuses on exploring a specific context and making assertions (Stake 1995). Considering this, I have designed this thesis in response to the literature reviewed in the previous chapter where it was evident that data on single-sex classes in a coeducational school was limited in comparison to data on single-sex schools in general. Moreover, the lack of data on this topic in the Caribbean region and Jamaica, in particular, justifies the approach used in this study. This approach is also ideal as it allowed me to collect data through direct encounters with the participants. However, it contrasted with the methodologies employed in previous studies conducted in the Caribbean such as those that assess the findings of previous research to reach conclusions regarding issues relating to, for instance, issues of gender stereotyping and academic performance (Pahlke 2014, Plummer et al. 2008) rather than utilising an approach that facilitates direct interaction with participants. Additionally, the methodological gap was noted in one study that carried out a comprehensive study that examined a cross-section of studies on single-sex education in a variety of research contexts. Although the study has provided a wealth of information on single-sex versus coeducational schools, it failed to

engage the participants on a personal level and thus, the participants´ voices were absent from the data. This is one advantage that my qualitative case study approach provides.

Another methodological contrast that was observed in the reviewed literature on single-sex education in the Caribbean is the use of documentary analysis to collect data on single-sex and co-educational institutions. The singular use of examination results does not provide the same depth and breadth in the data that is provided in my study through the use of the qualitative case study approach.   Besides, although the literature also indicated the use of the ethnographic research design which indicates an immersion in the culture of schools in five Caribbean countries, the study focused solely on achievement in Mathematics. Furthermore, there was an absence of students´ perception of what underlay their underachievement in these studies.

Additionally, the approach was appropriate as it aided in the fulfilment of my objective to gather information based on the social constructions and meanings applied by those who experience the sex segregation program. This format also facilitated my objective to produce rich, quality data which proponents of the positivist paradigm criticized for not being valid, reliable, or generalizable (Loh 2013; Morse 2015). Furthermore, utilising a research format that focuses on making meaning from social contacts, indicates the potential of my study to thoroughly explore this unique approach to addressing male underachievement in Jamaica. At the same time, it may be contrasted with the popular use of quantitative approaches used to explore single-sex education in the reviewed literature (Leo-Rhynie and Pencle 2002; Jackson 2012; Pahlke 2014; Sikora 2014; Dustmann et al. 2018). Although there are benefits to this research approach, I contend that they do not provide the same rich data that a qualitative case study provides. In addition to providing rich data, Guba and Lincoln (1994) suggested that it also promotes dependability, transferability and credibility as a central part of attaining trustworthiness in the study.

The qualitative case study approach also allowed me to focus on answering how and why questions within a specific context (Jack and Baxter 2008) rather than a cross-section of institutions in various research contexts. Further, the approach facilitated my decision to

conduct an open-ended, in-depth inquiry (Creswell 2014) into my specific topic of interest. I could also focus on a limited number of participants within a specific geographical area where I could fully explore their experiences within their context. By focussing on this ´bounded system´ (Stake 1995), I could approach it with careful attention, thus producing the high-quality results (Yin 2014) that were needed for the interpretation of this case. The literature suggested that case studies vary and the status as a methodology is sometimes questioned (Hyett et al 2014). However, it is ideal for my study as it facilitated an investigation of the general experiences of the teachers and students.

The strengths of this research approach did not only support the research questions which I sought to address in this study but facilitated research whose results may be deemed trustworthy. For instance, it allowed me to access detailed information about both the students and teachers who experience the single-sex program in a coeducational context daily, and, notably, I had access to these teachers and students within the setting. The qualitative case study approach also facilitated my use of purposive sampling to select the participants as opposed to the use of randomization in aspects of the literature (Dustmann et al. 2018) which does not target individuals known to be potentially rich data sources. In addition to fulfilling the aims of my study, the qualitative approach also added to the credibility of the study. This sampling strategy provided a diverse sample of individuals in a unique knowledge-rich environment. Besides, this method of selecting the participants involved the selection of individuals who were knowledgeable and experienced (Creswell and Plano Clark 2011; Patton 2014) in the area being studied and were willing to reflect on these experiences and communicate this information. It further contributed to the diverse perspectives of the stakeholder groups within Seaview High School, thus facilitating high quality, rich data which not only facilitated comparative analysis but added credibility to the study.

The decision to focus on a single case in this study was also appropriate. Researchers such as Stake (1995) and Yin (2009) suggested that the case study approach is appropriate for, among other things, studying programs. By utilizing this singular case study format, I could fully develop what Stake refers to as the descriptive approach which I have decided to employ. The benefits of this approach are reflected in the work of Gustafsson (2017) who stated that a

single case study is not as expensive or time-consuming as a multi-case study. The approach facilitated a deeper exploration of the topic being researched and as a researcher, I was able to question old theories and explore new theories as I increased my understanding (Ruddin 2006; Gustafsson 2017, cited in Mohajan 2018) of the use of single-sex instruction to address male underachievement. The process can be aided by the use of thick descriptions. Attride Stirling (2001) and Nowell et al. (2017) stated that qualitative researchers must engage in rigorous and methodical processes in conducting trustworthy studies. In this regard, I engaged in detailed description and interpretation of the experiences shared by the teachers and students, intertwined with background details that aided in the presentation of quality data, as well as in understanding the case being researched. By doing this, I have created what I hope is a clear trail to illuminate the path to my findings.

In addition to that, Yin (2011) describes the single case study as ´microscopic´ based on its sampling frame compared to that used in a multi-case study. Despite this and other similar criticisms, the approach remains unique (Ruddin 2006) and its credibility is enhanced by the increased rigour and the theories generated. In particular, I added rigour through an extensive data analysis process. The process included coding and recoding the data to create categories and subcategories. It further led to careful examination of the data collected and the condensation of the vast quantity of data into appropriate yet manageable themes while facilitating my reflexive contribution.

Data Collection Procedures

Semi-Structured Interviews

The data for this study was collected using several data collection methods rather than by relying on a single method (See Appendices A, B and C). According to Flick (2018), the researcher needs to focus on intuition in the field as she interacts with the participants as well as on making specific methods work rather than on formalized methods utilised in measurement-based research. Furthermore, while all methods have strengths, the selected method needed to fit the research questions and be sensitive to the research objectives. In conducting the research, I needed to determine the best methods that would help in the

acquisition of an in-depth understanding of the case being studied. In this regard, I chose to use several methods and employ the frameworks advocated by Guba and Lincoln and Richardson, to some extent, in collecting and analysing the data. One of the methods that I decided to use was the semi-structured in-depth interview. According to Adams (2015), semi-structured interviews have been criticised for being time-consuming and labour intensive. It also demands that the interviewer be smart, sensitive, and knowledgeable about substantive issues. This research method did not only have the potential to provide rich data and a deep understanding of the single-sex program, but it offered several advantages that made it ideal for my study.

My decision to utilise this research method was influenced by Marshall and Rossman (2005) who stated that a study that focuses on the lived experiences of individuals, typically utilises in-depth interviews. Further, this research method facilitates conversations with one respondent at a time (Adams 2015). Semi-structured interviews are useful when the researcher needs to ask questions (as seen in Appendix C) that the respondent may not want to speak candidly about in a focus group. Additionally, this method is ideal for situations in which the researcher wants to conduct a formative evaluation of a program and wants to speak with staff or is examining unchartered territory (Adams 2015). Considering this, the use of semi-structured interviews were suitable for my research into this unique academic program in Jamaica.

The relevance of the semi-structured interview was further reinforced by Creswell (2009) who stated that the in-depth interview is useful when the participants cannot be directly observed as well as if there is a need to gain historical information from the participants. He further stated that it allows the researcher to control the line of questioning. The rationale for selecting this research method was also guided by the words of Brinkmann and Kvale (2018) who reflected the objectives of my study and were therefore quite influential in my decision to use this method to collect my data. Their view is that the best way to learn about a person´s feelings, experiences, hopes and the world in which he lives, is to have a conversation with him or her. Other researchers, such as, Della Porta (2014) and Brinkmann and Kvale (2018) have also suggested that an in-depth interview is a particularly powerful way of capturing the experiences of the participants and the meanings which they attribute to

these experiences; they answer questions on their terms, and this allows for greater comparability (May 2011). These statements reflect the objectives of my study and indicate why this method was especially helpful. That is, as I was deeply interested in the meanings the teachers and students gave to their world and their participation in it.

Finally, the semi-structured interview format is not only widely used in case study research (Hancock and Algozzine 2006) but it allows for the use of open-ended questions that capture the data needed to answer the ´how´ and ´why´ questions being explored in my study. It generates information that represents the voices of the participants while minimizing my voice. From the perspective of Brinkmann and Kvale (2018), the interview goes beyond covering the meaning level to attempting to cover the factual level. In this regard, this method supports my objective to elicit explicit and precise descriptions of the experiences as well as of the meaning attributed to said experiences.

Focus Group Interviews

Another research method that was employed in the study is focus group interviews. A Focus group involves an informal conversation among a group of six to twelve participants about a specific topic (Longhurst 2016, Newcomer 2015). This research method is a valuable approach and was of immense value to this research. It was useful because it allowed me to gain rich and detailed insights into the beliefs, perceptions, and experiences of those who volunteered to participate in the discussion (Patton 2002; Carey and Asbury 2012). This method can be used as a stand-alone data collection method, but I am influenced by the perspectives of Barbour (2018) and Dilshad and Ijaz Latif (2013) who stated that it may be used to support other research methods such as the in-depth interview and observation as it provides quality data in a social context (Patton 2002). Focus group interviews can offer an interesting and enjoyable experience for both the participants and the facilitator. According to Gorman and Clayton (2005), focus groups allow the researcher to collect data faster as it requires a shorter time commitment. During the interview, participants are generally encouraged to interact with each other as this allows the researcher to also observe a range of beliefs. Furthermore, it allows the researcher to observe non-verbal communication. My decision to conduct two focus group interviews stemmed from my interest in gathering data

by encouraging free-flowing conversation among students who directly experience sex segregation daily. This was particularly beneficial as it did not only aid in generating rich qualitative data, but also ´pluralistic applications´ (Cheng 2014). Besides, focus group interviews are flexible and allow for deeper understanding (Daymon and Holloway 2002) of the case being studied. These benefits have added to the quality of the data collected.

Focus group interviews have also allowed me to meet the teachers and students in their natural environment (Casey and Kreuger 2000) and simultaneously gain varying perspectives on the students' experience of sex segregation. The interviews provided insight into the experience of the participants and allowed for a more holistic understanding of what is being studied. They were also used to capture the attitudes (Baskarada 2013) of small groups of individuals to the research problem. Focus groups are generally effective in providing substantial information that the researcher lacks about the subjects and for examining issues relating to marginalized groups in the society (Dilshad and Ijaz Latif 2013). It is also invaluable when the researcher wants to achieve insights on people´s understanding and experience of the issue being studied (Kitzinger 1997).

My decision to facilitate focus group interviews was further influenced by Newcomer et al. (2015) who stated that the questions should be sequenced to elicit details on the key areas being studied. Her study reminded me that this type of interview does not have as its objective participants reaching a consensus. While that is desirable in some instances, my study aimed to gather a range of opinions and experiences in the voices of those who have lived it.

In recognizing the benefits of this method to my study, I took into consideration the perspective of May (2011) that the rapport of the group is of paramount importance. The participants must be made comfortable and one way to achieve this was by facilitating general descriptions of their experience before they begin conversing on the specific focus of the study. Carey and Asbury (2012) suggested that once there is synergy in the group, the depth, and breadth of the data increase. The size of the focus group is also important as larger groups tend to result in trivial and short responses being provided. My decision on the

size of each group was influenced by researchers such as Newcomer (2015) and Longhurst (2015) who suggested a general group size of five to twelve participants. They stated that the group size varies based on whether sensitive or personal details are to be explored. Consequently, I decided to find a balance and include six students, including three males and three females between grades nine and eleven in each group. Although these students were from three different grade levels, their varying perspectives were beneficial as they discussed the single-sex program from all angles. To acquire this data, I needed to, in many instances, organize and redirect the focus of the students to the topic being discussed. This was important as it contributed to the clarity and depth of the data. In sum, focus groups were helpful as they allowed me to listen to the perspectives of several individuals from the larger group simultaneously (Mathers et al 1998).

Questionnaire

Another important research method was the questionnaire. Questionnaires are quite ubiquitous in educational research. They are normally used to collect information on various aspects of the school system (Siniscalco and Auriat 2005; Kazi and Khalid 2012). A well-designed questionnaire is an efficient way for the researcher to collect data from a large number of persons in a cost-effective manner. The open-ended question format was appropriate for this study because it allowed the students to formulate their responses and I could draw a range of themes from the data that was provided. The format of this research instrument supported my objective to gather data on the experiences and perspectives of the students in their own words. I chose to use the self-administered questionnaire so that the students could answer the questions without being influenced (Patton 2002) by me as a researcher and according to Kazi and Khalid (2012) this could lead to the addition of new information. It also eliminated the biases associated with the stipulated responses found in closed-ended questionnaires (Reja et al. 2003).

I acknowledge that there are disadvantages to using an open-ended questionnaire as opposed to the focus group or semi-structured interview. The researcher is unable to explain misunderstandings and there are no opportunities for follow up questions. Additionally,

closed-ended questions may result in a greater probability of all the questions being answered. To prevent this, researchers such as Kazi and Khalid (2012) suggested that the language used should be easily understood and the wording of the questions should be at the level of participants which includes consideration of both their educational level and culture. Further shortfalls are highlighted by Weller (2014) who suggested that the responses may be impacted by the memory limitations of the respondents and the research will not benefit from the comparability afforded by the structured closed-ended format. Patton (2002)) argues that the comparability of the responses provided by the open-ended questions is strengthened and there are greater details provided by each person. However, of greater significance is the willingness and ability of the participants to share their experiences and opinions with me. Despite the disadvantages, Parfitt (2005) made a valid point in his suggestion that this instrument is indispensable when a researcher needs data on people's attitudes, behaviour, and awareness about specific issues.

Observation

Observation is described as an important and comprehensive method of data collection (Patton 2002; Ciesielska et al. 2018). It allows the researcher to capture verbal and non-verbal communication as well as first-hand knowledge of what happens (Twycross and Shorten 2016) in the classroom. This method of data collection allows the researcher to interact with the participants in their natural environment, which gives a clearer picture of the field (Schmuck 1997) as well as facilitates the comparison of the data to what is shared in interviews. Further, the researcher can observe details that may have been omitted or exaggerated during the interviews. Non- participant observation has been employed in this study because of its potential to provide data that offers a deep understanding of the single-sex program that is being explored in the study.

During the observation, the researcher can sit at the back or side of a room and make notes (Jones and Somekh 2011) of what is occurring naturally. She can observe the classroom surrounding while paying attention to what is occurring and writing about what is noticed. Observation complements the previously mentioned data collection instruments and allows for the collection of data on a large number of individuals simultaneously. According to

Hames and Paolisso (2015), it facilitates the exploration of differences in areas such as age and sex. The unstructured approach was beneficial to my study as I was able to sit at the back and observe the proceedings without being obtrusive. I was also able to observe participation and behaviour to interpret the meanings of the events that took place in the classroom. Moreover, the immediacy of the data collection gave the process authenticity and allowed me as the researcher to take a keen look (Cohen et al. 2007) to gain another perspective on the sex separation program. This research method also allowed me to draw on my knowledge as a teacher, as I engaged in the interpretation of the actions or activities in the classroom.

Preparing for the Field

Selecting and Gaining Access to the Research Location

After selecting data collection methods, the next step in the research process was to select and access the research location. Qualitative researchers often select the research location based on convenience of access and the respondents tend to be selected opportunistically (Payne and Williams 2005). Although researchers may need to consider the convenience of the research site because of the effect it may have on personal and financial costs, the researcher also needs to select a location that is appropriate for the research and then regard gaining access as a separate consideration (Walford 2001).

The selection of my research location was influenced by the fact that sex segregation in coeducational schools was not a popular phenomenon in Jamaica, so there were limited locations available to conduct my research. It involved careful searches which included enquiries at the Ministry of Education but that proved futile. Further enquiries were made among teachers from across the Island whom I met in the Caribbean Secondary Education Certificate (CSEC) marking centre in Kingston, Jamaica where I worked as a marker. This marking centre was organized every summer by the Caribbean Examination Council, the organization that is responsible for the grade eleven and sixth form exit examinations. Hundreds of teachers from across the Caribbean meet at this location to mark the examinations for specific subject areas. There were hundreds of teachers from various institutions in Jamaica, therefore I felt that this location would be an ideal place to learn about

any institution that was utilising single-sex instruction in coeducational schools. The choice to study Seaview High school was, therefore, purposive (Patton 2002; Guest 2015) as it was the only coeducational secondary school that I found utilizing single-sex classes for some subject areas and would, therefore, be able to answer the how´ and ´why´ questions that formed the basis of the sex segregation approach at the institution being studied.

After selecting my research location, the next important step was to gain access to the research field. As a researcher, my objective was firstly to ensure freedom and integrity both for myself and the participants (Flick 2018) to later access, enter and generate data on the single-sex program that had been implemented at the institution. Of course, this process required that I consider a set of moral principles. I needed to state the purpose of my study, the research questions I wished to answer, and my reason for conducting the study at that institution as I tried to negotiate access. This process of negotiating mutual expectations is an important part of gaining access (Flick 2009). Upon initiating the data collection process, my first point of contact involved the so-called gatekeepers. This process was not without its challenges. The process required making contact via email and telephone conversations. The administration was not initially receptive to my request to conduct this study at the institution, and it quickly became clear that no interviews would be conducted with one person with whom I had hoped to conduct an interview. During a series of telephone communications in which I explained the reason for and objectives of my study, mutual expectations were expressed, and confidentiality assured. Afterwards, I was invited to visit the research location. Clarification of expectations was important as I needed to ensure that ethical concerns were resolved especially with regards to the participation of children. Upon my arrival, I met with the Headmistress who consented to my access to the institution. I was given oral permission to interact with staff members and speak to those who were willing to participate. One condition for administering questionnaires was that I needed to do this in one section of the school as this was perceived as being disruptive.

Entering the research field is considered to be distinct from, yet equally as important as gaining access (Kunda 2013). Chughtai and Myers (2017) described this entry as a rite of passage. The research process is disruptive (Wolf 2004a) to the institution, thus after gaining access one challenge that may arise is the willingness to participate. Flick (2018) highlighted

the importance of reciprocity in this situation. In my role as a researcher, I hoped to have an insider´s perspective. This could only be achieved if the participants trusted me. A part of gaining their trust included respecting the participants' requirement that their workspace or learning setting is not severely disrupted. Furthermore, according to Patton (2002) participants are also willing to engage the researcher if they think their cooperation is worthwhile. Consequently, I ensured that the participants knew details about me as a researcher, as well as about the nature and purpose of my study. They needed to understand how important they were to my study and felt valued in this process. Therefore, I attempted to build rapport by interacting with potential participants as I prepared to make sense of the events through the lens of my background and experiences as a Jamaican High school teacher.

Participant Selection

After gaining access, selecting the participants who would provide the data was the next step in the research process. Participant selection is considered to be one of the most important aspects of research design (Sargeant 2012) yet it has been described as one of the least critiqued activities in qualitative research (Reybold et al. 2013) because many researchers do not explain how participants were located, selected, and recruited (Arcury and Quandt 1999). The method of selection is done to attain the maximum information on the topic being studied (Hadi et al. 2012). It must have a clear rationale that relates to the research question. To fulfil this rationale my objective was to seek the participation of teachers, students, and parents. The teachers interact with students in single-sex and coeducational classrooms daily and were, therefore, able to respond to the objectives of this study. I viewed all the teachers as potential sources of rich data since they functioned in a data-rich environment with both single-sex and coeducational classes. I was interested in participants who had experienced both and were willing to freely describe their experiences. It must be noted that sometimes potential participants may be unwilling to participate in the research process while others may be incapable of providing data that contribute to an in-depth understanding of the social issue being studied. The decision was made to include the perspectives of teachers and students and eliminate parents as a source of data because of the challenge faced in finding parents who had any knowledge of the program.

Quota and purposive sampling strategies were used to select participants among the teachers and students. In qualitative research sample size is often not predetermined but depends on how many participants are required to fully inform the study (Sargeant 2012). Nevertheless, my use of quota sampling involved a pre-planned number of in-depth interviews, focus group discussions and questionnaires to be administered. Quota sampling focuses on persons who are most likely to experience or know about the topic (Mack et al. 2005). Further, Purposive sampling was used in the selection of participants for the in-depth interviews. According to Patton (1990) and Sandelwoski (1995), all types of sampling in qualitative research are in some way connected to purposive sampling. This approach involves handpicking cases (Lewin 2011) and selecting specific individuals or groups that are knowledgeable or experienced in the area being explored (Creswell and Plano Clark 2011; Guest 2015). Purposive sampling was used as it supports my aim to gather data and understand the perspectives of the students and teachers who experience gender separation at the school and will further aid in understanding and contributing to the theoretical framework (Bernard 2002). Therefore, selecting people who could inform my study would benefit my objectives.

I also employed convenience sampling in selecting the students who participated in the focus group interviews and questionnaires. In a school population of approximately 2400 students, I anticipated that the students would be able to contribute the rich data required as they describe their experience of being educated in single-sex and mixed groups. However, they may be unwilling to participate in the process. This approach meant that participants were selected based on their location, availability (Acharya 2013), and willingness to participate. I requested the participation of various students in the section of the school where data collection was permitted. This was followed by further discussions with their homeroom or form teachers who provided the adult supervision required as they decided if they wanted to participate. At the end of this process, six students volunteered to participate in each focus group.

Within the field: Collecting the Data

Interviewing: Semi-Structured Interviews

Within the research field, my approach to the interviews was informed by Guest's (2015) perspective on purposeful sampling. The informants included teachers who taught both single-sex and coeducational groups and were, therefore, data-rich sources. Ten teachers volunteered to participate in semi-structured in-depth interviews, seven females and three males. (See Appendix F for demographic information, role description, and typology of the beliefs of these informants). Mack et al (2005) and Gorman and Clayton (2005) also informed the approach which I took towards conducting the interviews. They suggested that the participants should be informed about the broad research context rather than being given specifics that may influence their opinion before the interview begins. This information must be delivered honestly with no false expectations being given to persuade the participants.

The informants indicated that it was difficult to participate in an interview during the school day because of the unique structure of the timetable at the institution. Consequently, some of the teachers shared their telephone numbers with me while others agreed to participate in a skype interview. Creswell (2012) sanctions this approach, arguing that it is acceptable in situations when the identified location is not acceptable, or it is impossible to use it. He further argued that the use of an electronic method to conduct in-depth interviews is beneficial when the participants belong to different geographical locations. The opinion of Miriam (2009) also suggests that by utilizing this method the emotional connection is lost, but I argue that the skype interviews furthered the connection started on campus and the telephone interviews also produced detailed, friendly conversations which yielded detailed perspectives on sex segregation at Seaview High School.

The interviews lasted for a period of one to two hours and went through a series of stages. There were introductions, discussion of the ethical principles and providing informed consent, seeking permission to record and an opportunity was given to the informant to raise concerns on any area they wanted to. After the interview, gratitude was extended to each informant. I began each interview by attempting to build rapport or break the ice. This was

done by engaging in casual conversation. To maintain the ethical principles, I ensured that the informants were reminded of the objectives of the study, and they were always informed that participation was voluntary and could be aborted at any point during the interview process.

Interviewing: Focus Groups

Chughtai and Myers (2017) stated that after the hurdle of gaining access to the field, the researcher must then face the challenge of finding willing participants. Recruiting participants to participate in the focus groups raised ethical concerns as my research included teenagers. My concerns were with acquiring informed consent from a parent or guardian while maintaining the autonomy of the students. (David et al. 2001) recognizes the complexities involved in achieving consent in the school setting because of the layers of gatekeepers who are involved. My decision on how to proceed was influenced by the research context. Limited access to parents meant that the authority figures within schools tend to act as proxies, permitting situations when the research is not invasive. However, ´the students also had a right to give informed consent. This consent was given after sessions in which information was provided in the classrooms. Students were then able to decide whether they wanted to volunteer. For some, sacrificing the time to participate was inhibitive.

Two groups of students participated in the focus group interviews which were conducted in classrooms suggested by members of staff. As was previously mentioned, two focus group interviews were conducted, each of which lasted for forty-five minutes. Permission for students to participate in the study and for the focus group interviews to be recorded were granted by the principal and form teachers. In conducting these interviews, I also took into consideration the perspectives of Mack et al. (2005) who suggested that before the focus group discussion begins, there needs to be oral or written informed consent. I began by introducing myself to the students. Consent was again sought from each participant before the interview began. The students were told about the topic that was to be discussed and were advised that they could leave if they no longer wanted to participate. Further, I asked their permission to record the discussion, and this was immediately granted.

I began by building rapport (May 2001) or breaking the ice (Fontana and Fey 2003) by engaging in general discussions about school life; then I proceeded by utilizing questions I had prepared, to guide the discussions. The students engaged in dynamic group interaction, sharing their perspectives, and providing meaning within their context. The discussions were dominated by the three male students in each group, but the girls became quite forthcoming after being encouraged and told that they were in a safe space where their opinion was valued, and anonymity guaranteed by the researcher. This provided an opportunity to observe the group dynamics and decipher how the students constructed meaning by observing interaction (Wilkinson 1999) among the group members. It also allowed me to compare the gendered interaction in these groups to what was described in the interviews and questionnaires.

Researchers such as Morgan (1988) and Krueger (1988) believe that the focus group researcher lacks the power to control the group discussion. This perceived shortcoming was mostly absent from my focus group discussions. Although there were moments when the discussion became spirited, students responded mostly in an orderly manner as they shared their perspectives on the topic. During those moments my actions were influenced by Miller and Crabtree (1999) who suggested that the researcher keeps the story flowing to ensure its competence. Furthermore, I listened to the participants, indicated my interest in their ideas, and utilised the field questions to guide the conversations. I also took brief notes during the process and recorded the conversations.

Questionnaire

Questionnaires were also administered to seventy participants based on convenience (See Appendix A). The questionnaires were administered during one scheduled break during the school day. They were issued to volunteers in one section of the school, stipulated by a member of the administration. Although I desired a wider variety of participants from across the grade levels, I was guided by Mack et al. (2005) who indicated that it is important that the researcher is respectful and responsive to the direction of local experts and leaders. Thirty-seven female students from grades seven (7), nine (9), ten (10), eleven (11) and twelve (12) completed the questionnaires while twenty-nine male students from grades seven (7) to

eleven (11) completed and returned the questionnaires. The students were informed that participation was voluntary, and they could withdraw from the process at any point. They were further reminded that their names should not be written anywhere on the questionnaire. Four questionnaires were discarded as they were not completed and sixty-six were returned. During the process, there were a minimal number of students who required clarification of questions, which I felt indicated the questions were mostly unambiguous. In the end, some students omitted questions, stating that they didn´t have answers to those questions. This kind of result is supported by Boynton (2004) who stated that failure to fully complete questionnaires often occurs when they are administered based on convenience.

Observation

Faryadi (2019) suggested that observation is the most effective way of collecting data as one can directly observe the participants and listen to their conversations. This perspective is arguable, but the method was useful as it allowed me to observe non-verbal behaviour and to develop an understanding of events that were not mentioned during the interviews or written on the questionnaires. The process began with discussions with teachers whose subject areas I was interested in observing. I explained the nature, purpose, and procedures of the study. Informed consent was granted by six teachers who indicated that I could take notes but was not allowed to video the lessons. To ensure the integrity of the research process, I needed the consent of all potential participants. I also spoke to the students before each lesson and asked for their consent to include them in my research. Nine lessons were observed in six classes. The students were between the age of twelve to fifteen years old and were between grade seven (7) and grade nine (9). The lessons that were observed and the frequency of the observation were based on the consent given. Three classes were observed twice, and three classes were observed once. Among these classes were two all-girls groups, two all-boys, and two coeducational groups. The lessons that were observed included science, language, business, and social studies, each of which lasted for sixty (60) minutes. These subjects were ideal as they gave insight into a cross-section of the major areas of studies in high school in Jamaica.

I approached the observation process with an open mind to observe and understand the experiences of the teachers and students in their natural environment. Despite this, I was influenced by Arvastson and Ehn (2009) who suggested that the researcher can enter the research field with an idea of the general areas to be observed. I wanted to observe the interaction among students in single-sex and coeducational classes as well as the interaction between students and teachers, but I remained as unobtrusive as possible (Ciesielska et al. 2018) as I tried to understand their experience of the single-sex program.

Tracking the Data

After collecting the data, it needed to be protected. The interviews were recorded using a recording software that was installed on my personal computer and the focus group interviews were recorded using my Android smartphone. Upon completion of the data collection process, the recordings from the focus group discussions were uploaded to the computer. According to Gorman and Clayton (2005), devices malfunction; thus, both types of recordings were then stored on google drive to ensure the preservation of the data. The recordings were then transcribed manually and mostly verbatim. There was the use of dialect in the focus group discussions so in some cases there was a need for minor translation. The transcribed data along with the notes from observing the lessons were then saved to my personal computer and later uploaded to google drive to safeguard against computer malfunction. Finally, the data collected through questionnaires were also typed and saved to the computer. During the process of transcribing and tying, notes and memos were written to reflect my understanding and interpretation of the events.   This also allowed me to engage with the data and to further determine whether the research objectives were being met.

Procedure for Data Analysis

Following data collection, the researcher engages in data analysis. Wong (2008) defines data analysis in qualitative research as the process of searching and arranging material that is acquired through interviews and observation notes to develop an understanding of a phenomenon. Qualitative data analysis is also said to be interested in eliciting stories from

individuals and groups (Bamberger 2000) and searching for relationships and themes (Marshall and Rossman 2006). To ensure the success of the process of analysis, Miller and Crabtree (1999) suggest that, among other things, the researcher should know her biases and preconceptions, be flexible, exhaust the data or try to account for all the data, consult other persons as she seeks alternative interpretations and celebrates anomalies as these have the potential to provide deeper insight into the data. My approach to data analysis is influenced by these perspectives. The overall aim of this study was to explore, understand and interpret the perspectives of the teachers and students at one coeducational high school in Jamaica, on their views regarding utilizing single-sex classes as a strategy to address male underachievement. The process of data collection, coding, categorizing, eliciting themes, using analytical memos, and engaging with my reflexive self, have aided in understanding the perspectives on the use of single-sex classes as a strategy to address male underachievement.

The approach used to analyse the data in this study was further informed by (Simons 2008, cited, in Esin et al. 2014) and Creswell (2014). Simons suggested that there are merits in combining the constructionist narrative analysis and a qualitative approach that focuses on content analysis. Creswell (2014) also suggested that the qualitative researcher should work inductively, moving from the specific to more general themes. In my role as a researcher, I was actively involved in interpreting and attaching meaning to the data. My approach was greatly influenced by Creswell´s approach to structuring qualitative data analysis. This suggestion included six steps.

1. Data must be organized and prepared for analysis.
2. Look at the information overall to establish meaning.
3. Code the data.
4. During the coding process, generate categories and themes.
5. Determine how the themes will be represented.
6. Interpret the findings.

To analyze the data the inductive approach which involves identifying patterns in the data was utilised. Thomas (2006) stated that this approach is often used in qualitative research although it often remains unnamed. The use of inductive data analysis facilitates the condensation of raw data into summaries, the establishment of links between my research

objectives and the findings, and it generally led to the formation of a theory that underpins the experiences that are reflected in my study. Thomas also indicated that data analysis utilizing the inductive approach begins with multiple readings and interpretation of the raw data to elicit data that are linked to the research objectives. Further, analysis was conducted by developing codes and categories which were refined during the process of multiple interpretations.

In organizing and preparing the data for analysis, I transcribed the semi-structured interviews and focus group interviews. I also organized the data from the questionnaires and observation notes, using Microsoft Word. The initial stages of analysis involved repeatedly listening to the recordings and reading the transcripts to formulate my initial interpretation of the data in light of my research questions and objectives. As I engaged with the data, I created some general code frames which became more focused as new ideas or codes were determined during the process of analysis. Charmaz (2014) and Glaser (1999) suggested that initial coding requires that I scrutinize the data by focussing on what´s happening in the data, the areas it focuses on, and the participant´s concerns or things they take for granted. To do this, I engaged in line-by-line coding initially, to ensure that I did not omit important data. Flick (2013) stated that this process has the advantage of allowing the researcher to gain a new perspective on familiar material. This perspective is supported by (Terry et al. 2017) who stated that the researcher tends to refine and modify during the coding process as she seeks to make sense of the data and provide a rigorous foundation for the process.

Primary coding was done using MAXQDA data analysis software. This decision has received conflicting responses in the literature. St John and Johnson (2000) argued that the use of software for coding could cause the researcher to lose contextualized meaning while (Terry et al. 2017) stated that every researcher needs to determine the best tool based on her project context. The use of this software, MAXQDA, allowed for the deconstruction of the data into meaningful, manageable units (Laukner et al. 2012). I also combined the use of the software with manual analysis employing notes and post-it to keep the narrative focused. Additionally, the process of coding was done several times, I utilised descriptive coding to note the ideas and concepts used in the data and In Vivo coding to record the specific words of the participants which I wanted to use. I also engaged in focused coding (Saldaña 2009) to

record patterns in the responses provided by respondents or noted in the field. These are typically recorded as themes.

Once the coding process was complete, I utilised thematic analysis to create interpretive stories from the data. At that point, my approach was influenced by Braun and Clark (2013) who stated that pattern-based analysis allows the researcher to identify features in the literature that answer the research questions. As I engaged with the data that I had coded to find patterns, I identified those that had salient features that addressed my research questions. This was an active process that required thoughtful reflection on the data. Braun and Clarke (2006 and 2019) indicated that the themes do not passively emerge from the data or coding. Instead, they are actively drawn from the data as a result of analysis and interpretation of the data (see Appendix I).   Consequently, I engaged in a process of reflective and reflexive thought on the data and further focussed on a process of creative analysis to ´develop´ (Braun et al. 2016) and ´generate´(Braun et al. 2018) interpretive stories.

Ethical Considerations

Ethical issues in research have become very important in light of society´s increased expectation of greater accountability (Haggerty 2004; Held 2006; Zegwaard et al. 2017, cited in Fleming and Zegwaard 2018). These issues are present in various kinds of research especially in qualitative research due to the in-depth nature of the study. The alleviation of these issues is believed to lie in the researcher being aware of the ethical principles: autonomy, beneficence, and justice (Orb et al. 2001).

Ethical problems can be very subtle at times and extremely obvious in other cases in qualitative research It is evident in areas such as how the researcher gains access to the field or in the impact that the researcher has on the participant. The nature of qualitative case study research is to explore and describe people´s experience in their natural environment therefore ethics must remain central to each stage of the research process. My commitment to conducting ethical research involved, among other things, respecting the dignity of and protecting the participants from harm (Connelly 2014; Bell and Bryman 2015). In this

regard, I committed to implementing safeguards to ensure this. One of the required tasks that I engaged in, was to acquire approval from the University Ethics Review Committee at the University of Sheffield to conduct the study.

Within the research field, my commitment to maintaining ethical standards remained at the fore. One area of focus was on volunteerism. My consideration of volunteerism was informed by Steffen (2016) who stated that participants should not be coerced into participating in a study. This can be problematic when decisions are being made by gatekeepers whose position of power could implicitly coerce (Miller and Bell 2012) participants. I mitigated this by informing all participants that participation in the research process was completely voluntary, and withdrawal without explanation was possible at any stage during the interview process. I must acknowledge that, although I gave the students this information, my position of power may have influenced the students' decision to participate initially or influence their hesitation to withdraw from the data collection process. Despite this, I needed to consider the participant´s rights to be informed. Orb et al. (2001) referred to this as autonomy. I honoured the rights of all participants by gaining their informed consent. Furthermore, through discussion about the nature and purpose of my study, I was able to negotiate the trust (Kvale 1996) of the participants.

The principle of beneficence has also influenced my research. According to (Orb et al. 2001) the researcher has a moral responsibility to protect the participants from harm. One way in which this needed to be done was to provide anonymity and confidentiality (Sanjari et al. 2014). These areas tend to be of ethical concern in qualitative research so to protect the participants I ensured that before starting any conversation, details on the consent form (See Appendix D) were reviewed with the participants. Further, anonymization was employed in my use of questionnaires, focus groups, and observation. Students who completed the questionnaires were informed that no names should be included, therefore, guaranteeing that there was no personal connection to the data or their personal information. Similarly, the students who participated in the observation were guaranteed anonymity as the researcher remained unaware of their identities. The participants in the focus group discussions and the teachers who participated in the in-depth interviews were guaranteed confidentiality as all identifiable details were adjusted to ensure there was no ethical compromise.

Confidentiality was limited in any references to administration due to the few persons working in that capacity and the unique roles that exist in this area. However, all participants who provided details of the program through interviews or questionnaires were protected. Steps were taken to adjust personal details such as names and subject areas. Securing the data is also of ethical importance; thus, identifiable details about the participants were immediately changed and then saved on google drive. It was therefore only accessible to me, the researcher. Additionally, the research site was also protected. A pseudonym was used and due to the unique nature of the program being researched, the location and other unique features of the school were omitted. In my use of quotes by the participants, I, therefore, decided to utilise pseudonyms to ensure that neither the data nor personal information could be connected to any of the participants.

As I navigated the research field, other ethical issues had to be considered. The involvement of minors in a research project raised ethical concerns. They were asked to discuss issues relating to sex and gender as well as topics that were topical in the Jamaican education discourse and which may have been uncomfortable to many of them. Besides, my use of focus group discussions for data collection required that I engage with small groups of students from different grades who shared their experiences of the sex segregation program. This situation could cause some participants to feel pressured to join because their friends agreed to participate even though they may feel uncomfortable with participation (Felzmann 2009) while others could feel obliged to share their opinion with me because they recognized me as an adult who, based on Jamaican culture, deserves respect and cooperation. I also recognized that group participation may lead to groupthink as sometimes, ideas that were shared by some participants, were met with agreement by most, and sometimes all other participants. In consideration of these eventualities, I impressed upon the students that participation should be voluntary and their decision to participate should be autonomous.

The standards of confidentiality were also threatened in the focus groups. The nature of the focus group meant that both the researcher and all the participants were privy to the ideas being discussed. It also meant that confidentiality could not be guaranteed. Although I implemented measures to protect their identities and opinions, I was aware that this could be breached by other members of the group. Therefore, I began the discussion by discussing the

procedures for maintaining confidentiality for all participants. I utilised the perspectives of Sim and Waterfield (2019) and Longhurst (2003) who indicated that participants should be asked to maintain discussions as confidential. With this in mind, the participants in the focus groups were asked to treat all conversations as confidential and to honour the other participants by not sharing the ideas that were discussed with non-participants. Despite, this, I acknowledge that the challenges posed by focus groups cannot be completely mitigated by this agreement.

Additionally, the nature of the topic being explored raised other ethical issues. The perception of masculinity in Jamaica meant that participants may either have extraordinarily strong opinions on being educated in a single-sex class or they may not communicate their opinions honestly. My positionality as a teacher prepared me for the possible reactions of both male and female students to the single-sex classroom. I encouraged them to speak freely which revealed that some students were willing to engage with "sensitive and potentially upsetting issues" (Felzmann 2009, p. 107) while others remained quiet and had to be encouraged to participate in the discussion.

Finally, during the interviews with teachers, I was faced with the issue of informants who were hesitant to provide details on some areas, especially if it presented them negatively or could be perceived as critical of administration or their colleagues. In other situations, they mentioned areas of concern, such as the belief that homosexuality could result from being in a single-sex class but remained hesitant to expand on these perspectives. The teachers were reminded that the process was voluntary, and they should provide details that they were comfortable sharing. Furthermore, as the process was voluntary, they were reminded that they could stop the interview f they desired to. Further, they were also reminded that there would be total confidentiality, which led to greater openness by the informants.

Researcher Positionality, Reflexivity and Reflection

Reflection is fundamental to the qualitative research process. It involves the researcher acting as both the subject who engages in thoughtful reflection and the object being reflected on

(Mortari 2015). As I embark on this reflective journey I am reminded by Hertz (1996) that as a reflective researcher I need to do more than report the findings of my research. I need to also explain how these findings were constructed. I engage in this process cognizant that my interpretation of what I see and experience in the field are influenced by my preconceptions, therefore my reasoning shapes how the findings are understood. It is therefore important that I look inward and utilise transparency (Steier 1995) in my reflection on how my subjective framework has impacted my research. This is important for the validity and trustworthiness of my research. To establish the trustworthiness of my study, I use this section to reflect on and discuss my positionality, the positionality of the research participants, and how these interconnect as I explore sex segregation at Seaview high school.

Researcher positionality is integral to the qualitative research process as it highlights the researcher´s worldview and the position he assumes on the topic he is studying (Foote and Bartell 2011, Savin-Baden and Major 2013). Positionality is unique to a researcher and affects the complete research process. According to Foote and Bartell (2011) the personal experiences that shape a researcher´s positionality, influence what the researcher brings to the total research process. It influences the research methods that are selected as well as the interpretation and outcomes. In this regard, I acknowledge the effect that my positionality could have on my research, its potential for researcher bias and subjectivity influenced by my philosophical position and other assumptions (Sikes 2004): In particular, I acknowledge that the totality of my research is influenced by my belief about social reality, assumptions about the way we interact with the environment as well as my social and professional experiences.

In conducting this research, I recognize that I am the main instrument for data collection so it is logical to expect that my `beliefs, political stance, and cultural background` (Bourke 2014, p.2) will impact the study. In this regard, I embrace the view of (Carr 2000, cited in Holmes 2020) who noted that education research is not usually value-free. As such, I am required to locate my values and beliefs regarding how I decided to design and conduct my study. This process requires that I engage in reflection and adopt a reflexive approach as I try to understand myself in the research process. The reflexive approach which informs my positionality requires that I disclose myself in my work as I try to understand how I influence the research.

My positionality in this study is shaped by several aspects of my social identity. Firstly, I am a black, female teacher who grew up in a working-class family in Jamaica. Secondly, my positionality is shaped by my background as a past student of a single-sex institution and as a teacher of all-boys, all-girls, and coeducational classes. Further, my cultural, religious, and linguistic identities also inform the positions I have adopted in this study. I am reminded by Homes and Gary (2020) that positionality is never fixed but is informed and shaped through a reflexive process. In this regard, I believe that my age and experience as an immigrant in Germany have influenced my interpretation of some of my experiences during the research process. Additionally, I approach the study as an insider being informed by (Griffith 1998, cited in Mercer 2007) and (Berger 2015 and Teh and Lek 2018, cited in Dodgson 2019) who stated that a researcher´s insider position is determined by, among other things, sharing personal characteristics such as gender, race, class, sexual orientation, and skin colour.

The participants in my study have also approached this study shaped by their unique positionalities. The informants in my in-depth interviews are black teachers who have experienced teaching single-sex and coeducational classes in the same institution. This gives them a unique experience that I hope will influence how male underachievement is addressed in Jamaica in the future. They are authority figures whose worldviews are shaped by their political, cultural, and religious identities. Besides, their decision to participate in my study may be influenced by our interconnected interest in finding a solution for male underachievement in Jamaica. The students´ positionalities are also shaped by their ethnicity, age, social class, and sexual orientation. Further, their perspectives are also influenced by their cultural, linguistic, and religious experiences.

My conception of this study began one year after my doctoral journey began. It was inspired by my background as a high school teacher. Having worked in a variety of institutions, I had personal experiences of the differences in the educational achievement of males and females in Jamaica. This background provided me with some level of insider knowledge which helped me to develop rapport and engage in comfortable discussions with the teachers. It also helped me to interpret the meanings associated with implementing sex segregation at this institution. Simultaneously, it also forced me to acknowledge that my experience of differential gender achievement is unique to the institution in which I had taught, and I

needed to focus on the specific school context as I interpreted the experiences that were specific to Seaview high school.

Additionally, I acknowledge that my position as a teacher could potentially influence the kind of information that the students share. Teachers are perceived as authority figures in Jamaica and students tend to address them respectfully. Our interaction was characterized by mutual respect and despite the power dynamics associated with these relationships, the students were influenced by their youthful exuberance and desire to share their experience with someone they believed could potentially effect change.

According to Irvine et al. (2008), when a study involves a minority language, rigour is enhanced when the researcher shares the language and culture with the participants. My cultural and linguistic identities intersect that of my participants who often utilised dialect as they gave insight into their experience. This insider knowledge meant that I did not only understand the ideas being expressed, but I was also able to gain insight from the tone used in expressing ideas and later describe their experience using their voice.

The participants´ approach to the study is further influenced by their gender and religious identities. Gender impacts their interpretation of the experience of being placed in single-sex classes. As they described their experience, it was evident that their worldview was further shaped by their sexual identity which was also connected to their religious and cultural identities. As a Jamaican researcher, I have had similar cultural influences; however, I have also been influenced by the German culture which places less emphasis on one´s sexuality. I acknowledge my responsibility to share the experiences that are specific to the research context while recognizing that my subjective perspective may influence how I present these stories.

The trustworthiness of my study is also connected to how I decide to analyse the data. My study wss influenced by Richardson´s crystallization approach which focuses on the use of a variety of data collection and analysis methods to establish the credibility of my research

results. This approach is especially appropriate as it supports my effort to incorporate rigour (Johnson 1999, cited in Tobin and Begley 2004), credibility, dependability, transferability, conformability (Guba and Lincoln 1985) which all contribute to the general trustworthiness of my study. Richardson (2005) proposed this approach, citing that it provides a kind of three-dimensional angle of analysis that facilitates a more "deepened, complex and thoroughly partial understanding of the topic" (p. 1417). She promoted a deconstruction of the idea of "validity" and the importance of the researcher´s interpretation of the topic. Further, I utilise language as an interpretive tool to produce the meaning of the experiences shared by the participants through varying data collection methods. This process calls on me as a researcher to understand myself reflexively and to nurture my voice in my writing (Richardson 2018). Tobin and Begley (2004) confirmed the importance of the voice, methodology, and reflection on the topic being studied, as well as the participants, as significant steps in this type of naturalistic study. During the process, I represented the perspectives and stories shared by the participants in a coherent manner. Their actions, opinions, and vulnerabilities are highlighted while recognizing the influence of my positionality as a qualitative researcher.

Notwithstanding the positives, I acknowledge that the format of qualitative case study research has been criticized for the difficulty in maintaining anonymity and confidentiality and the researcher´s presence possibly influencing the responses of the research subjects (Ospina 2004). It is also criticized for lacking rigour and offering a biased interpretation of the data (Zainal 2007). I was however inspired by writers such as Silverman (2006), Richardson (2003), and Guba and Lincoln (1985) who have offered alternative frameworks that ensure rigour in qualitative research. Guba and Lincoln (1994, 1985) argued that credibility is one of the most important ways in which trustworthiness is established in qualitative research. To inspire confidence in my research, I employed the use of a variety of well-thought-out research methods to elicit information from various participants. These methods were supported by appropriate questions which have illuminated the experiences of groups of stakeholders in the institution being studied. By utilizing a variety of established research methods, the information can be compared to establish patterns. In addition to collecting data that presents the perspectives of the stakeholders at the research site, I utilised official CSEC examination results compiled by the Ministry of Education in Jamaica for the High school being studied to do a comparative analysis (See Appendix E). This provided

another perspective and supported the teachers´ description of male-female academic performance at the school. Further, the time spent interacting with the participants (Erlandson 1993) led to an understanding of the culture and the acquisition of rich data.

Conclusion

Chapter four presented the methodological framework for my thesis. It rationalised my decision to utilise the qualitative case study approach which has been presented as an effective approach to studying this unique educational strategy in the Jamaican context. Further, it presents contrasts with previous studies that focused on academic outcomes or achievement in mathematics in other cases as they attempt to explore male underachievement. These studies have also been seen to utilise examination results rather than by exploring the lived experiences of the participants in the study.

The chapter also focussed on the activities involved in preparing for the research field, collecting data within the field, and later protecting the findings after the field, in preparation for analysis. Additionally, the chapter outlined how my positionality and that of the participants informed my study´s design, interpretation, and analysis. As such, it sets the stage for chapter five where I present the findings and analysis that have emerged because of these methods.

CHAPTER FIVE - Findings and Analysis

Introduction

In this chapter, I present the findings of this study. I begin with an overview of the main themes and findings. Afterwards, I engage in a discussion of the data that answers the research questions. Firstly, I discuss the data that respond to why the program was implemented and how this was done. In this section, I share the perspectives of the teachers and students on the genesis of the program. By doing this, it is evident what knowledge teachers and students have about the reason students have been separated based on their sex. In the following sections, the experiences of the teachers and students are presented based on; (1) themes that highlight the perceived advantages of sex segregation (2) themes that are associated with what the participants regard as the negative aspects of the program and (3) a summary of the teachers´ opinions of boys and girls and (4) a report on the participants´ perspectives on the future of the program.

In the first section, I discuss the conflicting perspectives on the academic effect of sex segregation. I also discuss the perspectives on competition, reduction in distraction, student participation, leadership skills and the sex-focussed teaching strategies that are thought to be facilitated by sex segregation. In the second section, I focus on those factors that challenge the sex segregation program. Here I discuss disruptive behaviour, class size, and homophobia.

Finally, I present the data that summarise the teachers´ and students´ perspectives on single sex versus coeducational classes, the teachers´ beliefs about boys and girls and finally, the teachers´ views on the way forward. These perspectives are supported by the direct words of the teachers and students who participated in the study.

The Main Themes and Findings

This study has demonstrated that there are differences in the perceptions held by teachers and students regarding the sex segregation program at Seaview High School. The findings illustrated that although the teachers and students were operating within the same space, their knowledge of the reason for the establishment of the program and their experience of it differed. Furthermore, some of the teachers and students generally had favourable opinions of the program due to the perceived benefits in areas such as academic performance, leadership skills increase in focus on academic work as well as the potential for sex-targeted lesson planning. It has also been shown that it positively impacts students´ confidence and willingness to participate in their class activities. There was no agreement among all participants on any of these perspectives. Thus, the conflicts are represented in the discussion of these findings.

Many of the teachers and students also shared ideas that depicted unfavourable characteristics of the program. These findings illustrated that it exacerbates indiscipline especially in the all-male classes, fails to impact academic performance, hinders the development of social relationships, and creates a fertile environment for homophobia. The findings have also illustrated that one cannot conclusively state that sex segregation is beneficial to students. This is evident in the conflicting perspectives of the teachers and students who participated in this research.

Knowledge of the Program

This section begins the discussion by highlighting the data that addresses the first two research questions. It illustrates what the teachers and students knew about the genesis of the sex segregation program.

Although the students and teachers at this institution experienced both single-sex and coeducational instruction daily, the inquiry indicates that many of them had little or no knowledge about the reason for the establishment of the program. According to Mati et al.

(2016) including students in decisions tend to impact educational outcomes and lead to improved academic performance. The data revealed that students were excluded from the process. Notably, many students who completed the questionnaires had no clear knowledge of why the program was implemented. They had individual thoughts about it, but many students shared that they were never told why they were being separated, although, according to one participant in focus group one, "everybody in the school is in an all-boys or all-girls form class, miss." The inquiry also indicated that there was a general feeling of exclusion or of having this program foisted on to them and there was no difference noticed in the knowledge held by students from different grade levels. This failure to engage the students in a discussion could be one of the reasons for the negative attitude displayed by students towards being placed in single-sex classes. This was expressed in comments such as, "I feel like the idea is stupid", "It is unnecessary" and "It is not a good idea". Conversely, by involving students in salient issues that impact their lives, they are more likely to understand and accept the motives (Oni and Adetoro 2015).

The data also indicated that teachers were more aware of the reasons for implementing the program. Despite this awareness, many of the teachers highlighted that there was limited staff involvement in the implementation of the program. Teacher Nine, a senior teacher at the institution, indicated that after the program had already started, teachers were given a questionnaire to ascertain their input regarding the functioning of the sex segregation initiative. Many of the teachers failed to complete and return this questionnaire, indicating a possible lack of will, or possibly a strategy used to register their disagreement with the establishment of the program. Additionally, they generally felt uninvolved in decisions regarding the implementation, maintenance, or potential abolition of the program. The teachers generally knew what the overarching objective of the program was, but they provided conflicting data on the duration of the project. The consensus was that the program had been implemented between five (5) and seven (7) years before. The variation may be due to teachers being employed at the institution after the inception of the sex segregation initiative, teachers have forgotten or have not thought of it in a long time and were therefore unsure.

Conflicting Academic Effect

The data gathered from the teachers and students who participated in the study also indicate that there is no conclusive evidence on the academic effect of separating students based on sex. Some participants reported advantages for specific groups of students while others regarded their experiences of single-sex education as providing greater drawbacks. The teachers reported that the initiative was necessary because the females continuously outperformed the male students. This imbalance was noted in the coeducational environment where boys appeared to be less confident than girls due to their academic superiority. This was highlighted by Teacher Four who stated that:

> "… It started partly because the girls are always coming first. In the mixed classes, the girls are always getting the trophies so they set up the classes to give the boys a chance so they can come second and third. So, they have to put them in their class to get their award so that the school can be happy for them; so that is why it was set up. And also, to help them as males to understand that we can't allow being in a female class to affect you - because they are shy at times to get up and ask questions because the females are there and they might laugh at them and because they have a girl in the class that they like, they're afraid to do certain things. This will help them to focus more on their schoolwork and the task at hand because it's an all-male class. They don't have time to be playing and that sort of thing. They have to focus on the task at hand. These were some of the reasons why it was set up."

Teacher Four also saw this separation as a way to "give them strength and more training ground to show how great they are in terms of learning and understanding the different content areas".

Although the separation targeted males, Teachers One and Two indicated that there were still disparities in the academic achievement of male and female students. Male students continued to score the lowest class averages, indicating that the separation did not appear to be meeting its objectives. This is evident in the statement made by Teacher One, "at my school, the girls are outdoing the boys' performance …yes…academic performance". The data further indicated that there weren´t vast differences in the scores attained by males and females as is evident in the minimal differences in the class averages scored by students in

different types of classes. It further indicated that although the female students were displaying higher grades in class, the data did not show either group being at a significant advantage. Teacher Nine stated that,

> "in general, probably the girls' classes might have the higher averages, but the difference between the highest and the lowest is not significant, we´re talking about an average that a top-class has the average of 55 and the bottom might be 44, but you will find two of the girls at the top and you might have the boys classes at the bottom but the nearest one to the bottom might be a girls class also."

The conflict in the data went beyond the segregated groups to show that academic advantage was enjoyed by students in the coeducational classes. This experience was shared by both Teacher Three and Teacher Five who stated that the coeducational groups continued to outperform the other types of classes. It is noteworthy that after five to seven years of utilising sex segregation, coeducational classes continued to dominate specific year groups. Teacher five confirmed this in the statement, "at Seaview High school, the class average is not too great, the example of a class average for a mixed class is 60%, for girls' class it's like 53% and for a boys class it can be in the 30s or in the 20s." The contrast in the perspectives on academic performance was a clear indication that one cannot assess the students as homogenous groups, because they all enter the classroom with unique interests and experiences which contribute to their variegated performances.

The data further revealed that students have idiosyncratic experiences with the sex segregation program. Consequently, one cannot generalise about all-boys or all-girls at Seaview High school. This was evident in the contrasts presented by informants such as Teacher Eight who shared that "I'm not finding the mixed group doing better. I find where either the boys´ group or the girls´ group is doing better than the mixed group". Teacher One observed that boys were improving as a result of the sex segregation but stated that of the two subjects that she taught, girls dominated the numerical subject, while the boys dominated the subject that focused more on reading and current affairs. Additionally, the boys enjoyed and participated in discussions on current affairs. This contrast appeared to astonish the teacher who said, "Yes, the boys really discuss. I can look forward to having discussions with them…yes yes".

The student's attitude towards the subject areas was also seen to influence their academic performance. This was reflected in the description of what occurred in the classes taught by Teacher Three. She had boys´ classes in which students attained 100% pass rate at times and girls´ classes in which students attained 100% pass rate at other times in the same subject area. This may be a result of students´ attitudes towards specific teachers and subject areas. Teacher Three stated that boys´ classes that were deemed the worst in the school by many teachers have responded positively to her, and she has had successful results from the same group of boys. Thus, when students liked a subject or teacher they may reflect this in their effort towards various tasks.

Despite the aforesaid, it must be noted that some of the male students had improved and were doing well. Teachers Nine and Ten admitted that there were always some male students who performed very well. For example, one male student passed fourteen CSEC subjects, but the teacher attributed his success, not only to his academic capabilities but also to his supportive parents who had invested time and money to get him extra help with his schoolwork. Furthermore, Teacher Nine reported that "we always have a couple of boys who outperform the girls. Only a percentage of them might not be as good as the girls; a couple of them have always done well but overall, I don't think it (the segregation) has an impact."

Teachers also reported that academic performance in a subject area is sometimes impacted by a student´s personality. One language teacher, Teacher Ten, shared that in her coeducational class female students outnumbered male students: nineteen to six. The boys in the class were described as quiet and well behaved; interested in the language course because they chose to study it. This contrasted with the experience of Teacher Nine who taught one of the vocational subjects. This area was typically dominated by boys both numerically and academically. He stated that girls typically did not dominate the practical components of the course: "the girls I guess in general, in my experience, when you are doing paperwork or like when you give a written test, the girls tend to come out ahead of the boys. But for the practical work, the boys come out on top. You might find that one of the girls or two of them might show an interest, but often they take up a saw and they complain that they can´t do this or that." This information supports the stereotypical perspective in the reviewed literature that suggests that boys dominate science while girls dominate languages.

Additionally, some of the teachers, such as Teachers One and Eight, believed that the girls´ groups were generally superior in academic performance and conduct; however, they noticed that there were some advantages to educating male students alone. However, one interference in the process was that all boys´ classes were often assigned labels to which they often responded. For instance, one teacher stated that those who were told by their teachers, that they were in the worst class, tended to respond accordingly and produced poor results (Teacher Three). If students were responsive to labels, positive reinforcement in the form of motivation would likely lead to improved academic performance. This perspective is shared by   Keller and Suzuki (2004), Joe et al. (2015) and Schumacher and Ifenthaler (2018) who stated that motivation is a key ingredient for achievement.

Fostering Competition in the Classroom

Another area that was seen to be positively impacted by sex segregation is competition among students in single-sex classes. Competition towards academic improvement existed among male and female students in the single-sex groups. Teacher Ten reported that "Among the male classes they have a spirit of competition where everybody tries to reach the top spot or get the highest average" while another teacher shared that "girls … have more of academic competition. Girls would have a feud about coming first in the class. And if they are not the brightest this year, they are going to beat you next year but the boys don´t care." These reports indicated persistence among the girls who were generally regarded as being more focused by the teachers. However, sex segregation offered male students the opportunity to be placed first in their class instead of occupying one place in the top ten in a mixed class as was reported by one teacher. When students had this type of opportunity, it was seen to foster a spirit of competition. As a result of this increased competition, Teacher Four noticed an improvement in the class averages in her male classes. This was because "all the males are now competing saying I want to come 1st, 2nd, 3rd, 4th."

The competition did not only take place in the classroom for academic outcomes. Based on Teacher Five´s experience, the boys tend to focus on competing for non-academic reasons in

the classroom. She stated that there were two types of competition in her classroom. "One is a testosterone competition, and one is an oestrogen competition - which girl can be the most popular in the class, which girl can be the most tricky in the class, which girl can be the most helpful, which girl can be the quietest. In the boys' class, it's the same thing: which one of us can be the Don, the alpha male, yeah, but when they're together, it's that the girls don't want to show the boys they talk too much, and the boys don't want to show the girls they talk too much. There tends to be less talking and more focus okay." Similarly, Teacher Three saw competition in the boys´ class "to see who is the ´baddest´ in the class but when they are with the girls, they are more settled in." The competition was sometimes also for academic outcomes.

Reduces Distraction and Improves Focus

Although the classroom facilitates competition, many students found various forms of distraction within the environment. Both teachers and students reported that they believed coeducational classes tend to contain distractions. For instance, boys and girls themselves were described as forms of distraction to each other. Teacher Eight and Teacher One stated that ´girls were often distracting to boys. ´ This statement is representative of the tendency to sexualise the female body. By perceiving them as distracting, responsibility is transferred for at least one factor that impedes male academic focus to female students. It implies that boys have limited control over their reaction to girls and further suggests that as females they possess characteristics that would distract their male counterparts. This idea was also expressed by many students who made statements such as "schools would be a better place without the distractions of the other gender *sic* interrupting us", "girls might not be able to concentrate in a class with the same gender *sic*". These ideas may have resulted from what some students described as a prevalence of students being "assaulted", "engaging in sexual conduct" or "feeling-up" which refers to fondling in the coeducational classes. Although relationships among students are natural, reference to ´assault´ conjures an image that indicates there may be a need for intervention efforts that would address this conduct in the learning environment.

An interesting difference in the overall beliefs in this area is that teachers appeared to focus on girls distracting boys while the students indicated a mutual distraction of each other. Their statements indicated that they believed distraction in the classroom may also result from students being very talkative or playful. This was reflected in the statements:

"When the classes are mixed, the students tend to communicate more causing the males average to be lower than the girls although the girls average will also be low".

"When you have a class with boys, they do not do well in the school work and they like to play with each other."

Many of the participants also believed that the sex segregation program helped both males and females to focus on their lessons. Both teachers and students appeared to believe that more boys than girls negatively impacted the coeducational classroom environment; however, one student suggested that girls also had a negative impact on boys´ academic performance. One student stated that "when the boys are mixed with the girls the girls tend to talk more which causes the boys´ level of learning to drop." The data further indicated that many of the students support sex segregation because they believed it helped them to focus and ultimately resulted in improved academic performance. This was shared by one student who said it "helps us to concentrate more on our schoolwork." Additionally, they claimed to be better able to focus because in the single-sex class "the males do not try to impress the females and therefore tend to focus more on schoolwork".

Student Participation

The data also highlighted student participation as an important factor at this institution. The potential benefits of participation are sometimes hindered by the students´ failure to and in some cases, refusal to participate in classroom activities. According to the IDRC and CIDA (1998) participation refers to the act of taking part in an activity. In this study, participation is used to refer to students being actively included in processes that affect their lives.

Teacher Six stated that the boys in her language class actively participated, but they do not usually attain good grades. It is important to note that her statement referred specifically to male students in her language class and not to males in general, at the institution. On the other hand, Teacher Ten reported that based on her experience boys were often uninterested in learning languages and a minimal number of them participated in her classes. Her statement is supported by aspects of the reviewed literature which presents the stereotypical view that boys were traditionally uninterested in learning languages. She shared that in a class that contains thirty (30) students "you will have 10 students who have the interest - with the boys you will find one or two that are interested in school - right now they are the ones who pay attention in class and participate." A similar experience was related by Teacher Four who stated that in her coeducational classes, "one or two males may participate but 95% of those who participate will be females."

Student participation was also experienced during the observation process. The observation of boys in language classes in grade seven and grade nine presented several contrasts. The boys in the grade seven class were incredibly quiet. A few of the students participated in the lesson while the others listened quietly or copied notes from the board. This could have occurred because the boys were unfamiliar with the topic, or they were possibly hesitant to try to speak in a foreign language. The older boys who were observed in the coeducational language class were quiet during the first observation while the girls dominated the discussions. The second observation of the same group revealed a more focused group of boys who participated more often than the girls in the class. This indicates that students were not homogenous. They are individualistic and do not always subscribe to existing stereotypes.

The contrast in the interest and level of participation that were seen between the male and female students may have been influenced by various factors. Students' preference for specific subject areas as well as the methods used to deliver the lessons could have influenced the students' interest. During the observation, it was apparent that role-play and notetaking were embraced by more girls than boys. This indicated the potential impact of sex targeted teaching strategies.

Additionally, the willingness of the students to participate in the learning process was not influenced by the sex composition of the class, in some instances. Teacher Six who participated in the interview taught males only, females and coeducational groups and found no difference in students´ interest or participation. In this subject area, the students required no prompting to participate in the class activities. She attributed this to sex segregation. "They all participated. I think they felt completely far more comfortable seeing they were all the same sex. They did not have any problem of feeling offended in front of the opposite sex again. So, I didn't have a problem with participation at all." This statement does not explain the similarities in students´ participation in the coeducational group. She further stated that in the coeducational group "there's a little more rivalry…They try to perform to get better grades. There's some amount of rivalry there but in terms of participation, they are the same level (as the single-sex groups). I don't see any difference."

The data also showed that one cannot definitively suggest that the sex composition of a classroom impacts students´ class participation or academic performance. For instance, Teachers Two and Five shared contrasting experiences with single-sex and coeducational groups. Teacher Two believed that girls can have a positive impact on male performance.

> "There is no participation (by boys), but the girls will give more feedback. But I think if the classes were mixed for every subject area, probably if there was a debate or something, the girls would give their views and probably that would prompt the males to give their feedback on what they are doing. When the males are in a class by themselves you don´t get any feedback at all. They just sit and listen, take notes, and write. You will have at least two students. You will have at least two students- these students will be in the top five of the class during exams, they will ask questions just to get some information, but the rest of the boys don't participate."
> On the other hand, Teacher five reported that when boys are separated from the girls, they tend to be more confident to participate in the lessons. She supported this claim by stating that "gender *sic* classes do have their perks because the boys tend to be more confident when they're together. So, if they make mistakes their friends alone can laugh at them. When you find them in a mixed group they're not as open and participative in classes so that's one of the good things about the single-gender *sic* classes. They're more participative and more talkative than in the mixed classes."

Additionally, boys were influenced by several cultural factors in Jamaica which could potentially impact their academic participation and performance. Chapter two of the study highlighted the influence of gender socialisation in the family and school as well as the macho culture which influences them via the community and media. Chevannes (2010) stated that masculinity is now characterised by violence or aggression and a rejection of anything considered feminine or homosexual. The masculine image is so important that there is a willingness to sacrifice academic gains to protect it. On the other hand, they have been found to become participative in lessons that interest them. This has been reported by Teacher Two who said that if you want "to get the boys to do something, it has to be something that they can relate to and nothing that will make them seem like a feminine person or anything like that. Once it relates to femininity, they are not going to do it. You can´t get them to do anything like that. Once it is related to feminine, they are not going to do it. Give them a dub poem or dancehall rhythm or make a poem using the same rhythm then they will do something like that. Once they can relate, they will participate." Therefore, one of her strategies included incorporating current affairs topics that they could respond to in her lessons.

Furthermore, many of the teachers reported that female students participated in greater numbers. According to Teacher Five, girls are more talkative in both single-sex and coeducational groups; however, sometimes this is reduced because "they have a fear for boys" meaning they are shy in the presence of boys (Teacher Two). This response does not seem to have a long-term impact on these female students. Teacher Nine stated that if they are quiet for some time, this usually passes once the students are given time to settle down.

Development of Leadership Skills

In addition to improvement in participation, the data has also revealed that sex segregation provides opportunities for students to develop their leadership skills. Participants in the study indicated what was normative at this institution was for girls to occupy most of the leadership positions.

Teacher Eight pointed out that, "when they are mixed you go to a class and the class monitor is a girl the assistant is a girl, and the Student Council Representative is a girl and all that sort of thing. When they went into their gender *sic* groups then every class needed a monitor and an assistant and a Student Council Rep so one of the boys have to come forward."

The data further illustrated that girl usually take charge in various situations such as during devotions at the school, a quiet time spent each morning singing, reading the Bible and praying. With the implementation of what is referred to at the school as ´gender devotion´, boys were seen taking responsibility. Teacher Eight stated that "they are always upfront with the leadership position. Now that we have the boys´ class, we have a group of boys who will come up and take charge of it and do it." Similarly, Teacher Nine confirmed this view, by stating that the separation "puts them in a spot (forces them) in terms of responsibility, in terms of class monitor, you have more of the boys getting involved" indicating that boys were forced to assume responsibility when girls are not around to do so.

Targeted Teaching Strategies

The data further presented sex-focused teaching strategies as a positive aspect of sex segregation. There are some conflicts in the views on the efficacy of this strategy. Many of the teachers believed sex-focused lessons were a possible solution to the disruptive behaviour that many students sometimes displayed in the classroom while others argued for lessons that target the specific abilities of individual learners.

Many of the teachers also reported that they believed boys and girls have different learning styles and should be taught based on these differences. However, based on the conflicting perspectives in the data, it is not clear that these differences are based on sex. Some teachers did not believe there were fundamental differences in the learning styles based on the sex of their students. This raises questions regarding whether learning styles are based on sex or on unique to individual students. Teacher Two believed that sex segregation provided the advantage of targeted lesson planning and delivery.

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For the teachers who believed that boys and girls have different learning styles they also seemed to believe that these differences could be addressed in the sex-segregated classroom. One teacher reported that "this is a good program. We can plan for both males and females for their lessons and both can understand the content that is being taught by the teacher. They get the best of both worlds." The teachers generally believed that boys were more energetic and required more hands-on activities. This is a stereotypical view of boys which is also reflected in the reviewed literature. This view was shared by Teacher Four who stated that it is important to "plan lessons for male and female students" because,

> "The boys want more hands-on experience, more things they can touch more things to draw when you're having a class or- you have to have things with diagrams so you will be able to hold them (their attention) for the two hours. So, in those mixed classes because you're doing a mixed class it's hard to focus on the boys, you have to focus on the boys and the girls so in those mixed classes you find that they are more disruptive because some of the things are too tedious. It's not within their capacity to understand while the females are able to understand while in the mixed classes."

Similarly, Teacher Three reported that "you have to keep them (boys) active because they don't like writing notes and they don't like to listen much, so you have to have the activities going; you have to keep them occupied all the time." This perceived difference in the learning styles of boys and girls has resulted in teachers finding the all-boys classes to be more challenging. Moreover, teachers have stated that the boys´ classes require more time to complete lessons and demand more activities to keep them active. This is reflected in Teacher Three´s report.

> "Yes, I have to have special lessons for the single genders *sic*, especially the boys, it's hard to keep them in tune. By the minute you lose them; you have to create more activities for them. A lesson that I can teach in one class for my mixed group, it's going to take two classes for my boys´ class. I can probably run through it quickly with the girls only, but It's always a challenge with just the boys. If I can run two activities for my mixed group, I'm going to need four or five for all boys."

Another colleague, Teacher Eight shared "…Boys are hyperactive, and the boys learn differently from girls. So, you have to really prepare for the boys. You cannot teach the boys in the same way you teach a girls´ class. The boys need to do things, they need to have activities. Even if it´s writing, they must do something, you can't just let them sit down in their class and talk and discuss, they don't like that. They want to do something…"

This experience was also supported by Teacher Five who stated that she could teach more content in an all-girls class because they required fewer activities. When one activity was adequate for a one-hour session in an all-girls class, boys required four to six activities. This required that the teacher engages in extensive preparation because once the boys have completed a task, they begin to talk to each other in class.

The foregoing indicates that many of the teachers believed that boys and girls have different learning styles and sex segregation provides an environment in which this can be addressed. Conversely, some teachers, such as Teacher Two, believed that targeted lesson planning should also be utilised in coeducational classrooms. Her strategy seems to take into consideration gendered learning needs as well as differential needs among the learners in her classroom. She reported that she plans her lessons according to the capabilities of her students. This perspective acknowledges that lessons may be planned to target individual learners. At the same time, her experience indicates the need for variations based on perceived gender preferences. She found that girls tend to adapt, but she tried to be more creative and utilised several activities to prevent disruptive behaviour among the boys.

Teacher Nine agreed that the teaching strategy that is employed during a lesson could potentially impact student conduct in the classroom. Therefore, teachers need to engage students to achieve intended learning outcomes. He claimed that the teachers who did not exert the effort to plan sex-focussed lessons that meet the needs of boys were often those who "have them (boys) thrown up at them and they don't want them." The teacher´s attitude towards all-boys classes was usually evident based on the disruptive conduct of the students in the classes. On the other hand, the female teachers, who specifically requested to be assigned as form or homeroom teachers of all males, did not report any challenges within

these classes. This was considered to be good for the boys; being with a teacher who wanted to work with them "who is on the ball and follow through and check on them". This is further improved if the homeroom teacher is supported by subject teachers who together provide the structure that the boys require. In short, Teacher Nine believed that by focussing on what target male students´ interests, teachers can reduce the behavioural issues of the male students.

Additionally, Teacher Six stated that there were no fundamental differences in the strategies used in this class. She stated that she incorporated technology such as videos and video games into her lessons as ´chalk and talk´ was outdated.   This teacher did not recognise differences based on sex but believed in delivering lessons that interested all the learners. The students who participated in the focus group largely agreed that they did not notice any differences in the teaching strategies used in coeducational and single-sex classes. One male student in the second focus group stated that "teachers don´t specialise in techniques, they just give you what is on the syllabus. They don´t do what´s in the traditional high schools." The data presented a conflict between what many of the teachers reported that they generally did and what students claimed to experience in the classroom. This perspective was also shared by one teacher, Teacher Nine, who reported that in his observation of teachers, he didn´t notice a difference in the lessons planned for boys versus girls. He believed that boys and girls required different teaching strategies and he recommended that teachers make this effort. Teacher Ten stated that the effort is sometimes challenged by the class size as well as the refusal of some males to participate in any activity that required partnership with another male. She shared a specific example of a language class activity in which students were asked to pretend that they were out for lunch with friends. This created several challenges in the boys´ class. She reported that:

> "The boys don't want to act with the other boys- they don't want to go out and eat with a bag a man in the class … I try to give them points to write because they love to beat on the desk and make songs. It has its pros but with the females. I can give them (girls) creative things just like that and they´ll do it, but with the boys, I wouldn't give them any project and stuff because I know what their strength is. They won't give you a nice fancy project, but you can encourage them to, but you won't get much out of

them, but if it's something different, that they like then it is easy to see them progress… versus if it was a mixed class."

Teacher Ten described a learning environment reflected in the studies conducted by Figueroa (2000) and Chevannes (1999) and referenced in chapter two of the study. It depicted girls who have been socialised to sit still, perform chores, and follow instructions while boys are socialised to express themselves more freely.

The observation of nine lessons indicated the use of a variety of strategies, some of which did not appear to have the desired impact on the students. This conclusion was drawn because instead of participating in the discussions, many students engaged in conversations or passed notes. In these lessons, the teachers utilised discussion, dictation, role-play, and note-taking. These strategies seemed to work for the students who were sitting at the front of the classroom but failed to hold the attention of those who whispered and giggled at the back of the room. Those who were attentive, as well as those who were distracted, included both male and female students, which calls for consideration of whether strategies should target individual student´s needs rather than gender needs.

Disruptive Behaviour in The Classroom

Several negative factors were also seen to be associated with sex segregation. Both teachers and students have cited disruptive behaviour in the classroom as a challenge to academic performance. Disruptive behaviour refers to activities that disrupt the learning process and cause the teacher to continually comment on a student´s behaviour (Arbuckel and Little 2004). Overall boys were described as more disruptive, especially in the all-boys classroom while girls were seen as less disruptive. The perception of boys as the main perpetrators of disruptive conduct in the classroom was represented in students´ statements such as "boys are very annoying and sometimes disrupt the class" and "some of the boys are too disruptive". These represent the views of girls who expressed a preference for single-sex classes. Similarly, Teacher Six stated that "boys can sometimes be a bit rowdy and difficult to manage" while Teacher Three stated that "the boys' class their behaviour is awful, and their

schoolwork is awful." Teacher Two also shared this view, This is represented in the description of boys classes as "rowdy" and further reported that "they make a lot of noise, they become boisterous and talk loud" while "the girls are in the back, the side, the middle and the corner basically in cliques talking."

The observation of the lessons confirmed the statements made by the teachers and students to a limited extent. The difference could have resulted from adjustments made by the students due to the presence of a stranger in the classroom. The students in those classes were not boisterous but there were instances in which boys spoke while the lesson was being delivered, passed notes, and threw balled paper across the room at other students. Also, the only fight that was observed, occurred in a single-sex male class, with classmates encouraging them to continue, leading to the students becoming boisterous. It must also be acknowledged, that although the girls were quieter during the observation, there were several instances in which they also carried on a conversation during the lesson. The girls' classes were cleaner, meaning there was no garbage strewn on the floor, and while some of the students were distracted, this occurred less frequently than in the all-boys or coeducational classes.

The strategies used to address disruptive behaviour varied from one teacher to the next. One teacher stated that she used a counting method if her class became disruptive. She counted to ten or stopped speaking to allow students to calm down. Many of the other teachers utilised activities that included the students in the classroom activities; they utilised encouraging tasks rather than being punitive. For instance, Teacher Three stated that if a student was disruptive, she would ask the student to "come and write on the board for me, keep them occupied and if I'm doing a role play, I call on the ones that give a lot of trouble. It depends on what they did I may call them outside of class and talk to them about the issue. If it is a major issue, I will send them to the Dean of Discipline." Similarly, Teacher One stated that she usually tries to refocus the attention of both boys and girls who are disruptive in a class by engaging the students in activities such as skits, drawing, painting, research or watching movies. These activities were believed to hold their attention.

The strategies that were used also varied based on the sex of the teacher. Female teachers appeared to utilise milder strategies than their male counterparts and the measures considered to be appropriate for boys and girls have also been shown to differ in some cases. One teacher reported that girls were not very disruptive in class, they only displayed "an attitude" which refers to uncooperative behaviour. This is usually addressed by speaking to them, giving a warning, or asking them to stay in a corner. On the other hand, boys were given harsher punishment which the teacher said they abhor. They were given additional work to deter them from this behaviour.

> She stated that "when they're giving trouble there's one thing that nobody is willing to do and that is to stay back after school and do extra lessons. Once they are ´out of line´ they have to stay back for two hours and do some work, do some assignment or something like that. They don't like that because their friends are going ahead of them so they're going to ensure that when they come to class, they're going to sit and participate in class discussion or whatever because nobody wants to be left behind after school. They don't want that - they don't like to do extra work, so once they have that, they know that they have extra work and they have to stay back and do extra work after school so they're going to come to class, participate, do the class assignment, do the classwork and then they're good to go. They're going to stay in line because they don't want that sort of punishment, so they're going to stay in line."

The difference in the methods of punishment for boys and girls may also be understood in the context of the socialisation practises in Jamaica as was illustrated in chapter two of the study. Girls are usually treated gently while boys are perceived as being capable of handling harsher conditions. The differences were evident in Teacher Ten´s statement that while she usually asks the girls to stand in a corner or write a report, she addresses the boy's disruptive behaviour by taking them to the Vice Principal´s office. However, she stated that harsher punishment was also meted out in some instances. For instance, she shared that after returning from suspension, students "were on bathroom duties, so they had to come in at 7.30 and they cleaned the bathroom before school started … They gave them additional bins … they wanted to publicly humiliate them with punishment so they will remember the punishment and how horrible it felt for doing certain things and hopefully that will help."

The differences in methods of addressing disruption were also perpetuated by male teachers who tend to ask boys to perform more difficult tasks if they were disruptive in the classroom. According to Teacher Nine, "the girls get away at school because they are not given harsh manual labour as the boys. The girls mop out the cafeteria, but the boys have rake and wheel borrows all over. I have a storeroom and I have them clean it up." The same teacher also reported that he finds it easier to work with boys whom he can "thump…and squeeze their neck (but) you can´t take a piece of board to hit a girl". Taken together, these findings indicate that the teachers operated based on societal perception of boys as tough individuals who were accustomed to aggression while girls were believed to be more delicate.

The data further reveals that there were other methods of discipline utilised at the institution. The main person who was responsible for discipline at the institution was the Dean of Discipline. According to Teacher Six, he utilised other strategies which varied based on the severity of the offence. He gave detentions, demerits, and suspensions in some cases.

Students' perspectives on disruptive behaviour in the classroom were similar to those shared by the teachers in many ways. The students provided a combination of positive and negative descriptions of their conduct in classes, but many of them reported that students were generally talkative and disruptive in classes. The students used words or phrases such as "disruptive", "noisy", "wild", "talkative", "behave like animals" to describe the conduct of boys in the single-sex classes. However, they had a more favourable opinion of general student conduct in the coeducational classes. Furthermore, they shared a variety of strategies used to address disruptive behaviour in classes. Some of the recurring strategies that were mentioned include: being given demerits, being told to shut up or being sent to stand in an area outside of the principal´s office. Additionally, students reported that some teachers tend to speak loudly, using Jamaican patois when they were addressing disruptive behaviour in classes while other students described teachers as being more aggressive towards the boys.

The perspectives on disruptive behaviour and methods of discipline brought into focus the role of the teacher in education. It must be acknowledged that the school acts as a site for more than academic dissemination, other lessons are learnt in the process. Within the classroom, the teacher acts as an authority figure. To some extent. The data in this section present actions that reflect a cultural power relationship that is often evident in the schools. Teachers in their capacity as authority figures sometimes demand respect and enforce rules which students are expected to follow. Caution must be shown in ensuring that there is a balance between being very permissive and focussing too much on following rules and administering punitive measures.

Male teachers try to create this balance by praising as well as punishing and by providing mentorship and acting as role models for their male students. One teacher reported that he was operating a mentorship program that targets at-risk youths. While others such as Teacher Two believed that "male teachers (should) do things to show that they are role models in the school so the boys can look up to them apart from being teachers and coming to teach." This was important because "the boys have frequent encounters with the police." The idea that male teachers should be role models for male students is also shared by Teacher Four who stated that,

> "I just let them understand that I'm not trying to replace their fathers but, in the classroom, I'm responsible for them; therefore, I am their father. Whatever I say it goes and whatever tone I use is for them to learn and for them to understand. It is not a disrespectful tone in any way shape or form, but just to get across the message to understand the concept of the lesson. But I have to set that barrier for them to understand. For the females, I have to do the same thing. The females rather to be talked to in certain tones because they are emotional and all that; my voice is always a big pitch issue whenever I talk in this tone, don't feel disrespected, but this is my tone so understand my tone and understand that we have a level and I respect you on your level and you respect me on my level so when I have classes, I don't have problems in my classes."

The teacher´s statement is a depiction of a cultural power relationship between the teacher and students. In addition to this, representing teacher-student relationships and, in many ways, adult-child relationships in Jamaica, it was used to justify instilling in males, the need to respect their female counterparts. Teacher Four stated that sex separation perpetuates a macho culture in which boys use expressions like "old dog" in their interaction with each other. As an authority figure, he saw an opportunity to encourage respect of the opposite sex and to "tell them you need to tone down, it's a female that you are talking to, so you need to talk to them in a calmer, kinder manner."

The findings also indicate that students accepted the encouragement, lessons from personal stories as well as the cultural expressions of men trying to positively influence boys in their classes. Whether the strategies used were effective requires further exploration. Their acceptance is, however, evident in the perspectives shared by students that although they believed that the male teachers are harsher with the boys, they feel that "he is just grooming us" meaning, preparing them to be men who are both respectful and respectable. According to one student, only "a male can show another male how to behave in the manner of a male instead of having a female."

Although there were attempts to influence the experiences of boys in this institution, several external factors presented in the data could potentially challenge the positive performance of the sex segregation initiative.

Class Size

Based on the data, another potential challenge to the successful implementation of the sex segregation program was class size. Class size refers to the number of students per teacher in class (Ajayi et al. 2017) and has been found to affect areas such as classroom management, instruction, and students´ academic achievement (Finn et al. 2003 and Smith et al. 2003, cited Kusi and Manful 2019).

Educators in general, are interested in understanding if there is a relationship between class size and academic performance. This is because they want to make the best decisions for their learners. Acquiring empirical data that provides this detail is especially important in countries that are economically disadvantaged (Obiakor and Oguejioffor 2020). The teachers in the study have cited class size as one of the biggest issues that they have had to deal with. Teacher Ten stated that "the size of the class that's the problem, not space or gender *sic*." Considering that the sex gap in their academic performance inspired the sex segregation program, the statement illuminated another significant issue that teachers and students have had to deal with. Another teacher reported that large class size is disadvantageous for both teachers and students. She stated that.

> "When you have a whole lot of them in one class, like at my school, you have like 48 boys in a class; that can be disastrous…When you have 48 of them in the class that is a disadvantage for the teacher and the students themselves. When too many boys are there, it is just packed up. When too many boys are together, it's just not good."

Class size has been recognized as a problem in Jamaica for a long time. There have been discussions among stakeholders in Jamaica, that there needs to be a reduction in class size. These discussions have had support from a cross-section of political personnel mainly because of its popularity among teachers and parents. In 2017, the Minister of Education, the Hon. Ruel Reid stated that he was working on a budget to reduce the teacher-student ratio to 1:25 (Angus 2017). However, this has not been realised yet. The question of whether a reduction in the class size will result in improved academic achievement and other student outcomes remains confounding. Many studies have been conducted on class size, many which have focussed on its effect on scholastic performance. On the one hand, one perspective has suggested that class size does not affect student achievement. This was supported by the head of the National Education Inspectorate (NEI), the group that is responsible for assessing the standards attained by students in schools in Jamaica, who stated that the idea that small classes result in better students is a myth. She compared the underperformance of students in small classes in a private primary school and the high achievement of female students at a single-sex school in Kingston where the student-teacher ratio is said to be 1:50.

Nevertheless, several other researchers such as Bouguen et al. (2017) have found that a reduction in class size can reduce gaps in scholastic performance if it is implemented in a "targeted and intensive manner" (p. 2). Similarly, Schanzenbach (2014) whose study was conducted in the United States, argued that it is unequivocal that class size impacts student outcomes. Her study found that large class size does not only impact student outcomes in the short term but has an impact on the human capital formation which refers to the process through which the people of a country are equipped with the necessary skills needed to contribute to the economic growth of their country. Ruffina et al (2018) operated in a different research context and came to the same conclusion. They found that large class size results in a disruptive learning environment for the students and some cases, students were too shy to participate in discussions.

The teachers in my study have reported that these issues were especially evident in the boys' groups. Teacher Nine reported that girls' classes were deliberately organised with fewer students than the male classes. She stated that for many years if "they had 90 plus girls they put them in three classes and if they had 90 plus boys and they placed them in two classes." Likewise, Teacher Ten said that in two of her classes "there are about 45 male students versus a female class who might have 30 plus students." The larger class size has resulted in lower interest among the male students in these classes. For Teacher Ten "you will find one or two boys that are interested in school."

Studies conducted in various research contexts globally confirm the need for reduced class size. The rationale for this is that teachers are forced to focus on students´ disruptive behaviour rather than on strategies to improve academic achievement (Blatchford et al. 2003 and Cakmak 2009) and students in small classes tend to focus mainly on academic activities rather than on peers and other non-academic projects (Obiakor and Oguejioffor 2020). One teacher in my study confirmed that,

> "If you have smaller classes, you would have better control. Teachers would have
> better control and the boys would be more attentive than even the girls." The problem
> of disruptive behaviour in large classes was presented as a concern in both all-boys
> and all-girls classes. Teacher Eight stated that "there is a girls´ class that I have for

two periods, and they chat a whole lot. You have to stand up for them not to chat. If these classes were smaller, you would not have so much chatting. Then you could control and see everybody. I think our problem is the class size, whether boys, girls or mixed, class size is a problem. That is the only thing I would change. I would really change the class size."

Schanenbach (2014) further suggested small class size results in positive outcomes as it facilitates higher levels of student engagement, increased time spent on tasks and teachers are better able to tailor their method of instruction to the students in the class.

Homophobia

The prevalence of homophobia is presented in the data as a potential impediment to the functioning of sex segregation at this institution. Chapter two of the study illustrates the prevalence of, as well as the perception held of homosexuality in Jamaican culture. The general perception of sexuality is evident in the areas of law, religion, entertainment, and other social institutions. Thus, it is not surprising that it has been integrated into the education system. These stereotypes were significantly represented in the views of students and in the views of the teachers to a lesser extent.

The comments made by the students indicate a belief that being educated close to someone of the same sex will result in a change from being heterosexual to homosexual. To reveal this fear, which is negatively construed, they utilize expressions such as "It (single-sex classes) promotes homosexuality" "The boys might turn gay, and the girls might turn lesbian as well." "Boys alone must not be in class by themselves, or they turn gay." The recurring reference to one "turning" sexuality reflects deep stereotypical beliefs that sexuality is impacted by one´s environment rather than his or her nature or biology.

The students´ perspectives on sexuality are said to be influenced by their parents. According to Teacher Four, "some parents have said that these classes will breed homosexuals, or these classes will cause my boy to socialise with only males. So, because of these problems that

parents have, the school is forced to answer questions when parents are coming with them."
The statement provides further context for students expressing opposition to single-sex
instruction by making statements such as "every direction I look, I am looking at another
male." The use of ´breed´ has debased persons based on their sexuality and further indicates
that adults also perceive homosexuality as a contagious condition.

The study further reveals that some of the teachers shared similar perspectives on sexuality,
which could explain their opposition to the sex segregation program. One teacher stated that
"I don´t think it´s so good to keep the boys all to themselves because some of them would
want to develop (ahhm) homosexual tendencies and likewise I see that coming out with the
girls too. That´s why I think that it´s a disadvantage in having them all to themselves." While
another stated that there were concerns among staff members that:

"The boys sit down and chat the whole day in class and breaktime is the same set of boys are
together in a bundle and a chat. Some of them (teachers) have issues with this. Right now,
they are saying to go back to mixed classes. That is their biggest problem – to mix them
again. And in this case, it's not that we have had cases where we could say we see evidence
where this is leading to homosexuality." These statements also seem to suggest that
socialisation in the school also influence students´ perspectives on sexuality. In that, men
who are themselves fuelled by stereotypes, become role models for the boys in this school.

The data also indicated that students, especially boys, had allowed homophobia to influence
their participation in academic activities. Teacher Three indicated that although the students
were in an all-boys class, there was still a concern about sitting close to each other. One
student stated that "I don't want any man to sit beside me, I don't want anybody to call my
name, I don't want any man to pass my book to me." Boys were unwilling to participate in
group activities because they "have to deal with that (being in an all-boys group) every day."
They also refused to participate in role-plays that were included to make classes more
interesting. According to Teacher Two, boys refused to participate in class activities that
involved them wearing costumes "that will make them seem like a feminine person or
anything like that. Once it relates to feminine, they are not going to do it." For them to
participate, the teacher had to "give them a dub poem or dancehall rhythm or make a poem

using the same rhythm, then they will do something like that. Once they can relate, they will participate. The girls now, just go with the flow. They´ll write anything, they´ll come dressed up anyway. But that´s ok with me. But apart from that, the boys are the problem sometimes."

The homophobic attitude was also interwoven into their daily conflicts, with students referring to each other using a local homophobic term "fish". Additionally, they have removed and, in some cases, adjusted words in the vocabulary. Teacher Ten reported that "They don´t use the number two (associated with homosexuality in dancehall culture), say they eat sea creatures, they don´t eat fish. This is the case in society. They have also changed the names of some places. (Montego Bay-gyaltego Bay. Manchester-Gyalchester, Lime Bottom is now Lime Top)" – Gyal is a colloquial term for a girl in Jamaica.

Single-Sex Versus Coeducation: The Perspectives of the Teachers and Students

The research findings so far have illustrated the factors that teachers and students have highlighted as having an impact on the functioning of the sex segregation program. However, it is also important to have an overview of their perspectives on the differences between the two types of classes.

The students presented their subjective opinions about being educated in single-sex and coeducational institutions. Although they shared their perspectives during the focus group discussions, they sometimes agreed with the views expressed by their peers. This highlighted the extent to which they held similar views and the points on which their views diverged. The conversation indicated a conflict in determining which type of class they enjoyed and which class they felt addressed their learning needs. The questionnaire as a method of data collection facilitated individual responses although it cannot be stated that undoubtedly students did not discuss their views during the process. These views were largely mixed, with students supporting both types of classes for male and female students.

The conflicting views were noticed among some male students who stated that single-sex classes are helpful because "you get to be around your sex, and you can express yourself". They also reported that they are supportive of each other in single-sex classes. Despite this, the data also revealed that more males than females objected to being educated in single-sex classes. The female students generally had a positive attitude towards single-sex classes but those who expressed dislike for single-sex classes had two criticisms. They argued that single-sex classes placed boys at risk of becoming homosexuals as was previously discussed.

For some male students, permitting them to remain in the coeducational classes will "motivate us" and lead to "more competition." While the single-sex classes are "very uncomfortable miss" and "that´s why some men are stressed". Considering this, most of these students have shown an interest in remaining in coeducational classes, they "learn better." Furthermore, they believed that it encourages healthy interaction with members of the opposite sex, facilitates "bonds of friendship" and helps them to "balance the level of competition between both genders *sic.*"

The teachers also had divergent views on the types of classes, influenced by their unique experiences in both. One teacher stated that single-sex instruction is beneficial to her female students who were described as more focused and willing to participate in class projects. Similarly, Teacher Five found the single-sex class to be helpful for her male students because it facilitated lesson planning that targeted their learning interests. The teacher believed that these targeted lessons led to a quieter classroom environment and more confident boys. Teacher Four shared similar views:

> "The boys want more hands-on experience, more things they can touch, more things to draw when you're having a class or- you have to have things with diagrams so you will be able to hold them for the two hours. So, in those mixed classes… it's hard to focus on the boys, you have to focus on the boys and the girls so in those mixed classes, you find that they are more disruptive because some of the things are too tedious."

Some of the teachers also had strong opinions on coeducation, viewing it as beneficial to male students´ education. Students were said to display better behaviour in the mixed classroom. According to Teacher Three "In the mixed classes… they behave much better especially the grade nine. They behave much better when they are around the girls. They create a better image. They try to behave and try to look nice. But when they are around all-boys, they are very disruptive, because everybody wants to show they are the bad man, or they are the boss. Everybody wants to show up their colours." For Teacher Six, students in the coeducational classes were very cooperative and tend to perform better academically. The teacher admits this opinion is subjective and will vary from teacher to teacher but shared that "In the mixed group I would say the grades are a little bit better as opposed to an all-boys or all-girls class." Teacher Five shared this position and suggested that the statistics proved the superior performance in the mixed groups "for the mixed class you would have an average of 60, girls´ class 53 and boys can be far below 40."

Conversely, Teacher Two saw single-sex classes as disadvantageous for males because "if you have a mixed class, the girls will always run away with the class and the boys will always be left behind." This teacher acknowledged the academic advantage girls have in a coeducational environment. Boys also recognised their disadvantage and complained that "the teachers give the girls more chance than we because sometimes we don´t get to talk in the class because they probably think say a nonsense we going to talk." Furthermore, it is believed that teachers also have greater class control.

Boys versus Girls: A Summary of the Beliefs of the Teachers

The data has also revealed the varying opinions held by teachers regarding boys and girls. Many of these views reflect the generally held cultural beliefs referenced in chapter two of the study. With regards to academic performance, girls were said to be more focused on schoolwork and academically stronger than boys as they tend to attain higher scores in-class activities. Many teachers described girls as cooperative and competitive. This was reflected in the rivalry to attain high grades and their willingness to participate in any activity that gained them a good grade. According to Teacher Two "girls sit in the front of the class to learn more" in both class types but "The only purpose I saw boys sitting in the front of the

class is unless they have an eye problem, and they can´t see the board." Additionally, they were said to outperform boys in most subject areas, but boys dominated the vocational areas. On the other hand, boys were described as less focused and likely to underperform if a negative label was assigned to them. According to one teacher, they are confident when they are together in an all-male class but lack confidence in coeducational classes because they regard girls as academically superior. Further, teachers reported that boys were uninterested in learning languages; however, the most effective strategy to improve their academic outcome would be to plan lessons that provided them with many hands-on and engaging activities. Conversely, girls were described as adaptable to any strategy utilised by a teacher.

Additionally, teachers perceived girls as talkative but stated that they were not as disruptive as boys. This disruptive behaviour has resulted in harsher punishment being meted out to boys. Besides, girls were described as responsible, willing to take charge without being told. Being exposed to sex segregation resulted in boys displaying greater leadership skills.

Finally, both boys and girls are homophobic, but this is displayed mostly by boys. One teacher cited the dancehall culture as an influential factor in perpetuating homophobia. She further shared that influential entertainers often transmit messages that are contrary to those valued in the education system. Remarkably, those entertainers were most admired by her male students.

Teachers´ Assessment of the Program and The Way Forward

The teachers who participated in the study fall into two groups. There is one group of individuals who see sex segregation as a possible answer to the issue of male underperformance and a second group that thinks it is creating more issues in the school. Their opinions of the program appear to be based mainly on a continuous observation made within their classrooms rather than on evidence gathered through a structured monitoring process. Their views on how the program has been handled since implementation, vary, with some teachers stating that it has been monitored and the information used to inform how they

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operated at the time of data collection, while others stated that there needs to be an ongoing assessment to ascertain the efficacy of the program.

The teachers who indicated that the program has never been assessed since it was implemented also stated the importance of establishing a process by which the advantages and disadvantages of sex segregation can be assessed. According to Teacher One, the sex segregation program should be evaluated to determine its effectiveness. She further stated that "I want to see them evaluate it and from that, we can decide if we should continue with it or not." Teacher Two also expressed a similar opinion. She claimed that "once they are monitored, they can know if it's a success or a failure. Once it's monitored you can get feedback from different groups to see if your school will work effectively with that method or you go back to coeducation or single-gender *sic* but I think the monitoring is the problem." It was further revealed that this was previously suggested but there was no favourable response. Teacher Seven also reported that "they said that about two or three years ago, but it has not yet been done… no real assessment has been done over the seven years.

Additionally, Teacher Nine stated that on one occasion they were asked to complete a questionnaire in which they should provide information regarding their experience teaching in both types of classes. The questionnaire was completed by some members of staff, but no feedback was given, and no action was taken. Because of this "there are persons on the staff who have been complaining that things started as an experiment, and it is not working so why not change it and go back."

On the other hand, two teachers stated that the program was already being monitored and the data used to inform decisions regarding the program. First, Teacher Six was not involved in any specific aspect of the process but she stated that:

> "Surely there's monitoring going on because, in the new sets of intake that came in
> September, they actually mixed three form classes and then tested another three as
> single-sex. So, I guess they're doing some monitoring because something had to have

happened or some report must have been done for them to implement mixing them again."

Teacher Five also supported this view. She reported that,

"They are being monitored that's why they want to change back to the mixed classes or try to change back to the mixed classes; because they're seeing where for example, at our school even though we have one gender *sic* classes, the students mix for English and Maths and R&T (Resource and Technology) and for those subject areas the teachers have said that they have better classes in regards to discipline than when the students are mixed. So, because of that, they have decided to change some of the classes in stages, change from one gender to the mixed group."

Both teachers and students have expressed an interest in returning to a full coeducation program. According to Teacher Seven,

"The aim was to get them by themselves (organise single-sex classes) and that would encourage them to learn and then see how it worked and if it's successful then the aim was to continue with it… In terms of looking at the grade averages now, during that time, there's no proof whereby we see these boys´ classes getting better than the girls. Let it go off that data - then there is no proof."

Based on the aforesaid, there is no obvious benefit to separating the students at Seaview High School. The statement also raises a question regarding whether the aim was to see if male students could gain better grades than their female counterparts or improve their performance the ensure that all learners were performing well. Teacher Five appears to suggest the latter in the statement "the main aim of this was for us to learn if boys can do better in one gender *sic* classroom and based on what I have seen so far it has not worked. Not even by a little per cent so I would not recommend it."

With regards to a possible transfer of the sex segregation program to other institutions, many teachers suggested that it could be adopted by other coeducational institutions but with

changes. Others opposed any such occurrence as they did not perceive the program as a success. Teacher Four recommended that other schools adopt the program, but there needs to be a special focus on lesson planning that target boys, as well as there needs to be careful consideration of the subject areas that should be offered in coeducational groups and those that are best taught in single-sex classes. Teacher Eight also recommended that other schools adopt the program but stated that it would be suitable for a smaller school where they could have a greater impact on the boys. Additionally, Teacher Six said that he would, without hesitation, recommend the program to other coeducational schools only if it were assessed and "proven with concrete evidence, that they can say yes the single-gender *sic* system is better than having a coeducational class".

Furthermore, two teachers have suggested that the program could be adopted by other institutions in search of a strategy for male underperformance. According to Teacher Two, "it is a success" and any institution that would adopt the program should try for "two or three years to see if the boys are learning more or are wasting time or something like that. But once they are monitored, they can know if it's a success or a failure. Once it's monitored you can get the feedback from different groups to see if your school will work effectively with that method or you should go back to coeducation." The teacher sees merit in an organised system of monitoring and evaluation to assess the efficacy of the program. Finally, Teacher Nine stated that

> "The staff would have to be prepared for it and have clear objectives laid out as to what they want to accomplish out of it. And in our case, it's like something the Principal came up with and it was pushed on us. In the school, whether or not they are going to look at what we are doing, where the strengths and weakness are but, spend some time as a staff and decide if you want this thing."

It is notable that although many of the teachers reported challenges with sex segregation and indicated support for a possible return to a fully co-educational school system, they showed confidence in its potential to address the academic needs of males. What seems to be required is a process that includes the staff and is assessed continually, to provide evidence of the effectiveness or ineffectiveness of the program as a strategy to address male underachievement.

Summary

Chapter five presented the findings and analysis of the data gathered on sex segregation at Seaview High School in Jamaica. The perspectives shared by the teachers and students were detailed and varied. The participants found many advantages to educating boys and girls apart but many of them expressed a desire to return to coeducational classes. The data also indicated that sex segregation provided positive outcomes for some students, but one cannot conclusively state that it has addressed the issue of male underachievement. What is clear, is that it has indicated that one size does not fit all; thus, there is room for further studies on potential strategies that could address this enduring issue.

CHAPTER SIX – Conclusion

Implications for Practice and Considerations for Further Research

Introduction

This chapter begins with a brief revisitation of the purpose and significance of this research. This will be followed by a summary of the key findings and the implications coming from the same. The chapter will close with some considerations for further research.

A Review of the Purpose and Significance of the Study

This study was conceptualised from my professional experience as a teacher. As a teacher, I was influenced by my observation of the sex gap in academic performance as well as my observation of the differences in the conduct and motivation of male and female students. Upon embarking on the research journey my goal was to understand the impact single-sex classes in a coeducational school had on male-underachievement.

In my exploration of single-sex instruction in a coeducational school one of the key objectives of my study was to gain a clear understanding of how the program functioned as well as the perspectives of the teachers and students, who experience both types of classes daily. I considered this first-hand experience to be ideal as it facilitates the authentic revelation of all aspects of the program in the voices of the informants. Coming from this, a possible model could be provided that can address male underachievement in the Jamaican context.

As was outlined in chapter one of the study, the significance of my research lies in its contribution to the existing literature about sex segregation. There is no paucity in the data on single-sex schooling, yet the reviewed literature indicates that the findings are equivocal. Consequently, this study aims to contribute to the debate with a specific focus on the

contribution of single-sex instruction within the coeducational school in the Jamaican context. As this is a largely unexplored aspect of studies on single-sex education in Jamaica, the study can provide valuable data that has implications for students, teachers, and policymakers.

Summary of the Findings

The study was guided by three research questions as was outlined in chapter one of the study. To answer these questions, I utilised a variety of research methods as part of a case study approach. The findings are summarised below.

The findings of the study indicate that sex- segregation has not proven to effectively address the issue of male underachievement on a wide scale. The academic effects of the program are conflicting. Male students perform well in some classes, but female students outperform them in most. Despite this, it was reported that the coeducational classes outperform both single-sex groups. Considering this, many teachers and students have suggested that there should be a return to a full coeducational program.

The study highlighted that there are some positive outcomes associated with sex segregation. For instance, it allows some boys to have the opportunity to be placed first, second or third place in their class. These positions are usually occupied by female students. It also allows boys to display their leadership skills rather than rely on the girls to take charge. Furthermore, sex segregation facilitates increased competition among students although this competition is not always for academic outcomes.

The study also highlighted that participation plays an important part in the learning process. Despite this, male students often fail to participate unless they are in a single-sex group where they appear to display greater confidence. In these lessons, there appears to also be a need for sex-targeted teaching strategies, as boys are more interested in hands-on activities. This

perspective is not held by all the teachers, some of whom believe lessons should instead be planned to target individual learners.

Some findings highlighted the negative factors that act as a challenge to sex segregation. For instance, disruptive behaviour is a significant issue as it was reported by all the teachers. Boys are more disruptive than girls and they tend to receive harsher punishment from their teachers. Additionally, teachers believed that large class size harms the teaching-learning process and single-sex male classes tend to have more students than the female classes.

Finally, homophobia is a pervasive issue at the institution. It is displayed in the boys´ refusal to participate in any activity regarded as effeminate and they also disassociate themselves from any activity that requires that they sit close to another male student. This impacts the teacher´s ability to utilise group activities.

Implications for Practice

Firstly, the results of this study have implications for designing academic programs that are geared towards male academic improvement. The finding that lessons that are not designed to target the learning needs of boys tend to result in loss of interest and disruption suggested that education programs need to be tailored with specific students in mind. Although it is shown that many learners have unique learning styles, it cannot be ignored that a large number of boys seem to require hands-on activities to remain focused. Given that, education programs need to target these needs in content as well as intensity.

Secondly, the sex segregation program was established to address male underachievement. The study has revealed that despite this, female classes and coeducational classes achieve higher grades. This indicates that there may be a need for the school´s administration to make adjustments that are suitable for the specific school context and with the necessary monitoring processes in place. Further, the challenges that continue after the intervention also have implications for policymakers and teachers. There may be a need to look beyond

sex for an explanation for male underachievement. Teacher quality may need to be considered which examines whether teachers are trained to identify and meet learner needs. There is also a role for policymakers at the Ministry of Education where the decision on the quality of student intake is made. The decision to assign students to a high school based on previous academic performance will likely perpetuate similar academic performance throughout. Educators can also be informed by these findings and be inspired to find new approaches to deal with male underachievement.

Thirdly, the study highlighted several factors that have acted as impediments to improved male academic outcomes. This finding has implications for both students, teachers and school administrators. It calls on school administrators to find creative strategies to address disruptive behaviour beyond the use of punitive measures that so far do not seem to prevent the same. The students need to recognize the negative academic impact of disruption. Also, the large class size is believed to impede academic progress at the school. The challenges of reducing class size lie with the Ministry of Education which is often constrained by limited resources. Nevertheless, correcting this issue is their responsibility.

Finally, the finding that the homophobic culture has infiltrated the school culture in ways that are reflected in the language used by students as well as words they refuse to use. Students refuse to participate in group work, and some boys complain about too many males being in their surroundings. This creates a challenge to positive academic outcomes especially as it promotes cooperative learning. This finding has implications for stakeholders at all levels of the education system. It raises questions about equality and fairness in the school environment when homophobia could ensure that there is no space for students who may identify as LGBTQ. Bahna (2012) in her reference to South Africa makes a statement that also applies to Jamaica: both legislative and educational strategies should be implemented to teach individuals the gravity of these homophobic practices.

Considerations for Further Inquiry

Given what has been discussed in the previous sections, a few recommendations will be submitted in this section for consideration. Firstly, findings from the study indicate that male underachievement remains a persistent issue at Seaview High School. Considering that single-sex classes in coeducational schools have been successful in places such as Australia, the program could be implemented in another school, with the requisite monitoring and assessment processes put in place. Lessons could be learned from the project implementation at this institution and a study conducted to determine the effect of segregation in another school. Furthermore, inquiry with institutions that have successfully utilised the model, could provide useful knowledge regarding how it was implemented and evaluated in that context.

Secondly, in conducting this study, only teachers and students were included. A similar study could be extended to include other stakeholders to ascertain other perspectives on sex segregation. For instance, parents and administrators could offer useful insights that could result in increased academic benefits for students.

Thirdly, sex segregation in coeducational schools is not common in Jamaica and has therefore not been studied extensively. Therefore, the topic demands further research on this and other aspects of the strategy. A possible area of research could focus on the context of the school as well as the context of the community that they serve to determine how these factors impact the efficacy of the strategy to improve student achievement.

Fourthly, many boys are performing well in Jamaica and many single-sex schools are enjoying academic success. This could form the starting point for research into which boys are doing well and why they are doing well. A study of this type would certainly provide data that applies to the Jamaican context and could thus provide a model that can be tailored to other schools that are attempting to address male underachievement.

Finally, broader areas of studies that target the cause of male underachievement would contribute useful data and address the source of the issue. If this knowledge were discovered, it would offer educators an opportunity to determine the most appropriate strategies that can be adopted or in other cases, innovative strategies that could be implemented that target specific learner needs.

References

Adams, W. C., (2015). Conducting Semi-Structured Interviews. In: K. Newcomer, H. Hatry, J. Wholey, eds. *Handbook of Practical Program Evaluation* (Online). 4th ed. New Jersey: John Wiley & Sons, Ltd. pp. 492–505. (Viewed 14 May 2021). Available from: https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119171386.ch19

Ahlin, Å., (2003). *Does School Competition Matter? Effects of a Large-Scale School Choice Reform on Student Performance*. Working Paper Series 2003:2. (Online). Uppsala University, Department of Economics. (Viewed 3 August 2020). Available from: https://ideas.repec.org/p/hhs/uunewp/2003_002.html

Ainley, J., Kos, J. and Nicholas, M., (2008). Participation in Science, Mathematics and Technology in Australian Education. *ACER Research Monographs* (Online). (Viewed 21 July 2020). Available from: https://research.acer.edu.au/acer_monographs/4

Ajayi, V. O., Audu, C. and Ajayi, E., (2017). *Influence of Class Size on Students' Classroom Discipline, Engagement and Communication: A Case Study of Senior Secondary Schools in Ekiti State, Nigeria* (Online). Rochester, NY: Social Science Research Network. (Viewed 11 June 2021). Available from: https://papers.ssrn.com/abstract=3066387

Akala, B. M., (2019). Affirmative Action for Gender Justice in South African and Kenyan Education Systems. *Africa Education Review*. **16**(5), 1–15.

ALEXANDER, J., (1977). The Role of the Male in the Middle-Class Jamaican Family: A Comparative Perspective. *Journal of Comparative Family Studies*. **8**(3), 369–389.

Allen, S. and Daly, K., (2007). *The Effects of Father Involvement: An Updated Research Summary of the Evidence* (Online). Canada: Father Involvement Research Alliance. (Viewed 26 June 2021). Available from: https://www.fatherhood.gov/research-and-resources/effects-father-involvement-updated-researchsummary-evidence

Altinyelken, H., (2015). *Background Paper Prepared for the Education for All Global Monitoring Report 2015 Evolution of Curriculum Systems to Improve Learning Outcomes and Reduce Disparities in School Achievement Evolution of Curriculum Systems to Improve Learning Outcomes and Reduce Disparities in School Achievement*. UNESCO. DOI: 10.13140/RG.2.2.11757.59362

Amin, A., Kågesten, A., Adebayo, E. and Chandra-Mouli, V., (2018). Addressing Gender Socialization and Masculinity Norms Among Adolescent Boys: Policy and Programmatic Implications. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*. **62**(3S), S3–S5.

Anderson, P. and Daley, C., (2014). Parenting Across Social Classes: Perspectives on Jamaican Fathers. In: H. Selin, ed. *Parenting Across Cultures: Childrearing, Motherhood and Fatherhood in Non-Western Cultures* (Online). Netherlands Springer Dordrecht. pp. 335–348. https://doi.org/10.1007/978-94-007-7503-9_25

Anfara, V.A., Martens, S. B., (2008). Do Single - Sex classes and Schools Make a Difference? *Middle School Journal*. **40**(2). (Viewed 23 May 2020). Available from: http://curriculumstudies.pbworks.com/f/Single%2520Sex%2520Classrooms%2520-%2520Anfara,%2520V,%2520Mertens,%2520S.pdf

Angus, G., (2017). Class Sizes to Be Reduced – Jamaica Information Service. *Jamaica Information Service* (Online). 30 November. (Viewed 11 June 2021). Available from: https://jis.gov.jm/class-sizes-reduced/

Anon., (2003). Single-Sex Schools: Are Single-Sex Schools Better than Schools with Males and Females Together? *Scholastic Action; New York*. **26**(11), 6.

Antecol, H., Eren, O. and Ozbeklik, S., (2015). The Effect of Teacher Gender on Student Achievement in Primary School. *Journal of Labor Economics*. **33**(1), 63–89.

Arbuckle, C. and Little, E., (2004). Teachers' Perceptions and Management of Disruptive Classroom Behaviour during the Middle Years (Years Five to Nine). *Australian Journal of Educational & Developmental Psychology*. v4, 59–70.

Archer, J. and Lloyd, B., (2002). *Sex and Gender*. United Kingdom: Cambridge University Press.

Arcury, T. A. and Quandt, S. A., (1999). Participant Recruitment for Qualitative Research: A Site-Based Approach to Community Research in Complex Societies. *Human Organization*. **58**(2), 128–133.

Attride-Stirling, J., (2001). Thematic Networks: An Analytic Tool for Qualitative Research: *Qualitative Research*. **1**(3), 385–405.

Gibb, S. J., Fergusson, D. M. and Horwood, L. J., (2008). Effects of Single-Sex and Coeducational Schooling on the Gender Gap in Educational Achievement. *Australian Journal of Education* (Online). **52**(3). Available from: https://journals.sagepub.com/doi/10.1177/000494410805200307

Bağ, E., Marti, L. and Bayyurt, Y., (2014). Gender and Classroom Interaction: Examining A Female and A Male Teacher's Moves Directed Towards Female and Male Students in Two EFL Classrooms in Turkey. *Boğaziçi University Journal of Education* (Online). **30**(1). Available from: /paper/Gender-and-Classroom-Interaction%3A-Examining-A-and-A-Ba%C4%9F-Marti/6765a6e34308b0375f86d774a1234456b2b0ab86

Bailey, B., and Charles. S., (2010). Gender differentials in Caribbean education systems. (Online). (Viewed 23 February 2019). Available from: https://www.cedol.org/wp-content/uploads/2012/02/70-72-2010.pdf

Bailey, B., (2014). Boys, Masculinity and Education. *Caribbean Review of Gender Studies* (Online). (8), 283-288. (Viewed 4 February 2021). Available from: https://issuu.com/igdssau/docs/igds_crgs_issue8_masculinities_dec2_0f2eb47b64d172

Bailey, W. et al., (1998). *Family and the Quality of Gender Relations in the Caribbean*. Mona, Jamaica: Institute of Social and Economic Research, University of the West Indies.

Bamberger, M., (2000). *Integrating Quantitative and Qualitative Research in Development Projects* (Online). Washington DC: The World Bank. (Viewed 17 May 2021). Available from: https://ideas.repec.org/b/wbk/wbpubs/15253.html

Bandura, A. and Bussey, K., (2004). On Broadening the Cognitive, Motivational, and Sociostructural Scope of Theorizing about Gender Development and Functioning: Comment on Martin, Ruble, and Szkrybalo (2002). *Psychological Bulletin*. **130**(5), 691–701.

Banet-Weiser, S. and Miltner, K. M., (2016). Masculinity So Fragile: Culture, Structure, and Networked Misogyny. *Feminist Media Studies*. **16**(1), 171–174.

Barbour, R., (2018). *Doing Focus Groups*. London: SAGE Publications Ltd.

Barrett, D. and Twycross, A., (2018). Data Collection in Qualitative Research. *Evidence-Based Nursing*. **21**(3), 63–64.

Barriteau, E., (2003). *Confronting Power, Theorizing Gender: Interdisciplinary Perspectives in the Caribbean*. Jamaica: University of the West Indies Press.

Baskarada, S. (2013). Qualitative Case Study Guidelines. Qualitative Report. **19**(40), 1–18.

Bassi, M. et al., (2018). Failing to Notice? Uneven Teachers' Attention to Boys and Girls in the Classroom. *IZA Journal of Labor Economics*. **7**(1), 9.

Basten, C. (1997). A Feminised Profession: Women in the Teaching Profession. *Educational Studies*. **23**(1), 55–62.

Basu, S. et al., (2017). Learning to Be Gendered: Gender Socialization in Early Adolescence Among Urban Poor in Delhi, India, and Shanghai, China. *Journal of Adolescent Health*. **61**(4, Supplement), S24–S29.

Baxter, P. and Jack, S., (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report.* **13**(4), 544–559.

Beede, D. N. et al., (2011). *Women in STEM: A Gender Gap to Innovation* (Online). Rochester, NY: Social Science Research Network. (Viewed 16 April 2021). Available from: https://papers.ssrn.com/abstract=1964782

Belcher, C., Frey, A. and Yankeelov, P., (2006a). The Effects of Single-Sex Classrooms on Classroom Environment, Self-Esteem, and Standardized Test Scores. *School Social Work Journal*. **31**(1), 61–75.

Belcher, C., Frey, A. and Yankeelov, P., (2006b). The Effects of Single-Sex Classrooms on Classroom Environment, Self-Esteem, and Standardized Test Scores. *School Social Work Journal*. **31**(1), 61–75.

Bellony, A., and Reilly, B., (2010). An Analysis of Labour Market Earnings in St. Lucia. Social and Economic Studies. **56** (3 and 4), 111-47.

Berger, R., (2015). Now I See It, Now I Don't: Researcher's Position and Reflexivity in Qualitative Research. *Qualitative Research*. **15**(2), 219–234.

Bernard, H. R., (2017). *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. Maryland: Rowman & Littlefield.

Bhana, D., (2012). Understanding and Addressing Homophobia in Schools: A View from Teachers. *South African Journal of Education*. **32**(3), 307–318.

Biesta, G., (2015). What Is Education For? On Good Education, Teacher Judgement, and Educational Professionalism. *European Journal of Education*. **50**(1), 75–87.

Bigler, R., Hayes, A. and Hamilton, V., (2013). The Role of Schools in the Early Socialization of Gender Differences, in: *Encyclopedia on Early Childhood Development* (Online). USA. (Viewed 5 April 2021). Available from: /paper/The-Role-of-Schools-in-the-Early-Socialization-of-Bigler-Hayes/80e8411677319040299b92a300076610359de63e

Bigler, R. S. and Signorella, M. L., (2011). Single-Sex Education: New Perspectives and Evidence on a Continuing Controversy. *Sex Roles*. **65**(9), 659.

Birch, E. R., Li, I. and Miller, P. W., (2009). The Influences of Institution Attended and Field of Study on Graduates' Starting Salaries. *Australian Economic Review*. **42**(1), 42–63.

Bisman, J. and Highfield, C., (2013). The Road Less Travelled: An Overview and Example of Constructivist Research in Accounting. *Australasian Accounting, Business and Finance Journal*. **6**(5), 3–22.

Bjarnegård, E., (2013). *Gender, Informal Institutions and Political Recruitment: Explaining Male Dominance in Parliamentary Representation*. UK: Palgrave Macmillan UK.

Black, S. E., Devereux, P. J. and Salvanes, K. G., (2013). Under Pressure? The Effect of Peers on Outcomes of Young Adults. *Journal of Labor Economics*. **31**(1), 119–153.

Blair, E., (2011). Different Hefts, Different Expectations. *Learning and Teaching*. **13**(1) 4.

Blakemore, J. E. O. and Hill, C. A., (2008). The Child Gender Socialization Scale: A Measure to Compare Traditional and Feminist Parents. *Sex Roles*. **58**(3), 192–207.

Blank, D. S., (2013). An Historical and Contemporary Overview of Gendered Caribbean Relations. *Journal of Arts and Humanities*. **2**(4), 1–10.

Blatchford, P., Edmonds, S. and Martin, C., (2003). Class Size, Pupil Attentiveness and Peer Relations. *The British Journal of Educational Psychology*. **73**(1), 15–36.

Blau, F. D. and Kahn, L. M., (2017). The Gender Wage Gap: Extent, Trends, and Explanations. *Journal of Economic Literature*. **55**(3), 789–865.

Bonas, S., (2014). Absence of fathers in homes described as social emergency. *Jamaica Observer* (Online). 06 June. (Viewed 26 June 2021). Available from: https://www.jamaicaobserver.com/news/Absence-of-fathers-in-homes-described-as-social-emergency_16803482

Bonomo, V., (2010). Gender Matters in Elementary Education: Research-Based Strategies to Meet the Distinctive Learning Needs of Boys and Girls. *Educational Horizons*. **88**(4), 257–264.

Booth, A. L. and Nolen, P., (2012). Choosing to Compete: How Different Are Boys and Girls. *Journal of Economic Behaviour and Organisation.* **81**(22), 542-555.

Booth, A. L., Cardona-Sosa, L. and Nolen, P., (2018). Do Single-Sex Classes Affect Academic Achievement? An Experiment in a Coeducational University. *Journal of Public Economics*. 168, 109–126. DOI:10.1016/J.JPUBECO.2018.08.016

Bosurgi, R., (2014). Homophobia in Jamaica: Is This Love? *The Lancet Infectious Diseases*, **14**(10), 930.

Bouguen, A., Grenet, J. and Gurgand, M., (2017). Does Class Size Influence Student Achievement? *The Institut des Politiques Publiques*. (28), 8.

Bourke, B., (2014). Positionality: Reflecting on the Research Process | Semantic Scholar. *The Qualitative Report*. **19**(33), 1–11.

Boxill, I., (1997). Perceptions of Gender Roles in Urban Jamaica. *Humanity & society*. **21**(2), 182–189.

Boyne, I., (2007). Gay Rights and Wrongs. *Jamaica Gleaner*. (Viewed June 26, 2021).

Braun, V. and Clarke, V., (2012). Thematic Analysis. In: H. Cooper et al., eds., *APA handbook of Research Methods in Psychology, Vol. 2. Research Designs: Quantitative, Qualitative, Neuropsychological, and Biological*. American Psychological Association. Washington, DC, US: American Psychological Association. pp. 57–71. (Viewed 13 May 2020). Available from: https://doi.org/10.1037/13620-004

Braun, V. and Clarke, V., (2013). *Successful Qualitative Research: A Practical Guide for Beginners*. London: SAGE.

Braun, V. and Clarke, V., (2019). Reflecting on Reflexive Thematic Analysis. *Qualitative Research in Sport, Exercise and Health*. **11**(4), 589–597.

Braun, V. and Clarke, V., (2020). Thematic Analysis. In: H. Cooper, ed. *APA Handbook of Research Methods in Psychology*. Washington, DC: American Psychology Association.

Braun, V., Clarke, V. and Weate, P., (2016). Using Thematic Analysis in Sport and Exercise Research. In: B. Smith and A. Sparkes, ed. *Routledge Handbook of Qualitative Research in Sport and Exercise*. London: Routledge.

Breda, T. and Napp, C., (2019). Girls' Comparative Advantage in Reading Can Largely Explain the Gender Gap in Math-Related Fields. *Proceedings of the National Academy of Sciences*. **116**(31), 15435–15440.

Brenøe, A. A. and Zölitz, U., (2019). *Exposure to More Female Peers Widens the Gender Gap in STEM Participation*. IZA Discussion Papers. (Viewed 12 April 2021). Available from: https://www.econstor.eu/handle/10419/207407

Brinkmann, S. and Kvale, S., (2018). *Doing Interviews*. London: SAGE.

Bristol, T. J., (2015). Teaching Boys: Towards a Theory of Gender-Relevant Pedagogy. *Gender and Education*. **27**(1), 53–68.

Brown, J., Chevannes, B., (1998). *'Why Man Stay so': An Examination of Gender Socialization in the Caribbean*. Kingston, Jamaica: University of the West Indies.

Brown, J. and Johnson, S., (2008). Childrearing and Child Participation in Jamaican Families. *International Journal of Early Years Education*. **16**(1), 31–40.

Bryan, C., (2018). Government to Build New Schools to Tackle Shift System. *Jamaica Information Service* (Online). (Viewed 24 August 2020). Available from: https://jis.gov.jm/government-to-build-new-schools-to-tackle-shift-system/

Bryman, A. and Bell, E., (2015). *Business Research Methods*. United Kingdom: Oxford University Press.

Burke, M. A. and Sass, T. R., (2013). Classroom Peer Effects and Student Achievement. *Journal of Labor Economics*. **31**(1), 51–82.

Buser, T., Niederle, M. and Oosterbeek, H., (2014). Gender, Competitiveness, and Career Choices. *The Quarterly Journal of Economics*. **129**(3), 1409–1447.

Cacciattolo, M., (2015). Ethical Considerations in Research. In: M. Vicars, S. Steinberg, T. McKenna, and M. Cacciattolo, eds. *The Praxis of English Language Teaching and Learning (PELT): Beyond the Binaries: Researching Critically in EFL Classrooms* (Online). Rotterdam: Sense Publishers. pp. 61–79 (Viewed 5 April 2020). Available from: https://doi.org/10.1007/978-94-6300-112-0_4

Cairns, R. B. and Cairns, B. D., (1995). *Lifelines and Risks: Pathways of Youth in Our Time*. New York, US: Cambridge University Press.

Çakmak, M., (2009). The Perceptions of Student Teachers about the Effects of Class Size With Regard to Effective Teaching Process. *The Qualitative Report*. **14**(3), 395–408.

Campbell, C., Proctor, H. and Sherington, G., (2009). *School Choice: How Parents Negotiate the New School Market in Australia*. Crow's Nest, N.S.W: Allen and Unwin.

Campbell, W., (2013). We Need to Rescue Our Boys. *Jamaica Observer* (Online). 27 February. (Viewed 7 September 2020). Available from: http://www.jamaicaobserver.com/columns/We-need-to-rescue-our-boys_13713971

Campbell, Y. and Wheatle, S.-S., (2020). Contradictions in Faith in the Caribbean Context: Postcolonialism, Religion and the Constitution. *Commonwealth & Comparative Politics*. **58**(3), 277–284.

Caprara, G., et al., (2008). Longitudinal Analysis of the Role of Perceived Self-Efficacy for Self-Regulated Learning in Academic Continuance and Achievement. *Journal of Educational Psychology*. **100**(3), 525–534.

CaPRI. (2013). *2012 Report Card on Education in Jamaica | CAPRI - The Caribbean Policy Research Institute*. Caribbean Policy Research Institute. (Viewed 27 February 2021). Available from: https://www.capricaribbean.org/documents/2012-report-card-education-jamaica

Card, D. and Payne, A. A., (2021). High School Choices and the Gender Gap in Stem. *Economic Inquiry*. **59**(1), 9–28.

Carey, M. and Asbury, J., (2012). *Focus Group Research*. Walnut Creek, CA: Routledge.

Carnevale, A. P., Smith, N. and Melton, M., (2011). *STEM: Science Technology Engineering Mathematics. State-Level Analysis*. Washington DC: Georgetown University Center on Education and the Workforce.

Carrington, B. and McPhee, A., (2008). Boys' 'Underachievement' and the Feminization of Teaching. *Journal of Education for Teaching*. **34**(2), 109–120.

Carter, M. J., (2014). Gender Socialization and Identity Theory. *Social Sciences*. **3**(2), 242–263.

Cashdan, E., (1998). Are Men More Competitive than Women? *The British journal of social psychology / The British Psychological Society*. **37** (2), 213–29.

Cavas, B. and McCloughlin, T., (2009). The Kolb Learning Style Inventory and Science Education: What We Can Learn about Learners' Priorities? Science Live for Teachers (SL4T) (Online). January 2009. Drumcondra. (Viewed 28 June 2020). Available from:

https://www.researchgate.net/publication/273772528_The_Kolb_learning_style_inventory_and_science_education_What_we_can_learn_about_learners'_priorities

Ceci, S. J. and Williams, W. M., (2011). Understanding Current Causes of Women's Underrepresentation in Science. *Proceedings of the National Academy of Sciences*. **108**(8), 3157–3162.

Chappell, L. and Waylen, G., (2013). Gender and the Hidden Life of Institutions. *Public Administration*. **91**(3), 599–615.

Charles, C., (2011). *Representations of Homosexuality in Jamaica* (Online). Rochester. NY: Social Science Research Network. (Viewed 26 June 2021). Available from: https://papers.ssrn.com/abstract=2372139

Charles, M. and Bradley, K., (2009). Indulging Our Gendered Selves? Sex Segregation by Field of Study in 44 Countries. *American Journal of Sociology*. **114**(4), 924–976.

Charmaz, K., (2014). *Constructing Grounded Theory*. London: SAGE.

Chen, C., Jones, K. and Moreland, K., (2014). Differences in Learning Styles. *The CPA Journal*, **84**(8), 46–51.

Chen, G., (2020). Why Single-Sex Public Schools Are Growing in Popularity. (Online). 28 February 2020. (Viewed 9 June 2020). Available from: https://www.publicschoolreview.com/blog/why-single-sex-public-schools-are-growing-in-popularity

Cheng, K.-W., (2014). A Study on Applying Focus Group Interview on Education. *Reading Improvement*. **51**(4), 381–385.

Cherney, I. D. and Campbell, K. L., (2011). A League of Their Own: Do Single-Sex Schools Increase Girls' Participation in the Physical Sciences? *Sex Roles*. **65**(9), 712.

Cheryan, S., et al., (2017). Why Are Some STEM Fields More Gender Balanced than Others? *Psychological Bulletin*. **143**(1), 1–35.

Chevannes, B., (2002). Gender and Adult Sexuality. In: P. Mohammed, ed. *Gendered Realities: Essays in Caribbean Feminist Thought*. Jamaica: Centre for Gender and Development Studies. pp. 486–494.

Chevannes, B., (2010). Jamaican Masculinity: Construction and Consequences. *Jamaica Gleaner* (Online). 21 March 2010. (Viewed 1 June 2021). Available from: https://jamaica-gleaner.com/gleaner/20100321/lead/lead9.html

Chisamya, G., et al., (2012). Gender and Education for All: Progress and Problems in Achieving Gender Equity. *International Journal of Educational Development*. **32**(6), 743–755.

Chughtai, H. and Myers, M. D., (2017). Entering the Field in Qualitative Field Research: A Rite of Passage into a Complex Practice World. *Information Systems Journal*. **27**(6), 795–817.

Chunnu, W. M., (2021). Battyboy Must Die! Dancehall, Class and Religion in Jamaican Homophobia. *European Journal of Cultural Studies*. **24**(1), 123–142.

Ciccone, A. and Garcia-Fontes, W., (2014). *Gender Peer Effects in School, a Birth Cohort Approach* (Online). Department of Economics and Business, Universitat Pompeu Fabra. v14-19 (Viewed 9 August 2020). Available from: https://econpapers.repec.org/paper/upfupfgen/1424.htm

Ciesielska, M., Boström, K. W. and Öhlander, M., (2018). Observation Methods. In: M. Ciesielska and D. Jemielniak, eds. *Qualitative Methodologies in Organization Studies: Volume II: Methods and Possibilities* (Online). Cham: Springer International Publishing. pp. 33–52. (Viewed 14 May 2021). Available from: https://doi.org/10.1007/978-3-319-65442-3_2

Ciesielska, M., Wolanik Boström, K. and Öhlander, M., (2018). Observation Methods. In: M. Ciesielska and D. Jemielniak, eds. *Qualitative Methodologies in Organization Studies*. Switzerland: Palgrave Macmillan. pp. 33–52.

Cimpian, J. R., Kim, T. H. and McDermott, Z. T., (2020). Understanding Persistent Gender Gaps in STEM. *Science*. **368**(6497), 1317–1319.

Clark, K., (2019). Male Educators Needed. *Jamaica Observer* (Online). 23 April 2019. (Viewed 10 March 2021). Available from: https://www.jamaicaobserver.com/opinion/male-educators-needed-_162930

Clark, M. A., et al., (2008). Examining Male Underachievement in Public Education: Action Research at a District Level. *NASSP Bulletin*. **92**(2), 111–132.

Clarke, C., (2005). Socialization and Teacher Expectations of Jamaican Boys in Schools: The Need for a Responsive Teacher Preparation Program. *International Journal of Educational Policy, Research, and Practice: Reconceptualizing Childhood Studies*. **5**(4), 3–34.

Clarke, V. and Braun, V., (2014). Thematic Analysis. In: C. Michalos, ed. *Encyclopedia of Quality of Life and Well-Being Research.* Netherlands: Springer Netherlands.

Clarke, V., Braun, V. and Hayfield, N., (2015). Thematic Analysis. In: J. Smith, ed. *Qualitative Psychology: A Practical Guide to Research Methods*. London: SAGE.

Cobbett, M. and Younger, M., (2012). Boys' Educational 'Underachievement' in the Caribbean: Interpreting the 'Problem'. *Gender and Education*. **24**(6), 611–625.

Coghlan, D. and Brydon-Miller, M., (2014). *The SAGE Encyclopedia of Action Research*. London: SAGE.

Cohen, S., (2002). *Folk Devils and Moral Panics: The Creation of the Mods and Rockers*. NY: Routeledge.

Colaner, C. and Rittenour, C., (2015). "Feminism Begins at Home": The Influence of Mother Gender Socialization on Daughter Career and Motherhood Aspirations as Channelled Through Daughter Feminist Identification. *Communication Quarterly*. **63**(1), 81–98.

Connell, R. W. and Messerschmidt, J. W., (2005). Hegemonic Masculinity: Rethinking the Concept. *Gender and Society*. **19**(6), 829–859.

Connelly, L. M., (2014). Ethical Considerations in Research Studies. *MedSurg Nursing*. **23**(1), 54–56.

Cooke, C., (2010). Wanted - More Men in the Classroom. *Jamaica Gleaner* (Online). 9 February 2010. (Viewed September 7, 2020). Available from: http://jamaica-gleaner.com/gleaner/20100209/cleisure/cleisure2.html

Cools, A., Fernández, R. and Patacchini, E., (2019). *Girls, Boys, and High Achievers*. Institute of Labor Economics (IZA). Discussion Paper IZA DP No. 12314. (Viewed 17 April 2021). Available from: https://ideas.repec.org/p/iza/izadps/dp12314.html

Cooper, C., (1995). *Noises in the Blood: Orality, Gender, and the "Vulgar" Body of Jamaican Popular Culture* (Online). Durham. NC: Duke University Press. (Viewed 26 June 2021). Available from: https://read.dukeupress.edu/books/book/596/Noises-in-the-BloodOrality-Gender-and-the-Vulgar

Coulter, R. P. and Greig, C. J., (2008). The Man Question in Teaching: An Historical Overview. *Alberta Journal of Educational Research* (Online). **54**(4). (Viewed 10 August 2020). Available from: https://journalhosting.ucalgary.ca/index.php/ajer/article/view/55248

Crabtree, B. F. and Miller, W. L., (1999). *Doing Qualitative Research*. London: SAGE Publications.

Crawford, A. D., (2010). The Effects of Dancehall Genre on Adolescent Sexual and Violent Behavior in Jamaica: A Public Health Concern. *North American Journal of Medical Sciences*. **2**(3), 143–145.

Creswell, J. W., (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. London: SAGE.

Culpin, I., et al., (2013). Father Absence and Depressive Symptoms in Adolescence: Findings from a UK Cohort. *Psychological Medicine*. **43**(12), 2615–2626.

CXC., (2018). CXC Annual Report 2018. (Online). (Viewed 20 January 2020). Available from: https://www.cxc.org/cxc-annual-report-2018/

Dale, R. R., (2017). *Mixed or Single-Sex School? Volume 3: Attainment, Attitudes and Overview*. London: Routledge.

Dale, R. R., (2018). *Mixed Or Single-Sex School? Volume 2: Some Social Aspects*. London: Taylor & Francis Limited.

Datnow, A. and Hubbard, L., (2002). *Gender in Policy and Practice: Perspectives on Single-Sex and Coeducational Schooling*. New York: Psychology Press.

Datnow, A., Hubbard, L. and Woody, E., (2001). *Is Single Gender Schooling Viable in the Public Sector? Lessons from California´s Pilot Program. Final Report* (Online). New York: Ford. Foundation and Chicago, IL: Spencer Foundation. (Viewed 9 August 2020), Available from: https://eric.ed.gov/?id=ED471051

David, M., Edwards, R. and Alldred, P., (2001). Children and School-Based Research: 'Informed Consent' or 'Educated Consent'? *British Educational Research Journal*. **27**(3), 347–365.

Daymon, C. and Holloway, I., (2002). *Qualitative Research Methods in Public Relations and Marketing Communications*. London: Routeledge.

Dee, T. S., (2005). A Teacher like Me: Does Race, Ethnicity, or Gender Matter? *The American Economic Review*. **95**(2), 158–165.

Delaney, J. and Devereux, P. J., (2019). *It's Not Just for Boys! Understanding Gender Differences in STEM*. Institute of Labor Economics (IZA). IZA DP No. 12176 (Viewed 6 September 2020). Available from: https://ideas.repec.org/p/iza/izadps/dp12176.html

Denzin, N. K., (1989). *Interpretive Biography*. United Kingdom: SAGE.

Denzin, N. K., (2017). Critical Qualitative Inquiry. *Qualitative Inquiry*. **23**(1), 8–16.

Diekman, A. B., et al., (2017). A Goal Congruity Model of Role Entry, Engagement, and Exit: Understanding Communal Goal Processes in STEM Gender Gaps. *Personality and Social Psychology Review*. **21**(2), 142–175.

Dijkstra, P., et al., (2008). Social Comparison in the Classroom: A Review. *Review of Educational Research*. **78**(4), 828–879.

Dikilitaş, K. and Griffiths, C., (2017). Thinking About the Context: Setting (Where?) And Participants (Who?). In: K. Dikilitaş and C. Griffiths, eds. *Developing Language Teacher Autonomy through Action Research* (Online). Cham: Springer International Publishing. pp. 89–105. (Viewed 24 February 2021). Available from: https://doi.org/10.1007/978-3-319-50739-2_4

Dilshad, R. M. and Latif, M. I., (2013a). Focus Group Interview as a Tool for Qualitative Research: An Analysis. *Pakistan Journal of Social Sciences*. **33**(1), 191–198.

Dilshad, R. M. and Latif, M. I., (2013b). Focus Group Interview as a Tool for Qualitative Research: An Analysis. *Pakistan Journal of Social Sciences*. **33**(1), 191–198.

Dodgson, J. E., (2019). Reflexivity in Qualitative Research. *Journal of Human Lactation*. **35**(2), 220–222.

Dormus, K., (2019a). The Development of Coeducation in Poland against European Backdrop (19th-21st Century) *SHS Web of Conferences* (Online). **66** (01027). Available from:

https://doi.org/10.1051/shsconf/20196601027

Drayton, K. B., (1997). White Man's Knowledge: Sex, Race and Class in Caribbean English Language Textbooks. Kingston: Ian Randle.

Driessen, G. and van Langen, A., (2013). Gender Differences in Primary and Secondary Education: Are Girls Really Outperforming Boys? *International Review of Education*. **59**(1), 67–86.

Dustmann, C., Ku, H. and Kwak, D. W., (2018). Why Are Single-Sex Schools Successful? *Labour Economics* (Online). **54**, 79–99. Available from: https://doi.org/10.1016/j.labeco.2018.06.005

Eckart, J. A. and Tracy, D. M., (1992). Gender Socialization in Schools: A Course for Change Agents. *Teaching Education*. **5**(1), 59–64.

Eckert, P. and McConnell-Ginet, S., (2013). *Language and Gender*. New York: Cambridge University Press.

Edin, K. and Nelson, T., (2013). *Doing the Best I Can* (Online). Berkeley and Los Angeles: University of California Press. (Viewed 26 June 2021). Available from: https://www.ucpress.edu/book/9780520283923/doing-the-best-i-can

Edwards, A., (1989). The Sex/Gender Distinction: Has It Outlived Its Usefulness? *Australian Feminist Studies*. **4**(10), 1–12.

Eliot, L., (2011). Single-Sex Education and the Brain. *Sex Roles*. **69**, 363-381.

Ellingson, L. L., (2009). *Engaging Crystallization in Qualitative Research: An Introduction*. Los Angeles: SAGE.

Ellis, E., (2018). Gender complexities in Jamaican secondary education: class culture and the ´elephant´ in the room. *Gender and Education* (Online). **30**(8), 1019-1031. (Viewed 16 March 2020). Available from: https://doi.org/10.1080/09540253.2017.1290218

Emolu, E., (2014). Play, Toys and Gender Socialization. *Journal Plus Education.* **11**(2), 22–30.

Evans, H., (1999). Gender Differences in Education in Jamaica. In: L. Quamina-Aiyejina, ed. . Education for all in The Caribbean: Assessment 2000 Monograph Series (Online). Kingston: Office of the UNESCO Representative in the Caribbean. Pp. 1-41. (Viewed 15 May 2020). Available from: https://unesdoc.unesco.org/ark:/48223/pf0000136430

Bigler, R,. Robertson Hayes, A., and Hamilton, V., (2013). The Role of Schools in the Early Socialization of Gender Differences. In: Encyclopedia on Early Childhood Development. (2021). (Viewed 5 April 2021). Available from: https://www.child-encyclopedia.com/gender-early-socialization/according-experts/role-schools-early-socialization-gender-differences

Erarslan, A. B. and Rankin, B., (2013). Gender Role Attitudes of Female Students in Single-Sex and Coeducational High Schools in Istanbul. *Sex Roles*. **69**(7), 455–468.

Erdoğdu, M. Y., (2020). The Roles of Attitudes towards Learning and Opposite Sex as a Predictor of School Engagement: Mixed or Single Gender Education? *Palgrave Communications*. **6**(1), 1–9.

Erlandson, D. A., et al., (1993). *Doing Naturalistic Inquiry: A Guide to Methods*. London: SAGE.

Esin, C., Fathi, M. and Squire, C., (2014). Narrative Analysis: The Constructionist Approach. In: U. Flick, ed. *The SAGE handbook of qualitative data analysis.* Los Angeles: SAGE Publications. pp. 203–216.

Esmaeili, Z., Mohamadrezai, H. and Mohamadrezai, A., (2015). The Role of Teacher's Authority in Students' Learning. *Journal of Education and Practice*. **6**(19), 1–15.

EURYDICE. (2012). Gender Differences in Educational Outcomes: Study on the Measures Taken and the Current Situation in Europe. (Viewed 30 June 2020). Available from: http://op.europa.eu/en/publication-detail/-/publication/40271e21-ca1b-461e-ba23-88fe4d4b3fd4

Evans, H., (1999). *Gender Differences in Education in Jamaica*. Paris: UNESCO.

Evans, H., (2002). *What Are the Benefits of Single-Sex and Coed Schooling?* (Online). Kingston: The University of the West Indies. (Viewed 5 June 2020). Available from: https://studylib.net/doc/8299772/ioeannual2000final.vp-corelventura-7.0

Evans, H. L., (2001). *Inside Jamaican Schools*. University of the West Indies Press.

Fabes, R. A., Martin, C. L., Hanish, L. D. and DeLay, D., (2018). Gender Integration in Coeducational Classrooms: Advancing Educational Research and Practice. *School Psychology Quarterly: The Official Journal of the Division of School Psychology, American Psychological Association*. **33**(2), 182–190.

Faria, E., Jha, J. and Bakshi, S., (2012). *Understanding and Challenging Boys' Disadvantage in Secondary Education in Developing Countries*. (Online). Education for All Global Monitoring Report 2012/ED/EFA/MRT/PI/13. (Viewed 28 June 2020). Available from: https://www.academia.edu/32651597/Understanding_and_challenging_boys_disadvantage_in_secondary_education_in_developing_countries

Farquharson, J. T., (2005). Faiya-Bon: The Socio-Pragmatics of Homophobia in Jamaican (Dancehall) Culture. In: S. Mühleisen and B. Migge, ed. *Politeness and Face in Caribbean Creoles* (Online). Amsterdam/Philadelphia: John Benjamins Publishing Company. (Viewed 28 June 2021). Available from: https://www.academia.edu/968862/Faiya_bon_The_socio_pragmatics_of_homophobia_in_Jamaican_dancehall_culture

Faulstich-Wieland, H., (2013). Should Male Primary School Teachers Be There Principally as Role Models for Boys? *Universal Journal of Educational Research*. **1**(2), 65–73.

Favara, M., (2012). *The Cost of Acting 'Girly': Gender Stereotypes and Educational Choices*. Institute of Labor Economics (IZA). IZA DP No. 7037. (Viewed 3 August 2020). Available from: https://ideas.repec.org/p/iza/izadps/dp7037.html

Felder, R. and Henriques, E. R., (1995). Learning and Teaching Styles In Foreign and Second Language Education. *Foreign Language Annals*. **28**(1), 21–31.

Felzmann, H., (2009). Ethical Issues in School-Based Research. *Research Ethics Review*. **5**(3), 104–109.

Fernandes, L., (2014). *Routledge Handbook of Gender in South Asia*. Abingdon: Routledge Handbooks (Online). (Viewed 28 April 2021). Available from: https://www.routledgehandbooks.com/doi/10.4324/9781315848501

Figueroa, J. P., et al., (2015). Understanding the High Prevalence of HIV and Other Sexually Transmitted Infections among Socio-Economically Vulnerable Men Who Have Sex with Men in Jamaica. *PLOS ONE*. **10**(2), e0117686.

Figueroa, M., (2007). Underachieving Caribbean boys: Marginalization or gender privileging? (Online). (Viewed 3 April 2019). Available from: https://www.cedol.org/wp-content/uploads/2012/02/23-25-2007.pdf

Figueroa, M., (2010). Coming to Terms with Boys at Risk in Jamaica and the Rest of the Caribbean. *Commonwealth Education Partnerships*. 11, 66–68.

Fine, C. and Duke, R., (2015). Expanding the Role of Gender Essentialism in the Single-Sex Education Debate: A Commentary on Liben. *Sex Roles*. **72**(9), 427–433.

Fleming, J. and Zegwaard, K. E., (2018). Methodologies, Methods and Ethical Considerations for Conducting Research in Work-Integrated Learning. *International Journal of Work-Integrated Learning*. **19**(3), 205–213.

Flick, U., (2013). *The SAGE Handbook of Qualitative Data Analysis*. London: SAGE.

Flick, U., (2018). *An Introduction to Qualitative Research*. London: SAGE.

Flood, M. and Pease, B., (2005a). Undoing Men's Privilege and Advancing Gender Equality in Public Sector Institutions. *Policy and Society*. **24**(4), 119–138.

Flood, M. and Pease, B., (2005b). Undoing Men's Privilege and Advancing Gender Equality in Public Sector Institutions. *Policy and Society*. **24**(4), 119–138.

Folastri, S., Rangka, I. B. and Ifdil, M., (2017). Student's Self-Concept Profile Based on Gender: A Rasch Analysis. Advances in Social Science, Education and Humanities Research 118, 264–269. (Viewed 11 April 2021). Available from: https://www.atlantis-press.com/proceedings/icset-17/25886542

Foote, M. Q. and Bartell, T. G., (2011). Pathways to Equity in Mathematics Education: How Life Experiences Impact Researcher Positionality. *Educational Studies in Mathematics*. **78**(1), 45–68.

Ford, J. S. and Reutter, L. I., (1990). Ethical Dilemmas Associated with Small Samples. *Journal of Advanced Nursing*. **15**(2), 187–191.

Forgasz, H. and Leder, G., (2020). VCE STEM Subject Enrolments in Co-Educational and Single-Sex Schools. *Mathematics Education Research Journal* (Online). 32, 433-448. (Viewed 6 September 2020). Available from: https://doi.org/10.1007/s13394-019-00271-4

Francis, B., (1999). Lads, Lasses and (New) Labour: 14-16-Year-Old Students' Responses to the 'Laddish Behaviour and Boys' Underachievement' Debate. *British Journal of Sociology of Education*. **20**(3), 355–371.

Francis, B., (2000). The Gendered Subject: Students' Subject Preferences and Discussions of Gender and Subject Ability. *Oxford Review of Education*. **26**(1), 35–48.

Francis, J., (2015). The CSEC Grade: Time for a Change. *Jamaica Gleaner* (Online). 30 March 2015. (Viewed 28 February 2021). Available from: http://jamaica-gleaner.com/article/lead-stories/20150331/csec-grade-time-change

Frean, A., (2008). Boys, Brains and Toxic Lessons. *The Times* (Online). 23 January 2008. (Viewed 6 June 2020). Available from: https://www.thetimes.co.uk/article/boys-brains-and-toxic-lessons-lkkrmt2zf8s

Gaskins, J., (2013). 'Buggery' and the Commonwealth Caribbean: A Comparative Examination of the Bahamas, Jamaica, and Trinidad and Tobago. In: C. Lennox and M. Waites, eds. *Human Rights, Sexual Orientation and Gender Identity in The Commonwealth* (Online). London: University of London Press. pp. 429–454. (Viewed 26 June 2021). Available from: https://www.jstor.org/stable/j.ctv512st2.20

Geerdink, G., Bergen, T. C. M. and Dekkers, H., (2011). Diversity in Primary Teacher Education Gender Differences in Student Factors and Curriculum Perception. *Teachers and Teaching: theory and practice*. **17**(5), 575–596.

Gelman, S. A., (2005). *The Essential Child: Origins of Essentialism in Everyday Thought*. Oxford, New York: Oxford University Press.

George, P., (2012). Who succeeds in mathematics? Caribbean perspectives on the mix of schools and mathematics. *Research papers in Education* (Online). **47**(1), 103-121. (Viewed 16 May 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/02671521003637138

Gentrup, S. and Rjosk, C., (2018). Pygmalion and the Gender Gap: Do Teacher Expectations Contribute to Differences in Achievement between Boys and Girls at the Beginning of Schooling? *Educational Research and Evaluation*. **24**(3–5), 295–323.

Giddens, P. W. S. A., (2017). *Sociology 8th Edition*. Cambridge Malden, MA: John Wiley.

Gilbert, R. and Gilbert, P., (2017). *Masculinity Goes to School*. London: Routledge.

Glaser, B. G., (1999). The Future of Grounded Theory. *Qualitative Health Research*. **9**(6), 836–845.

Gonzalez, P., (2009). *Education for All Global Monitoring Report 2009: Governance, Management and Financing of Educational Equity-Focused Policies in Chile.* UNESCO (Online). (Viewed 27 February 2021). Available from https://unesdoc.unesco.org/ark:/48223/pf0000178013

Gorard , S. and Smith, E., (2004). What Is 'Underachievement' at School? *School Leadership and Management*. **24**(2), 205–225.

Gordillo, E., (2017). Single-Sex Schooling and Coeducation: The Continuation of the Debate and the Defence of Science. *Revista Española de Pedagogía*. **75**(267), 255–271.

Gorman, G. E., et al., (2005). *Qualitative Research for the Information Professional: A Practical Handbook*. London: Facet Publishing.

Gosse, D. and Arnocky, S., (2012). The State of Canadian Boyhood—Beyond Literacy to a Holistic Approach. *in education* (Online). **18**(2), 67-97. (Viewed 1 March 2021). Available from: https://journals.uregina.ca/ineducation/article/view/64

Green, D. S., et al., (2019). Multidimensionality and Complexities of Fathering: A Critical Examination of Afro-Jamaican Fathers' Perspectives. *Sex Role.* **81**(9), 576–593.

Greig, C. J., (2011). Boys-only classrooms: gender reform in Windsor, Ontario 1966 -1972. *Educational Review.* **63**(2), 127-141.

Grindley, L., (2012). School Is Cool - No Problems with Homosexuality. *Jamaica Gleaner* (Online). 2 September 2012. (Viewed 21 April 2021. Available from: https://jamaica-gleaner.com/gleaner/20120902/out/out7.html

Grusec, J. E. and Davidov, M., (2015). Analyzing Socialization from a Domain-Specific Perspective. In: J. Grusec et al., eds. *Handbook of socialization: Theory and Research.* 2nd ed. New York, NY, US: The Guilford Press. pp. 158–181.

Grusec, J. E. and Hastings, P. D., (2014). *Handbook of Socialization, Second Edition: Theory and Research*. New York: Guilford Publications.

Grygiel, P., Modzelewski, M. and Pisarek, J., (2017). Academic Self-Concept and Achievement in Polish Primary Schools: Cross-Lagged Modelling and Gender-Specific Effects. *European Journal of Psychology of Education.* **32**(3), 407–429.

Guba, E. E., Lincoln, Y. S., Huberman, A. and Miles, M. B., (1994). 'Competing Paradigms in Qualitative Research'. In: N. K. Denzin, Y. S. Lincoln, Y. and Huberman, A. M. eds. *Handbook of Qualitative Research* (Online). Thousand Oaks, CA.: SAGE Publications. pp. 105–117. (Viewed 4 April 2020). Available from: http://images.lib.monash.edu.au/ats4677/04130094.pdf

Gunawan, J., (2015). Ensuring Trustworthiness in Qualitative Research. *Belitung Nursing Journal*. **1**(1), 10–11.

Guo, J., et al., (2015). Achievement, Motivation, and Educational Choices: A Longitudinal Study of Expectancy and Value Using a Multiplicative Perspective. *Developmental Psychology*. **51**(8), 1163–1176.

Gurian, M. and Stevens, K., (2005). *The Minds of Boys: Saving Our Sons from Falling Behind in School and Life*. San Francisco, CA, US: Jossey-Bass.

Gurian, M., Stevens, K. and King, K., (2008). *Strategies for Teaching Boys and Girls -- Secondary Level: A Workbook for Educators*. San Francisco: John Wiley & Sons.

Gurian, M., Stevens, K. and Daniels, P., (2009). *Successful Single-Sex Classrooms: A Practical Guide to Teaching Boys and Girls Separately*. CA: John Wiley & Sons.

Gurian, M., (2010). *Boys and Girls Learn Differently! A Guide for Teachers and Parents*. San Francisco, CA: John Wiley & Sons.

Gustafsson, J. T., (2017). Single Case Studies vs. Multiple Case Studies: A Comparative Study (Online). (Viewed 15 May 2020). Available from: https://www.diva-portal.org/smash/get/diva2:1064378/FULLTEXT01.pdf%20(10

Gutzmore, C., (2004). Casting the First Stone!: Policing of Homo/Sexuality in Jamaican Popular Culture. *Interventions*. **6**(1), 118–134.

Hadi, R., et al., (2012). Sampling in Qualitative Research: A Guide For Beginning. *Annals of Military and Health Services Research.* **10**(3), 238–250.

Hadjar, A., Krolak-Schwerdt, S., Priem, K. and Glock, S., (2014). Gender and Educational Achievement. *Educational Research*. **56**(2), 117–125.

Hahn, S., Kim, T.-H. and Seo, B., (2014). Effects of Public and Private Schools on Academic Achievement. *Seoul Journal of Economics*. **27**(2), 137.

Hahn, Y. and Wang, L., (2018). The Effectiveness of Single-Sex Schools through Out-of-School Activities: Evidence from South Korea. *Oxford Bulletin of Economics and Statistics*. **81**(2), 369-393.

Halpern, D. F., et al., (2011). The Pseudoscience of Single-Sex Schooling. *Science*. **333**(6050), 1706–1707.

Hamid, B. D. H. A., et al., (2008). Linguistic Sexism and Gender Role Stereotyping In: Malaysian English Language Textbooks. *GEMA Online® Journal of Language Studies* (Online). **8**(2). (Viewed 28 April 2021). Available from: https://ejournal.ukm.my/gema/article/view/177

Hancock, D. R. and Algozzine, R., (2006). *Doing Case Study Research: A Practical Guide for Beginning Researchers*. New York: Teachers College Press.

Handa, S., (1998). Review of Women and the Sexual Division of Labour in the Caribbean. *Feminist Review*. (59), 233–235.

Harker, R., (2000). Achievement, Gender and the Single-Sex/Coed Debate. *British Journal of Sociology of Education*. **21**(2), 203–218.

Harriott, A. and Jones, M., (2016). *Crime and Violence in Jamaica: IDB Series on Crime and Violence in the Caribbean*. Inter-American Development Bank (Online). (Viewed 18 May 2020). Available from: https://publications.iadb.org/publications/english/document/Crime-and-Violence-in-Jamaica-IDB-Series-on-Crime-and-Violence-in-the-Caribbean.pdf

Hart, L., (2015). Benefits Beyond Achievement? A Comparison of Academic Attitudes and School Satisfaction for Adolescent Girls in Single-Gender and Coeducational Classrooms. *Middle Grades Research Journal*. **10**(2), 33–48.

Hart, L. C., (2016). When 'Separate' May Be Better: Exploring Single-Sex Learning as a Remedy for Social Anxieties in Female Middle School Students. *Middle School Journal*. **47**(2), 32–40.

Hendricks, S., (2020). Experts Say Why Boys in Education System Are Failing. *Jamaica Observer* (Online). 23 February 2020. (Viewed 1 March 2021). Available from: http://www.jamaicaobserver.com/news/experts-say-why-boys-in-education-system-are-failing_187855?profile=1373

Hermann, Z. and Kopasz, M., (2019). Educational Policies and the Gender Gap in Test Scores: A Cross-Country Analysis. *Research Papers in Education* (Online). (Viewed 10 June 2020). 1–22. Available from: https://doi.org/10.1080/02671522.2019.1678065

Heron, T., (2012). Special Issue on Women's Reproductive Health and Rights in Select Caribbean Countries. *Social and Economic Studies*. **61**(3), 117–143.

Hertz, R., (1996). Introduction: Ethics, Reflexivity and Voice. *Qualitative Sociology*. **19**(1), 3–9.

Hewitt, R., (2016). The Influences of Conservative Christianity, Rastafari and Dance Hall Music within Jamaica on Homophobia and Stigma against People Living with HIV and AIDS. *Alternation Journal*. **23**(2), 169–184.

Heyneman, S. P. and Stern, J. M. B., (2014). Low-Cost Private Schools for the Poor: What Public Policy Is Appropriate? *International Journal of Educational Development*. **35**, 3–15.

Hill, J. P. and Lynch, M. E., (1983). The Intensification of Gender-Related Role Expectations during Early Adolescence. In: J. Brooks-Gunn, and A. C. Petersen, eds. *Girls at Puberty: Biological and Psychosocial Perspectives* (Online). Boston, MA: Springer US. pp. 201–228. (Viewed 29 March 2021). Available from: https://doi.org/10.1007/978-1-4899-0354-9_10

Hodgetts, K. and Lecouteur, A., (2010). Gender and Disadvantage in the Australian Parliamentary Inquiry into the Education of Boys. *Feminism & Psychology*. **20**(1), 73–93.

Hogg, M. A., (2016). Social Identity Theory. In: S. McKeown, R. Haji, and N. Ferguson, eds. *Understanding Peace and Conflict Through Social Identity Theory: Contemporary Global Perspectives* (Online). Cham: Springer International Publishing. pp. 3–17. (Viewed 5 March 2021). Available from: https://doi.org/10.1007/978-3-319-29869-6_1

Holmes, A. G. D., (2020). Researcher Positionality -- A Consideration of Its Influence and Place in Qualitative Research -- A New Researcher Guide. *Shanlax International Journal of Education*. **8**(4), 1–10.

Holmes, D. and Gary, A., (2020). Researcher Positionality - A Consideration of Its Influence and Place in Qualitative Research - A New Researcher Guide. *Shanlax International Journal of Education*. **8**(4), 1–10.

Hoominfar, E., (2019). Gender Socialization. In: W. L. Filho et al., eds. *Encyclopedia of the UN Sustainable Development*. Switzerland: Springer International Publishing. pp. 1–10

Hoxby, C., (2000). *Peer Effects in the Classroom: Learning from Gender and Race Variation*. Working Paper 7867 (Online). National Bureau of Economic Research. (Viewed 8 August 2020). Available from: http://www.nber.org/papers/w7867

Hughes, T., (2006). The Advantages of Single-Sex Education. *National Forum of Educational Administration and Supervision Journal*. **23**(2).

Husband, T., (2012). Addressing Reading Underachievement in African American Boys through a Multi-Contextual Approach. *Reading Horizons: A Journal of Literacy and Language Arts* (Online). **52**(1), 1-23. Available from: https://scholarworks.wmich.edu/reading_horizons/vol52/iss1/2

Hyde, J. S., ez al., (2019). The Future of Sex and Gender in Psychology: Five Challenges to the Gender Binary. *American Psychologist*. **74**(2), 171–193.

Hyett, N., Kenny, A. and Dickson-Swift, V., (2014). Methodology or Method? A Critical Review of Qualitative Case Study Reports. *International Journal of Qualitative Studies on Health and Well-Being* (Online). **9**(1), 1-12. (Viewed 30 June 2020). Available from: https://doi.org/10.3402/qhw.v9.23606

IDRC, CIDA (1998) Participatory methods in community - based coastal resource management (Online). (Viewed 31 May 2021). Available from: http://hdl.handle.net/10625/28491

I.I.I R., (1998). *Participatory Methods in Community - Based Coastal Resource Management* (Online). Philipines: International Institute of Rural Reconstruction. (Viewed 31 May 2021). Available from: https://idl-bnc-idrc.dspacedirect.org/handle/10625/28491

Irvine, F., Roberts, G. and Bradbury-Jones, C., (2008). The Researcher as Insider Versus the Researcher as Outsider: Enhancing Rigour Through Language and Cultural Sensitivity. In: P. Liamputtong, ed. *Doing Cross-Cultural Research: Ethical and Methodological Perspectives* (Online). Dordrecht: Springer Netherlands. pp. 35–48. (Viewed 24 May 2021). Available from: https://doi.org/10.1007/978-1-4020-8567-3_3

Islam, K. Md. M. and Asadullah, M. N., (2018). Gender Stereotypes and Education: A Comparative Content Analysis of Malaysian, Indonesian, Pakistani and Bangladeshi School Textbooks. *PLoS ONE* (Online). **13**(1). (Viewed 28 April 2021). Available from: https://doi.org/10.1371/journal.pone.0190807 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5774688/

Jackson, C., (2002). Can Single-Sex Classes in Co-Educational Schools Enhance the Learning Experiences of Girls and/or Boys? An Exploration of Pupils' Perceptions. *British Educational Research Journal*. **28**(1), 37–48.

Jackson, C., (2003). Motives for 'Laddishness' at School: Fear of Failure and Fear of the 'Feminine'. *British Educational Research Journal*. **29**(4), 583–598.

Jackson, C., (2006). *Lads and Ladettes in School: Gender and a Fear of Failure*. London: Open University Press.

Jackson, C., (2016). *The Effect of Single-Sex Education on Academic Outcomes and Crime: Fresh Evidence from Low-Performing Schools in Trinidad and Tobago*. Cambridge, MA: National Bureau of Economic Research.

Jackson, C. K., (2012). Single-Sex Schools, Student Achievement, and Course Selection: Evidence from Rule-Based Student Assignments in Trinidad and Tobago. *Journal of Public Economics*. **96**(1), 173–187.

Jackson, C. K., (2019). Can Introducing Single-Sex Education into Low-Performing Schools Improve Academics, Arrests, and Teen Motherhood? *Journal of Human Resources*. **56**(1), 1-44.

Jackson, C. and Smith, I. D., (2000). Poles Apart? An Exploration of Single-Sex and Mixed-Sex Educational Environments in Australia and England. *Educational Studies*. **26**(4), 409–422.

Jackson, J. F. L., Moore, J. and Leon, R., (2010). Male Underachievement in Education Across the Globe: A Shift in Paradigm for Gender Disparities Regarding Academic Achievement. *International Encyclopedia of Education* (Online). **1**, 838–844. Available from: DOI: 10.1016/B978-0-08-044894-7.00162-7

Jacobs, A. and Leach, C., (2011). Teacher Training and the Public Good: The University of Winchester Alumni Project. *History of Education*. **40**(2), 213–228.

JAMA., (2007). COEDUCATION. **297**(9). Available from: doi:10.1001/jama.297.9.1007-b

Jamaica. MOEY., (2011). Strictly Positive: A Resource Guide on Positive Disciplinary Practices (Online). Kingston: Ministry of Education and Youth. (Viewed 6 June 2021). Available from: https://www.unicef.org/jamaica/reports/strictly-positive-resource-guide-positive-disciplinary-practices

Jamaica. Ministry of Education., (2012). National Education Strategic Plan: 2011-2020 (Online). Kingston: Ministry of Education. (Viewed 28 February 2021). Available from: http://planipolis.iiep.unesco.org/en/2012/national-education-strategic-plan-2011-2020-5530

Jamaica. MOEY., (2014). Caribbean Secondary Examination Certificate 2014. Analysis of Public Schools´´ Performance (Online). Kingston: Ministry of Education and Youth. (Viewed 1 March 2021). Available from: https://drive.google.com/drive/u/0/search?q=csec%20results

Jamaica. MOEY., (2016). 12 More Schools to Be Removed from Shift System (Online). Kingston: Ministry of Education and Youth. (Viewed 24 August 2020). Available from https://moey.gov.jm/12-more-schools-be-removed-shift-system

Jamaica. MOEY., (2017). 42 Schools to Be Taken off Shift System (Online). Kingston: Ministry of Education and Youth. (Viewed 24 August 2020). Available from: https://moey.gov.jm/42-schools-be-taken-shift-system

Jamaica. Ministry of Education., (2020). About | Ministry of Education, Youth, and Information (Online). Kingston: Ministry of Education. (Viewed 22 March 2021). Available from: https://moey.gov.jm/about

Jamaica Observer., (2016). Wolmer´s Boys´School History. *Jamaica Observer* (Online). 26 November 2016. (Viewed 18 June 2020). Available from: http://www.jamaicaobserver.com/sport/wolmer-s-boys--school-history_81704

Jamaica Observer., (2018). More Women Needed in STEM Fields — Grange. *Jamaica Observer* (Online). 9 March 2018. (Viewed 25 June 2021). Available from: https://www.jamaicaobserver.com/latestnews/more_women_needed_in_stem_fields_grange

Jamaica Observer., (2019). Technology Minister Urges Women to Pursue STEM Careers. *Jamaica Observer* (Online). 5 July 2019. (Viewed 25 June 2021). Available from: https://www.jamaicaobserver.com/latestnews/technology_minister_urges_women_to_pursue_stem_careers

Jamaica. Offences Against the Person Act 1864 (Online). Kingston: Ministry of Justice Government of Jamaica. (Viewed 26 June 2021). Available from: https://moj.gov.jm/laws/offences-against-person-act

James, C. and Davis, A., (2014). Jamaican Males' Readings of Masculinities and the Relationship to Violence. *Caribbean Review of Gender Studies*. (8), 218–251.

Jenkins, L. N. and Demaray, M. K., (2015). Indirect Effects in the Peer Victimization-Academic Achievement Relation: The Role of Academic Self-Concept and Gender. *Psychology in the Schools*. **52**(3), 235–247.

Jha, J. and Pouezevara, S., (2016). *Boys' Underachievement in Education | Global Reading Network* (Online). USA: USAID. (Viewed 28 June 2020). Available from: https://www.globalreadingnetwork.net/resources/boys-underachievement-education

Jimenez, E. and Lockheed, M. E., (1989). Enhancing Girls' Learning Through Single-Sex Education: Evidence and a Policy Conundrum. *Educational Evaluation and Policy Analysis*. **11**(2), 117–142.

Johns, A., (2020). Public Morals versus Private Rights: Examining the Influence of Christian Norms and Institutions on the Development of LGBT Rights in Jamaica. *Commonwealth and Comparative Politics*. **58**(3), 387–405.

Johnston, M. and Sheehan, M., (2016a). Historical Thinking and the 'Boy Friendly' Curriculum. *Assessment Matters*. **10**, 74–99.

Jones, M. G. and Wheatley, J., (1990). Gender Differences in Teacher-Student Interactions in Science Classrooms. *Journal of Research in Science Teaching*. **27**(9), 861–874.

Joseph, S., Ramsook, L. and Simonette, G., (2016). Women Teachers in Boys' Schools: Experiences and Perspectives. *International Journal of Education and Research*. **4**(4), 295–303.

Jr, V. A. A. and Mertens, S. B., (2008). Do Single-Sex Classes and Schools Make a Difference? *Middle School Journal*. **40**(2), 52–59.

Jugović, I., (2017). Students' Gender-Related Choices and Achievement in Physics. *CEPS Journal*. **7**(2), 71–95.

Kangethe, N. S., Lyria, K. S. and Nyamanga, A. M., (2014). The Gender Socialization Question In Education: Influence on Boys' and Girls' Academic Achievement. *European Scientific Journal* (Online). **10**(19), 279-294. (Viewed 22 February 202). Available from: https://eujournal.org/index.php/esj/article/view/3802

Karpiak, C. P., Buchanan, J. P., Hosey, M. and Smith, A., (2007). University Students from Single-Sex and Coeducational High Schools: Differences In Majors and Attitudes at a Catholic University. *Psychology of Women Quarterly*. **31**(3), 282–289.

Kathuria, S., et al., (2005). A Time to Choose: Caribbean Development in the 21st Century. Series Notes No. 73. (Viewed 12 April 2020). Available from: https://openknowledge.worldbank.org/bitstream/handle/10986/10330/342080ENGLISH0Jun05173EN.pdf?sequence=1&isAllowed=y

Kelleher, F., (2011a). *Women and the Teaching Profession: Exploring the Feminisation Debate*. Paris: Commonwealth Secretariat, UNESCO.

Kelleher, F., (2011b). *Women and the Teaching Profession: Exploring the Feminisation Debate* (Online). London: Commonwealth Secretariat, UNESCO. (Viewed 5 April 2021). Available from: https://unesdoc.unesco.org/ark:/48223/pf0000212200

Kelly, G. and Nihlen, A., (1982). Schooling and the Reproduction of Patriarchy: Unequal Workloads, Unequal Rewards. In: M.W. Apple, ed. *Cultural and Economic Reproduction in Education* (Online). London: Routledge. pp. 162–180. (Viewed 28 April 2021). Available from: https://www.taylorfrancis.com/https://www.taylorfrancis.com/chapters/edit/10.4324/9781315227252-5/schooling-reproduction-patriarchy-gail-kelly-ann-nihlen

Kereszty, O., (2009). Gender in Textbooks. *Systems of Education*. **4**(2), 1–7.

Kerkhoven, A. H., et al., (2016). Gender Stereotypes in Science Education Resources: A Visual Content Analysis. *PLoS ONE*. **11**(11), 1-13. (Viewed 28 April 2021). Available from: https://doi.org/10.1371/journal.pone.0165037

Ketefian, S., (2015). Ethical Considerations in Research. Focus on Vulnerable Groups. *Investigación y Educación en Enfermería*. **33**(1), 164–172.

Kirabo Jackson, C., (2016). *The Effect of Single-Sex Education on Test Scores, School Completion, Arrests, and Teen Motherhood: Evidence from School Transitions* (Online). Rochester, NY: Social Science Research Network. (Viewed 8 August 2020). Available from: https://papers.ssrn.com/abstract=2777310

Kirschner, P. A., (2017). Stop Propagating the Learning Styles Myth. *Computers and Education* (Online). **106,** 166–171. Available from: https://doi.org/10.1016/j.compedu.2016.12.006

Kitzinger, C., (1997). *Lesbian and Gay Psychology: A Critical Analysis*. California: Sage Publications.

Klein, S., et al. ed., (2007). *Handbook for Achieving Gender Equity through Education, 2nd Ed*. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Kollmayer, M., Schober, B. and Spiel, C., (2018). Full Article: Gender Stereotypes in Education: Development, Consequences, and Interventions. *European Journal of Developmental Psychology*. **15**(4), 361-377.

Koniewski, M. and Hawrot, A., (2021). Are Single-Sex Schools More Effective than the Coed Ones? The Effect of Single-Sex Schooling on Achievement among Female Adolescents in Catholic Schools. *Research Papers in Education* (Online).1–22. (Viewed 18 April 2020). Available from: https://doi.org/10.1080/02671522.2021.1886318

Korstjens, I. and Moser, A., (2017). Series: Practical Guidance to Qualitative Research. Part 2: Context, Research Questions and Designs. *European Journal of General Practice*. **23**(1), 274–279.

Krampe, E. M., (2003). The Inner Father. *Fathering: A Journal of Theory, Research, and Practice about Men as Fathers*. **1**(2), 131–148.

Krueger, R. A. and Casey, M. A., (2000). *Focus Groups: A Practical Guide for Applied Research*. London: SAGE Publications.

Kunda, G., (2013). Reflections on Becoming an Ethnographer. *Journal of Organizational Ethnography*. **2**(1), 4–22.

Kusi, H. and Manful, H., (2019). Class Size And Academic Performance Of Students In Selected Nursing And Midwifery Training Colleges In The Central Region, Ghana. *Advances in Social Sciences Research Journal*. **6**(9), 224–246.

Kvale, S., (1996). *Interviews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks, Calif.: Sage Publications.

LaFont, S., (2001). Very Straight Sex: The Development of Sexual Mores in Jamaica. *Journal of Colonialism and Colonial History*. **2**(3), 1–25.

Lambert, M. C., et al., (2001). Child Behavior and Emotional Problems in Jamaican Classrooms: A Multimethod Study Using Direct Observations and Teacher Reports for Ages 6–11. *International Journal of Intercultural Relations*. **25**(5), 545–562.

Lauckner, H., Paterson, M. and Krupa, T., (2012). Using Constructivist Case Study Methodology to Understand Community Development Processes: Proposed Methodological Questions to Guide the Research Process. *The Qualitative Report*. **17**(13), 1–22.

Laumann, K., (2020). Criteria for Qualitative Methods in Human Reliability Analysis. *Reliability Engineering & System Safety* (Online). **194**, 1-11. (Viewed 15 May 2020). Available from: https://doi.org/10.1016/j.ress.2018.07.001

Laurel Richardson and Elizabeth Adams St. Pierre., (2018). Writing, a Method of Inquiry. In: N. K. Denzin and Y. S. Lincoln, eds. *The Sage handbook of qualitative research*. Thousand Oaks, Calif: Sage. pp. 818–838.

Lavy, V. and Schlosser, A., (2011). Mechanisms and Impacts of Gender Peer Effects at School. *American Economic Journal: Applied Economics*. **3**(2), 1–33.

Law, H., Sikora, J., (2020). Do single-sex schools help Australians major in STEMM at university? *An International Journal of Research, Policy and Practice* (Online). **31**(4). (Viewed 13 May 2020). Available from: https://doi.org/10.1080/09243453.2020.1755319

Lawson, K. M., Crouter, A. C. and McHale, S. M., (2015). Links between Family Gender Socialization Experiences in Childhood and Gendered Occupational Attainment in Young Adulthood. *Journal of Vocational Behavior* (Online). **90**, 26–35. (Viewed 25 March 2020). Available from: https://doi.org/10.1016/j.jvb.2015.07.003

Lazarus, L., (2012). This Is a Christian Nation: Gender and Sexuality in Processes of Constitutional and Legal Reform in Jamaica. *Social and Economic Studies*. **61**(3), 117–143.

Leaper, C. and Farkas, T., (2015). The Socialization of Gender during Childhood and Adolescence. In: E. Grusec and P. D. Hastings, eds. *Handbook of socialization: Theory and research, 2nd ed*. New York, NY, US: The Guilford Press. pp. 541–565.

Leder, G. C. and Forgasz, H. J., (1997). Single-Sex Classes in a Coeducational High School Highlighting Parents' Perspectives. *Mathematics Education Research Journal*. **9**(3), 274–291.

Ledford, J. R. and Gast, D. L., (2018). *Single Case Research Methodology: Applications in Special Education and Behavioral Sciences* (Online). New York: Routledge. (Viewed 16 April 2020). Available from: https://www.taylorfrancis.com/books/e/9781315150666

Ledford, J. R., Gast, D. L. and Gast, D. L., (2018). *Single Case Research Methodology: Applications in Special Education and Behavioral Sciences* (Online). New York: Routledge. (Viewed 3 April 2020). Available from: https://www.taylorfrancis.com/books/e/9781315150666

Lee, S., Niederle, M. and Kang, N., (2014). Do Single-Sex Schools Make Girls More Competitive? *Economics Letters*. **124**(3), 474–477.

Lee, V. E. and Bryk, A. S., (1986). Effects of Single-Sex Secondary Schools on Student Achievement and Attitudes. *Journal of Educational Psychology*. **78**(5), 381–395.

Legewie, J. and DiPrete, T. A., (2012). School Context and the Gender Gap in Educational Achievement. *American Sociological Review*. **77**(3), 463–485.

Legewie, J. and DiPrete, T. A., (2014). The High School Environment and the Gender Gap in Science and Engineering: *Sociology of Education* (Online). **87**(2), 259-280. (Viewed 23 July 2020). Available from: https://doi.org/10.1177/0038040714547770

Leo-Rhynie, E., (1993). *The Jamaican Family: Continuity and Change*. Kingston: The Grace, Kennedy Foundation.

Leo-Rhynie, E. and Pencle, C., (2002). Gender Stereotypes: Perceptions and Awareness of a Sample of Jamaican Adolescents. In: P. Mohammed, ed. *Gendered Realities: Essays in Caribbean Feminist Thought*. University of the West Indies Press. Pp. 201-220.

Leslie, G., (2010). *Background: Violent Crime in Jamaica*. Small Arms Survey. (Viewed 14 March 2021). Available: from https://www.jstor.org/stable/resrep10745.8

Leung, L., (2015). Validity, Reliability, and Generalizability in Qualitative Research. *Journal of Family Medicine and Primary Care*. **4**(3), 324.

LGBT., (2021). Non-Binary Inclusion. (Viewed 5 March 2021). Available from: https://lgbt.foundation/who-we-help/trans-people/non-binary

Li, G. and Wong, W. I., (2018). Single-Sex Schooling: Friendships, Dating, and Sexual Orientation. *Archives of Sexual Behavior*. **47**(4), 1025–1039.

Lincoln, Y. S. and Guba, E. G., (1985). *Naturalistic Inquiry*. London: SAGE.

Lindsey, L. L., (2016). *Gender Roles: A Sociological Perspective*. London: Routledge.

Lingard, B. and Douglas, P., (1999). Men Engaging Feminisms Pro-Feminism, Backlashes and Schooling. *British Journal of Sociology of Education*. **41**(2), 283-292.

Lingard, Bob, Martino, W. and Mills, M. (2009). Boy-Friendly Schooling. In: B. Lingard, W. Martino and Mills, M., eds. *Boys and Schooling: Beyond Structural Reform* (Online). London: Palgrave Macmillan UK. pp. 56–85. (Viewed 29 April 2021). Available from: https://doi.org/10.1057/9780230582767_3

Lingard, B., Martino, W. and Mills, M., (2009). *Boys and Schooling: Beyond Structural Reform* (Online). UK: Palgrave Macmillan UK. (Viewed 1 July 2020). Available from: https://www.palgrave.com/gp/book/9780230517011

Lingard, B., Martino, W., Mills, M. and Bahr, M., (2002). *Addressing-the-Educational-Needs-of-Boys* (Online*)*. Canberra: Commonwealth Department of Education, Science and Training. (Viewed 29 April 2021). Available from: https://www.yumpu.com/en/document/view/10392400/addressing-the-educational-needs-of-boys/33

Lingard, B., Mills, M. and Weaver-Hightower, M. B., (2012). Interrogating Recuperative Masculinity Politics in Schooling. *International Journal of Inclusive Education*. **16**(4), 407–421.

Lips, H. M., (2020). *Sex and Gender: An Introduction, 7th Edition*. CA: Waveland Press.

Lisle, J. D., (2018). The Development of Theory on Gendered Patterns of Achievement in the Anglophone Caribbean: Insights, Contradictions, and Silences. *Gender and Education*. **30**(4), 450–466.

Livingstone, D. W., (1999). Beyond Human Capital Theory: The Underdevelopment Problem. *International Journal of Contemporary Sociology* (Online). **36**, 163-192. (Viewed 4 June 2020). Available from: https://webspace.oise.utoronto.ca/~living13/beyondhc/

Loh, J., (2013). Inquiry into Issues of Trustworthiness and Quality in Narrative Studies: A Perspective. *The Qualitative Report*. **18**(33), 1–15.

Longhurst, R., (2003). Semi-Structured Interviews and Focus Groups. In: *Key Methods in Geography*. London: Sage. pp. 117–132.

Longhurst, R., (2016). Semi-Structured and Focus Groups. In: N. Clifford et al., eds. *Key Methods in Geography* (Online). London: SAGE. Pp. 103-115. (Viewed 5 May 2020). Available from: https://www.google.de/books/edition/Key_Methods_in_Geography/_wk4kVABqE4C?hl=en&gbpv=1&dq=Key+Methods+in+Geography&printsec=frontcover

Lou, C., et al., (2012). Media's Contribution to Sexual Knowledge, Attitudes and Behaviors for Adolescents and Young Adults in Three Asian Cities. *The Journal of adolescent health: official publication of the Society for Adolescent Medicine*. **50**(3 0), S26–S36.

Lovell, J. S., (2016). 'We Are Jamaicans:' Living with and Challenging the Criminalization of Homosexuality in Jamaica. *Contemporary Justice Review*. **19**(1), 86–102.

Lu, F. and Anderson, M. L., (2015). Peer Effects in Microenvironments: The Benefits of Homogeneous Classroom Groups. *Journal of Labor Economics*. **33**(1), 91–122.

Luton, D., (2009). Buggery laws firm - PM says life or 15 years for some sex offence breaches *Jamaica Gleaner* (Online). 4 March 2009. (Viewed 26 June 2021). Available from: https://old.jamaica-gleaner.com/gleaner/20090304/lead/lead1.html

Mahony, P., (1983a). How Alice's Chin Really Came to Be Pressed against Her Foot: Sexist Processes of Interaction in Mixed-Sex Classrooms. *Women's Studies International Forum*. **6**(1), 107–115.

Mahony, P., (2012). *Schools for the Boys?: Co-Education Reassessed*. London: Routledge.

Majzub, R. and Rais, M., (2010). Boys' Underachievement: Causes and Strategies. *Procedia Social and Behavioral Sciences*. **2**(2), 3160–3164.

Malabver, M., (2016a). Mark Malabver: Save Our Boys. *Jamaica Gleaner* (Online). 4 January 2016. (Viewed 28 February 2021). Available from: https://jamaica-gleaner.com/article/commentary/20160105/mark-malabver-save-our-boys

Malaby, M. and Ramsey, S. J., (2011). The Dilemmas of Male Elementary Preservice Teachers. *Curriculum and Teaching Dialogue*. **13**(1–2), S1–S1.

Malterud, K., (2001). Qualitative Research: Standards, Challenges, and Guidelines. The *Lancet* (Online). **358**(9280), 483–488. (Viewed 28 April 2020). Available from: https://doi.org/10.1016/S0140-6736(01)05627-6

Maltese, A. V. and Cooper, C. S., (2017). STEM Pathways: Do Men and Women Differ in Why They Enter and Exit? *AERA Open* (Online). **3**(3), 2332858417727276. (Viewed 16 May 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1177/2332858417727276

Mansfield, K. C., (2013). The Growth of Single-Sex Schools: Federal Policy Meets Local Needs and Interests. E*ducation Policy Analysis Archives* (Online). **21**(78). (Viewed 28 May 2020). Available from: https://doi.org/10.14507/epaa.v21n87.2013

Marini, M. M., (1990). Sex and Gender: What Do We Know? *Sociological Forum*. **5**(1), 95–120.

Marriott, J. L., (2018). What Can Be Done to Help the Pharmacy Profession Advance Globally? *American Journal of Pharmaceutical Education* (Online). **82**(8). (Viewed 29 June 2021). Available from: https://www.ajpe.org/content/82/8/7040

Marsh, H. and Martin, A., (2011). Academic Self-Concept and Academic Achievement: Relations and Causal Ordering. *The British Journal of Educational Psychology*. **81**(1), 59–77.

Marsh, H. W., Byrne, B. M. and Yeung, A. S., (1999). Causal Ordering of Academic Self-Concept and Achievement: Reanalysis of a Pioneering Study And... *Educational Psychologist* (Online). **34**(3), 155–167. (Viewed 12 May 2020). Available from: https://doi.org/10.1207/s15326985ep3403_2

Marsh, H. W. and Hau, K.-T., (2004). Explaining Paradoxical Relations Between Academic Self-Concepts and Achievements: Cross-Cultural Generalizability of the Internal/External Frame of Reference Predictions Across 26 Countries. *Journal of Educational Psychology*. **96**(1), 56–67.

Marsh, H. W., et al., (2008). The Big-Fish–Little-Pond-Effect Stands Up to Critical Scrutiny: Implications for Theory, Methodology, and Future Research. *Educational Psychology Review*. **20**(3), 319–350.

Marsh, H. W. and Yeung, A. S., (2016). Longitudinal Structural Equation Models of Academic Self-Concept and Achievement: Gender Differences in the Development of Math and English Constructs. *American Educational Research Journal*. (Online). **35**(4). (Viewed 10 June 2020). Available from: https://journals.sagepub.com/doi/10.3102/00028312035004705

Marsh, H., et al., (2019). Young Women Face Disadvantage to Enrollment in University STEM Coursework Regardless of Prior Achievement and Attitudes. *American Educational Research Journal* (Online). **56**(5), 1629–1680. (Viewed 12 April 2021). Available from: https://doi.org/10.3102/0002831218824111

Marshall, C. and Rossman, G. B., (2016). *Designing Qualitative Research*. California: SAGE.

Martino, W., (2008). Boys' Underachievement: Which Boys Are We Talking About? Ontario: Literacy and Numeracy Secretariat.

Martino, W. J., (2008). Male Teachers as Role Models: Addressing Issues of Masculinity, Pedagogy and the Re-Masculinization of Schooling. *Curriculum Inquiry*. **38**(2), 189–223.

Martino, W. and Kehler, M., (2006). Male Teachers and the 'Boy Problem': An Issue of Recuperative Masculinity Politics. *McGill Journal of Education / Revue des sciences de l'éducation de McGill* (Online). 41(2). (Viewed 1 March 2021). Available from: https://mje.mcgill.ca/article/view/559

Martino, W., Kehler, M. D. and Weaver-Hightower, M. B., (2009). *The Problem with Boys' Education: Beyond the Backlash*. London: Routledge.

Martinot, D., Bagès, C. and Désert, M., (2012). French Children's Awareness of Gender Stereotypes about Mathematics and Reading: When Girls Improve Their Reputation in Math. *Sex Roles: A Journal of Research*. **66**(3–4), 210–219.

Massa, L. J. and Mayer, R. E., (2006). Testing the ATI Hypothesis: Should Multimedia Instruction Accommodate Verbalizer-Visualizer Cognitive Style? *Learning and Individual Differences*. **16**(4), 321–335.

Mathers, N., Fox, N. and Hunn, A., (1998). Trent Focus for Research and Development in Primary Health Care: Using Interviews in a Research. Trent Focus. (Viewed 28 June 2020). Available from: http://faculty.cbu.ca/pmacintyre/course_pages/MBA603/MBA603_files/UsingInterviews.pdf

Mati, A., Gatumu, J. C. and Chandi, J. R., (2016). Students' Involvement in Decision Making and Their Academic Performance in Embu West Sub-County of Kenya. *Universal Journal of Educational Research*. **4**(10), 2294–2298.

May, T., (2011). *Social Research*. New York: Open University Press.

Mayer, R. E. and Massa, L. J. (2003). Three Facets of Visual and Verbal Learners: Cognitive Ability, Cognitive Style, and Learning Preference. *Journal of Educational Psychology*. **95**(4), 833–46.

Mburu, D. N., (2013). Effects of the Type of School Attended on Students Academic Performance in Kericho and Kipkelion Districts, Kenya. *International Journal of Humanities and Social Science*. **3**(4), 79–90.

McGivney, V., (2004). *Men Earn, Women Learn: Bridging the Gender Divide in Education and Training*. Leicester: National Institute of Adult Continuing Education.

McKown, C. and Weinstein, R. S., (2003). The Development and Consequences of Stereotype Consciousness in Middle Childhood. *Child Development*. **74**(2), 498–515.

McLanahan, S., Tach, L. and Schneider, D., (2013). The Causal Effects of Father Absence. *Annual review of sociology* (Online). 39, 399–427. (Viewed 12 March 2021). Available from: doi:10.1146/annurev-soc-071312-145704

Mclellan, R., (2004). An Approach to Tackling 'Laddish'Masculinity to Raise Boys' Achievement at Secondary School. Paper Presented at Annual BERA Conference, 15 to 18 September 2004, Manchester (Online). Manchester: University of Cambridge. (Viewed 15 April 2021). Available from: file:///C:/Users/jenes/Downloads/An_Approach_to_tackling_LaddishMasculinity_to_ra%20(3).pdf

Mencher, J. P. and Okongwu, A. ed., (1993). *Where Did All the Men Go?: Female-Headed/Female-Supported Households in Cross-Cultural Perspective*. New York: Routledge.

Mercer, J., (2007). The Challenges of Insider Research in Educational Institutions: Wielding a Double-edged Sword and Resolving Delicate Dilemmas. *Oxford Review of Education* (Online). **33**(1), 1–17. (Viewed 12 May 2021). Available from: https://doi.org/10.1080/03054980601094651

Mertens, D.M., (2019). *Research and Evaluation in Education and Psychology* (Online). Los Angeles: SAGE Publications. (Viewed 4 April 2020). Available from: https://us.sagepub.com/en-us/nam/research-and-evaluation-in-education-and-psychology/book259357

Meyer, P., (2008). Learning Separately: The Case for Single-Sex Schools. *Education Next*. **8**(1), 10–22.

Mikkola, M., (2016). Feminist Perspectives on Sex and Gender. In: E.N. Zalta, ed., *The Stanford Encyclopedia of Philosophy (Online)*. Fall 2019. (Viewed 18 February 2021). Available from: https://stanford.library.sydney.edu.au/archives/fall2016/entries/feminism-gender/

Miller, D. I., Eagly, A. H. and Linn, M. C., (2015). Women's Representation in Science Predicts National Gender-Science Stereotypes: Evidence from 66 Nations. *Journal of Educational Psychology* (Online). **107**(3), 631–644. (Viewed 20 March 2020). Available from: https://doi.org/10.1037/edu0000005

Miller, E., (1991). *Men at Risk*. Kingston: Jamaica Publishing House.

Miller, T. and Bell, L., (2002). Consenting to What? Issues of Access, Gatekeeping and 'Informed' Consent. In: A. Orb, L, Eisenhauer, D. Wynaden, eds. *Ethics in Qualitative Research* (Online). United Kingdom: SAGE Publications Ltd. pp. 54–69. (Viewed 20 May 2021). Available from: DOI: 10.1111/j.1547-5069.2001.00093.x

Mills, M., Martino, W. and Lingard, B., (2007). Getting Boys' Education 'Right': The Australian Government's Parliamentary Inquiry Report as an Exemplary Instance of Recuperative Masculinity Politics. *British Journal of Sociology of Education* (Online). **28**(1), 5–21. (Viewed 12 March 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/01425690600995958

Mlama, P. M. et al, (2005). *Gender Responsive Pedagogy: A Teacher's Handbook* (Online). Kenya: Forum for African Women Educationalists. (Viewed 28 April 2020). Available from: https://www.wikigender.org/wp-content/uploads/2015/08/GRP-Booklet.pdf

Mogashoa, T., (2014). Applicability of Constructivist Theory in Qualitative Educational Research. *American International Journal of Contemporary Research*. **4**(7) 51-59.

Mohajan, H., (2018). Qualitative Research Methodology in Social Sciences and Related Subjects. *Journal of Economic Development, Environment and People*. **7**(1), 23–48.

Mohammed, P., (1999). *Caribbean Women at the Crossroads: The Paradox of Motherhood among Women of Barbados, St. Lucia and Dominica*. Mona, Jamaica: Canoe Press, University of the West Indies.

Mohammed, P., (2002). *Gendered Realities: Essays in Caribbean Feminist Thought*. Kingston: University of the West Indies Press.

Mojapelo, S. M., (2018). Educational Resources for Under-Resourced Schools in the Limpopo Province: Proposed Library Model. *Mousaion*, 36(4), 1–17. (Viewed 26 June 2021). Available from: https://doi.org/10.25159/2663-659X/3555

Molla, E., (2016). The Role Of School In Gender Socialization. *The European Journal of Educational Sciences* (Online). **03**(01). (Viewed 1 April 2021). Available from: http://ejes.eu/wp-content/uploads/2016/04/1.pdf

Mollaeva, E. A., (2018). Gender Stereotypes and the Role of Women in Higher Education (Azerbaijan Case Study). *Education and Urban Society* (Online). **50**(8), 747–763. (Viewed 26 May 2020). Available from: https://doi.org/10.1177/0013124517713613

Monyai, R., (2013). The Teacher as a Catalytic Agent in the Implementation of the Curriculum. *IJHSSI* (Online). **2**(9), 90–96. (Viewed 12 July 2020). Available from: file:///C:/Users/jenes/Downloads/TheTeacherasaCatalyticAgentintheImplementationoftheCurriculum.pdf

Moore, H. L., (2002). *Understanding Sex and Gender* (Online). London: Routledge. (Viewed 18 February 2021). Available from: https://www.taylorfrancis.com/chapters/understanding-sex-gender-henrietta-moore-813/e/10.4324/9780203036327-37

Mordecai, M. and Mordecai, P., (2001). *Culture and Customs of Jamaica*. Greenwood Publishing Group.

Moreau, M.-P., (2019). *Teachers, Gender and the Feminisation Debate*. London: Routledge.

Morgan, S. L., Gelbgiser, D. and Weeden, K. A., (2013). Feeding the Pipeline: Gender, Occupational Plans, and College Major Selection. *Social Science Research* (Online). **42**(4), 989–1005. (Viewed 15 May 2020). Available from: DOI: 10.1016/j.ssresearch.2013.03.008

Morgenroth, T. and Ryan, M. K., (2020). The Effects of Gender Trouble: An Integrative Theoretical Framework of the Perpetuation and Disruption of the Gender/Sex Binary. *Perspectives on Psychological Science* (Online). (Viewed 12 February 2021). Available from: DOI: 10.1177/1745691620902442

Morgenroth, T., et al., (2021). Defending the Sex/Gender Binary: The Role of Gender Identification and Need for Closure. *Social Psychological and Personality Science* (Online). **12**(5). (Viewed 25 February 2021). Available from: https://doi-org.sheffield.idm.oclc.org/10.1177/1948550620937188

Morse, J. M., (2015). Critical Analysis of Strategies for Determining Rigor in Qualitative Inquiry: *Qualitative Health Research* (Online). **25**(9). (Viewed 4 April 2020). Available from: https://journals.sagepub.com/doi/10.1177/1049732315588501

Mortari, L., (2015). Reflectivity in Research Practice: An Overview of Different Perspectives. *International Journal of Qualitative Methods* (Online). **14**(5). (Viewed 25 March 2020). Available from: https://doi.org/10.1177/1609406915618045

Mulholland, J., Hansen, P. and Kaminski, E., (2004). Do Single-Gender Classrooms in Coeducational Settings Address Boys' Underachievement? An Australian Study. *Educational Studies* (Online). **30**(1), 19–32. (Viewed 23 May 2020). Available from: https://doi.org/10.1080/0305569032000159714

Mumford, K. and Smith, P., (2007). The Gender Earnings Gap in Britain: Including the Workplace. *Manchester School* (Online). **75**(6), 653–672. (Viewed 12 May 2020). Available from: **https://doi.org/10.1111/j.1467-9957.2007.01040.x**

Muntoni, F. and Retelsdorf, J., (2018). Gender-Specific Teacher Expectations in Reading—The Role of Teachers' Gender Stereotypes. *Contemporary Educational Psychology* (Online). **54**, 212-220. (Viewed 21 February 2020). Available from: https://doi.org/10.1016/j.cedpsych.2018.06.012

Muralidharan, K. and Sheth, K., (2016). Bridging Education Gender Gaps in Developing Countries: The Role of Female Teachers. *Journal of Human Resources*. **51**(2), 269–297.

Myers, J., (2009). Searching for Role Models. *Chicago Reporter* (Online). 25 June. (Viewed 14 August 2020. Available from: https://www.chicagoreporter.com/searching-role-models/

NEI., (2015). *National Education Inspectorate Report* (Online). Kingston: Jamaica. (Viewed 25 March 2021). Available from: https://www.nei.org.jm/Portals/0/Content/Documents/School%20Inspection%20Reports/Region%203/Round%207/R7%20Ocho%20Rios%20High%20School%20Final%20Inspection%20Report.pdf?ver=2017-12-15-153556-693&ver=2017-12-15-153556-693

Nelson, C. A., (2008). *Lyrical Assault: Dancehall Versus the Cultural Imperialism of the North-West* (Online). Rochester, NY: Social Science Research Network. (Viewed 26 June 2021). Available from: https://papers.ssrn.com/abstract=1287242

Newcomer, K. E., Hatry, H. P. and Wholey, J. S., (2015). *Handbook of Practical Program Evaluation* (Online). San Francisco: Jossey-Bass and Pfeiffer Imprints, Wiley. (Viewed 19 April 2020). Available from: http://site.ebrary.com/id/11090807

Newton, P. M. and Miah, M., (2017). Evidence-Based Higher Education – Is the Learning Styles 'Myth' Important? *Frontiers in Psychology* (Online). **8**(444). (Viewed 9 April 2021). Available from: https://doi.org/10.3389/fpsyg.2017.00444

Ng'ang'a, Alice, Mureithi, L. P. and Wambugu, A., Ozsoy, G., (2018). Mathematics Gender Gaps in Kenya: Are Resource Differentials between Boys and Girls to Blame? *Cogent Education* (Online). **5**(1). (Viewed 2 March 2021). Available from: http://search.proquest.com/docview/2176649320/abstract/7C6B6FBDC9864984PQ/1

Niederle, M. and Vesterlund, L., (2011). Gender and Competition. *Annual Review of Economics*. **3**(1), 601–630.

Nilsson, F., (1996). The Breakdown of the Sex/Gender Distinction in Anthropological Discourse. *NORA - Nordic Journal of Feminist and Gender Research*. **4**(2), 114–127.

Noble, C. and Pease, B., (2011). Interrogating Male Privilege in the Human Services and Social Work Education. *Women in Welfare Education*. **10**, 29–38.

Nonaka, D., Jimba, et al., (2012). Content Analysis of Primary and Secondary School Textbooks Regarding Malaria Control: A Multi-Country Study. *PloS One* (Online). **7**(5), e36629. (Viewed 8 May 2021). Available from: doi: 10.1371/journal.pone.0036629

Norfleet James, A. and Richards, H. C. (2003). Escaping Stereotypes: Educational Attitudes of Male Alumni of Single-Sex and Coed Schools. *Psychology of Men & Masculinity*. **4**(2), 136–148. (Viewed 25 May 2020). Available from: DOI: 10.1037/1524-9220.4.2.136

Nowell, L., et al., (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods* (Online). **16**, 1–13. (Viewed 23 June 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1177/1609406917733847

Obiakor, M. I. and Oguejioffor, C. N., (2020). Impact of Classroom Size on Academic Performance of Secondary School Students in Enugu North Local Government Area of Enugu State, Nigeria. *African Journal of Educational Management, Teaching and Entrepreneurship Studies* (Online). **1**(1), 52–59. (Viewed 21 July 2020). Available from: https://ajemates.org/index.php/ajemates/article/view/11/10

O'Donoghue, D., (2018). *Learning to Live in Boys' Schools: Art-Led Understandings of Masculinities*. London: Routledge.

OECD., (2012). *Closing the Gender Gap: Act Now*. Paris: OECD Publishing (Online). (Viewed 28 April 2021). Available from: https://www.oecd-ilibrary.org/social-issues-migration-health/close-the-gender-gap-now_9789264179370-en

OECD., (2014). *PISA 2012 Results: What Students Know and Can Do (Volume I)* (Online). Paris: OECD Publishing. (Viewed 28 April 2021). Available from: https://www.oecd-ilibrary.org/education/pisa-2012-results-what-students-know-and-can-do-volume-i-revised-edition-february-2014_9789264208780-en

OECD., (2017). *Education at a Glance 2017* (Online). Paris: OECD Publishing. (Viewed 2 March 2021). Available from: https://read-oecd-ilibrary-org.sheffield.idm.oclc.org/education/education-at-a-glance-2017_eag-2017-en

Okafor, E. O. and Mokwelu Blessing Obianuju., (2018). Influence of Co-Education on Academic Performance of Secondary School Students in Anambra State, Nigeria. Hofa: *African Influence of Multidisciplinary Research* (Online). **1**(2), 68-76. (Viewed 12 July 2020). Available from: https://zenodo.org/record/2574437#.XwrgJCgzbIU

Oni, A. A. and Adetoro, J. A., (2015). The Effectiveness of Student Involvement in Decisionmaking and University Leadership: A Comparative Analysis of 12 Universities in South-West Nigeria. *Journal of Student Affairs in Africa.* **3**(1), 65–81.

O.Nyumba, T., Wilson, K., Derrick, C. J. and Mukherjee, N., (2018). The Use of Focus Group Discussion Methodology: Insights from Two Decades of Application in Conservation. *Methods in Ecology and Evolution* (Online). **9**(1), 20–32. (Viewed 28 July 2020). Available from: **https://doi.org/10.1111/2041-210X.12860**

Oosterbeek, H. and Van Ewijk, R., (2014). Gender Peer Effects in University: Evidence from a Randomized Experiment. *Economics of Education Review* (Online). **38**(C), 51–63. (Viewed 28 May 2020). Available from: https://doi.org/10.1016/j.econedurev.2013.11.002

Orb, A., Eisenhauer, L. and Wynaden, D., (2001). Ethics in Qualitative Research. *Journal of Nursing Scholarship*. **33**(1), 93–96.

Ordaz-Villegas, G., Acle-Tomasini, G. and Reyes-Lagunes, L. I., (2013). Development of an Academic Self Concept For Adolescents (ASCA) Scale. *Journal of Behaviour, Health and Social Issues* (Online). **5**(2), 117-130. (Viewed 22 April 2020). Available from: https://doi.org/10.5460/jbhsi.v5.2.42304

Orlando, M. B. and Lundwall, J., (2010). *Boys at Risk: A Gender Issue in the Caribbean Requiring a Multi-Faceted and Cross-Sectoral Approach*. The World Bank. (Viewed 3 March 2021). Available from: https://ideas.repec.org/p/wbk/wboper/10181.html

Ospina, S., Parry, K., (2004). Qualitative Research. In: R. G., Goethals, G. J. Sorenson and J. M. Burns, eds. *Encyclopedia of leadership* (Online). London: SAGE Publications. (Viewed 5 April 2020). Available from: https://nyuscholars.nyu.edu/en/publications/qualitative-research

OTTERBEIN, K., (2009). Caribbean Family Organization: A Comparative Analysis1. *American Anthropologist* (Online). **67**(1), 66–79. (Viewed 21 May 2021). Available from: **https://doi.org/10.1525/aa.1965.67.1.02a00050**

Ouazad, A., (2008). *Assessed by a Teacher Like Me: Race, Gender, and Subjective Evaluations* (Online). Rochester, NY: Social Science Research Network. (Viewed 14 August 2020). Available from: https://papers.ssrn.com/abstract=1267109

Pace, J. L. and Hemmings, A., (2007). Understanding Authority in Classrooms: A Review of Theory, Ideology, and Research. *Review of Educational Research* (Online). **77**(1), 4–27. (Viewed 2 June 2021). Available from: https://doi.org/10.3102/003465430298489

PADGETT, T., (2006). Breaking News, Analysis, Politics, Blogs, News Photos, Video, Tech Reviews. *Time* (Online). 12 April 2006. (Viewed 26 June 2021). Available from: http://content.time.com/time/world/article/0,8599,1182991,00.html

Pahlke, E. and Hyde, J. S., (2016). The Debate over Single-sex Schooling. *Child Development Perspectives* (Online). **10**(2), 81–86. (Viewed 3 June 2020). Available from: **https://doi.org/10.1111/cdep.12167**

Pahlke, E., Hyde, J. S. and Allison, C. M., (2014). The Effects of Single-Sex Compared with Coeducational Schooling on Students' Performance and Attitudes: A Meta-Analysis. *Psychological Bulletin.* **140**(4), 1042–1072.

Palinkas, L. A., et al., (2015). Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Administration and Policy in Mental Health* (Online). **42**(5), 533–544. (Viewed 13 June 2020). Available from: DOI: 10.1007/s10488-013-0528-y

Panizzon, D., et al., (2018). Exploring the 'Hard Facts' around STEM in Australia: Females, Low Socioeconomic Status and Absenteeism. *International Journal of Innovation in Science and Mathematics Education* (Online). **26**(8), 30–44. (Viewed 2 July 2020). Available from: https://openjournals.library.sydney.edu.au/index.php/CAL/article/view/12961/11906

Park, H., (2010). Japanese and Korean High Schools and Students in Comparative Perspective. In: J. Dronkers, ed. *Quality and Inequality of Education: Cross-National Perspectives* (Online). Dordrecht: Springer Netherlands. pp. 255–273. (Viewed 1 May 2021). Available from: https://doi.org/10.1007/978-90-481-3993-4_10

Park, H., Behrman, J. and Choi, J., (2012). Causal Effects of Single-Sex Schools on College Entrance Exams and College Attendance: Random Assignment in Seoul High Schools. *British Educational Research Journal*. **28**(1), 37–48.

Park, H., Behrman, J. R. and Choi, J., (2013). Causal Effects of Single-Sex Schools on College Entrance Exams and College Attendance: Random Assignment in Seoul High Schools. *Demography*. **50**(2), 447–469.

Park, H., Behrman, J. R. and Choi, J., (2018). Do Single-Sex Schools Enhance Students' STEM (Science, Technology, Engineering, and Mathematics) Outcomes? *Economics of Education Review*. **62**, 35–47. (Viewed 15 July 2020). Available from: https://doi.org/10.1016/j.econedurev.2017.10.007

Park, S., (2018). Coeducation, Academic Performance, and Subject Choice: Evidence from Quasi-Random Classroom Assignments. *Education Economics* (Online). **26**(6), 574–592. (Viewed 30 May 2020). Available from: https://doi.org/10.1080/09645292.2018.1515310

Parker, L. H. and Rennie, L. J., (2002). Teachers' Implementation of Gender-Inclusive Instructional Strategies in Single-Sex and Mixed-Sex Science Classrooms. *International Journal of Science Education* (Online). **24**(9), 881–897. (Viewed 30 June 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/09500690110078860

Parry, O., (2000). *Male Underachievement in High School Education in Jamaica, Barbados, and St. Vincent and the Grenadines*. Kingston, Jamaica: Canoe Press.

Pashler, H., McDaniel, M., Rohrer, D. and Bjork, R., (2008). Learning Styles: Concepts and Evidence. *Psychological Science in the Public Interest* (Online). **9**(3), 105–119. (Viewed 28 June 2020). Available from: https://doi.org/10.1111/j.1539-6053.2009.01038.x

Patton, M. Q., (2014). *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*. London: SAGE Publications.

Patton, M. Q. (2016). Two Decades of Developments in Qualitative Inquiry: A Personal, Experiential Perspective. *Qualitative Social Work* (Outline). **1**(3), 261–283. (Viewed 28 May 2020). Available from: https://doi.org/10.1177/1473325002001003636

Payne, M. A. and Newton, E. H., (1990). Teachers' and Students' Perceptions of the Major Advantages and Disadvantages of Coeducational Secondary Schooling. *Australian Journal of Education*. **34**(1), 67–86. (Viewed 23 March 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1177/000494419003400105

Peebles, D., (2014). *Gender Analysis of Open and Distance Learning in the Caribbean Region*. Commonwealth of Learning (Online). (Viewed 4 March 2021). Available from: http://oasis.col.org/handle/11599/206

Penner, A. M. and Willer, R., (2019). Men's Overpersistence and the Gender Gap in Science and Mathematics. *Socius* (Online). **5**, 1-17. (Viewed 23 May 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1177/2378023118821836

Perra, M. S. and Ruspini, E., (2013). Men Who Work in 'Non-Traditional' Occupations. *International Review of Sociology* (Online). **23**(2), 265–270. (Viewed 28 May 2020). Available from: https://doi.org/10.1080/03906701.2013.804288

Phillips, O., (2002). Zimbabwe. In: D. J. West and R. Green, eds. *Sociolegal Control of Homosexuality: A Multi-Nation Comparison* (Online). Boston, MA: Springer US. pp. 43–56. (Viewed 26 June 2021). Available from: https://doi.org/10.1007/0-306-47142-6_3

Piechura-Couture, K. and Sherwin, G., (2013). Should Boys and Girls Be Taught Separately?, **146**(5), 122.

Pinheiro, P. (2006). *World Report on Violence Against Children* (Online). Switzerland: United Nations. (Viewed 31 March 2021). Available from: https://resourcecentre.savethechildren.net/node/2999/pdf/2999.pdf

Pinxten, M., Fraine, et al., (2012). Educational Choice in Secondary School in Flanders: The Relative Impact of Occupational Interests on Option Choice. *Educational Research and Evaluation*. **18**(6), 541–569. (Viewed 23 July 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/13803611.2012.702991

PIOJ., (2009). Vision 2030 Jamaica National Development Plan. (Viewed 27 February 2021). Available from: http://www.vision2030.gov.jm/National-Development-Plan

PIOJ., (2014). *A Review of Current & Emerging Vulnerability in Jamaica* (Online). Kingston: Planning Institute of Jamaica. (Viewed 26 June 2021). Available from: https://www.pioj.gov.jm/product/a-review-of-current-emerging-vulnerability-in-jamaica/

Plummer, D., (2010). Is Learning Becoming Taboo for Caribbean Boys? In: M. Morrissey, M. Bernard, and D. Bundy, eds. *Challenging HIV and AIDS: A New Role For Caribbean Education* (Online). Paris, France: United Nations Educational, Scientific and Cultural Organisation (UNESCO) and Ian Randle Publishers. pp. 174–183. (Viewed 8 July 2020). Available from: http://www.unesco.org/new/en/natural-sciences/priority-areas/sids/resources/pubs-single-view-sids/news/book_challenging_hiv_and_aids_a_new_role_for_caribbean_education/

Plummer, D. C., (2013). Masculinity and Risk: How Gender Constructs Drive Sexual Risks in the Caribbean. *Sexuality Research and Social Policy*. **10**(3), 165–174.

Porta, D. D., (2014). *Methodological Practices in Social Movement Research*. Oxford: Oxford University Press.

Price, L., (2004). Individual Differences in Learning: Cognitive Control, Cognitive Style, and Learning Style. *Educational Psychology* (Online). **24**(5), 681-698. (Viewed 2 June 2021). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/0144341042000262971

Priess, H. A., Lindberg, S. M. & Hyde, J. S. (2009). Adolescent Gender-Role Identity and Mental Health: Gender Intensification Revisited. *Child Development*, **80**(5), 1531–1544.

Prince, V., (2005). Sex vs. Gender. *International Journal of Transgenderism* (Online). **8**(4), 29–32. (Viewed 7 May 2021). Available from: https://doi-org.sheffield.idm.oclc.org/10.1300/J485v08n04_05

P.T.M, M. and Yoshie, K., (2015). *Investing against Evidence: The Global State of Early Childhood Care and Education* (Online). France: UNESCO Publishing. (Viewed 5 July 2020). Available from: https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/UNESCO_investing_against_evidence_2015_EN.pdf

Ramaligela, M. S., Gaigher, E. and Hattingh, A., (2014). Exploring the Use of Technology Textbooks in Medium- and Well-Resourced School Contexts in South Africa. *Africa Education Review* (Online). **11**(2), 183–200. (Viewed 15 May 2021). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/18146627.2014.927156

Rambla, X., Ferrer, F., Tarabini, A. and Verger, A., (2008). Inclusive Education and Social Inequality: An Update of the Question and Some Geographical Considerations. *PROSPECTS*, **38**(1), 65–76.

Reddock, R., (2003). Men as Gendered Beings: The Emergence Of Masculinity Studies in the Anglophone Caribbean. *Social and Economic Studies*. **52**(3), 89–117.

Reddock, R., (2010). Gender and Achievement in Higher Education. *Journal of Education and Development in the Caribbean*. **12**(1).

Reinking, A. and Martin, B., (2018). The Gender Gap in STEM Fields: Theories, Movements, and Ideas to Engage Girls in STEM. *Journal of New Approaches in Educational Research* (online). **7**(2), 148–153. (Viewed 12 June 2020). Available from: DOI: https://doi.org/10.7821/naer.2018.7.271

Retelsdorf, J., Schwartz, K. and Asbrock, F., (2015). "Michael Can't Read!" Teachers' Gender Stereotypes and Boys' Reading Self-Concept. *Journal of Educational Psychology* (Online). **107**(1), 186–194. (Viewed 26 July 2020). Available from: DOI: 10.1037/a0037107

Reybold, L. E., Lammert, J. D. and Stribling, S. M., (2013). Participant Selection as a Conscious Research Method: Thinking Forward and the Deliberation of 'Emergent' Findings. *Qualitative Research* (Outline). **13**(6), 699–716. (Viewed 12 May 2020). Available from: https://doi.org/10.1177/1468794112465634

Ricketts, H., (2009). *Parenting in Jamaica: A Study Conducted on Behalf of the Planning Institute of Jamaica*. Kingston: Policy Research Unit, Planning Institute of Jamaica.

Riegle-Crumb, C., King, B., Grodsky, E. and Muller, C., (2012). The More Things Change, the More They Stay the Same? Examining Gender Equality in Prior Achievement and Entry into STEM College Majors over Time. *American Educational Research Journal* (Outline). **49**(6), 1048–1073. (Viewed 25 July 2020). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3872126/

Riordan, C., (2002). What Do We Know About the Effects of Single-Sex Schools in the Private Sector? Implications for Public Schools. In: A. Datnow, L. Hubbard, eds. *Gender in Policy and Practice: Perspectives on Single-sex and Coeducational Schooling*. New York: Psychology Press. pp. 10-30.

Riordan, C., et al., (2008). *Early Implementation of Public Single-Sex Schools: Perceptions and Characteristics* (Online). Oregan: U.S. Department of Education Office of Planning, Evaluation and Policy Development. (Viewed 26 April 2021). Available from: https://www2.ed.gov/rschstat/eval/other/single-sex/characteristics/index.html

Roberts, K., Dowell, A. and Nie, J. B., (2019). Attempting Rigour and Replicability in Thematic Analysis of Qualitative Research Data; A Case Study of Codebook Development. *BMC Medical Research Methodology* (Online). **19**(66), 1–8. (Viewed 30 May 2020). Available from: https://bmcmedresmethodol.biomedcentral.com/articles/10.1186/s12874-019-0707-y

Robinson, P. and Smithers, A., (1999). Should the Sexes Be Separated for Secondary Education -- Comparisons of Single-Sex and Co-Educational Schools? *Research Papers in Education* (Online). **14**(1), 23–49. (Viewed 3 August 2020). Available from: https://doi.org/10.1080/0267152990140103

Rogers, R., (2016). Coeducation (19th-21st Centuries) | EHNE. *Encyclopédie pour une histoire nouvelle de l'Europe* (Online). (Viewed 10 July 2020). Available from: https://ehne.fr/en/article/gender-and-europe/educating-europeans/coeducation-19th-21st-centuries

Rohrer, D. and Pashler, H., (2012). Learning Styles: Where's the Evidence? *Medical Education* (Online). **46**(7), 634–635. (Viewed 12 July 2020). Available from: DOI: 10.1111/j.1365-2923.2012.04273.x

Ruddin, L. P., (2006). You Can Generalize Stupid! Social Scientists, Bent Flyvbjerg, and Case Study Methodology. *Qualitative Inquiry* (Online). **12**(4), 797–812. (Viewed 2 June 2020). Available from: https://doi.org/10.1177/1077800406288622

Ruffina, A. N., Esther, A. E. and Anastecia, I. N., (2018). Impact of Class Size on Students' Academic Performance in Biology in Idemili North Local Government Area of Anambra State. *International Journal of Education and Evaluation.* **4**(8), 11. (Viewed 3 June 2021). Available from: https://iiardpub.org/get/IJEE/VOL.%204%20NO.%208%202018/Impact%20of%20Class%20Size.pdf

Sadker, M. and Sadker, D., (1994). *Failing at Fairness: How America's Schools Cheat Girls.* N.Y.: Macmillan Publishing Company.

Saha, L. J. and Dworkin, A. G., eds., (2009). *International Handbook of Research on Teachers and Teaching.* NY: Springer Science and Business Media.

Saldaña, J. (2009). *The Coding Manual for Qualitative Researchers.* London: SAGE Publications. (Viewed 13 April 2020). Available from: https://www.semanticscholar.org/paper/The-Coding-Manual-for-Qualitative-Researchers-Salda%C3%B1a/583c3a3460bd5c98068cfc46236414b1bb89ef5e

Salomone, R., (2006). Single-Sex Programs: Resolving the Research Conundrum. *Teachers College Record - TEACH COLL REC*. **108** (4), 778–802.

Salomone, R. C., (2008). *Same, Different, Equal: Rethinking Single-Sex Schooling*. Yale University Press.

Sandelwoski, M., (1995). Sample Size in Qualitative Research. *Research in Nursing and Health* (Online). **18**(2), 179–183. (Viewed 8 May 2020). Available from: **https://doi-org.sheffield.idm.oclc.org/10.1002/nur.4770180211**

Sanjari, M., et al., (2014). Ethical Challenges of Researchers in Qualitative Studies: The Necessity to Develop a Specific Guideline. *Journal of Medical Ethics and History of Medicine* (Online). **7**(14). (Viewed 19 May 2021). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4263394/

Sargeant, J., (2012). Qualitative Research Part II: Participants, Analysis, and Quality Assurance. *Journal of Graduate Medical Education* (Online). **4**(1), 1–3. (Viewed 18 May 2020). Available from: DOI: 10.4300/JGME-D-11-00307.1

Sargent, C. and Harris, M., (1992). Gender Ideology, Childrearing, and Child Health in Jamaica. *American Ethnologist* (Online). **19**(3), 523–537. (Viewed 12 June 2020). Available from: **https://doi.org/10.1525/ae.1992.19.3.02a00060**

Sari, M., (2017). Teachers' Views on Co-Education: Co-Education or Single-Sex Education? *Acta Didactica Napocensia*. **10**(3), 35–44.

Savin-Baden, M. and Major, C. H., (2013). *Qualitative Research: The Essential Guide to Theory and Practice*. UK: Routledge.

Sax, L., (2005). *Why Gender Matters*. New York: Doubleday.

Sax, L. J., et al., (2015). "But I'm Not Good at Math": The Changing Salience of Mathematical Self-Concept in Shaping Women's and Men's STEM Aspirations. *Research in Higher Education* (Online). **56**(8), 813–842. (Viewed 8 June 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1007/s11162-015-9375-x

Schanzenbach, D. W., (2014). Does Class Size Matter? Boulder, Co: National Education Policy Centre. (Viewed 20 May 2021). Available from: https://nepc.colorado.edu/sites/default/files/pb_-_class_size.pdf

Schmuck, R. A., (1997). *Practical Action Research for Change*. IL: IRI/SkyLight Training and Publishing, Inc.

Schrock, D. and Schwalbe, M., (2009). Men, Masculinity, and Manhood Acts. *Annual Review of Sociology*. **35**, 277–95). (Viewed 15 Male 2021). Available from: DOI: 10.1146/annurev-soc-070308-115933

Schudson, Z. C., Beischel, W. J. and van Anders, S. M., (2019). Individual Variation in Gender/Sex Category Definitions. *Psychology of Sexual Orientation and Gender Diversity*, **6**(4), 448–460.

Schumacher, C. and Ifenthaler, D., (2018). The Importance of Students' Motivational Dispositions for Designing Learning Analytics. *Journal of Computing in Higher Education*. **30**(3), 599–619.

Schwartz, T., (2016). Explaining Caribbean Family Patterns. *Schwartz Research Group* (Online). Viewed 26 June 2021). Available from: https://timothyschwartzhaiti.com/caribbean-family-patterns/

Seguino, S., (2003). Why are Women in the Caribbean so much more likely than men to be unemployed? *Social and Economic Studies*. **52**(4), 83–120.

Self, N. S., (2009). Build a Positive Classroom Environment: Avoid Competition! *Childhood Education* (Online). **85**(5), 306.

Shapka, J. D. and Keating, D. P., (2016). Effects of a Girls-Only Curriculum During Adolescence: Performance, Persistence, and Engagement in Mathematics and Science: *American Educational Research Journal* (Online). 40(4), 929–960. (Viewed 10 June 2020). Available from: https://journals.sagepub.com/doi/10.3102/00028312040004929

Sharpe, J., (2016). Mental Health Issues and Family Socialization in the Caribbean. In: J. L. Roopnarine, D. Chadee, eds. *Caribbean Psychology: Indigenous Contributions to a Global Discipline*. Washington, DC, US: American Psychological Association. pp. 71–96.

Shavelson, R., Hubner, J. and Stanton, G., (1976). Self-Concept: Validation of Construct Interpretations. *Review of Educational Research*. **46**(3), 407–441.

Shenton, A., (2004). Strategies for Ensuring Trustworthiness in Qualitative Research Projects. *Education for Information*. **22**(2), 63–75.

Sherwin, G., (2015). Anecdotal and Essentialist Arguments for Single-Sex Educational Programs Discussed by Liben: A Legal Analysis. *Sex Roles: A Journal of Research*. **72**(9–10), 434–445.

Sidanius, J. and Pratto, F., (2001). *Social Dominance: An Intergroup Theory of Social Hierarchy and Oppression* (Online). Cambridge: Cambridge University Press. (Viewed 8 June 2020). Available from: https://doi.org/10.1017/CBO9781139175043

Signorella, M. L., Hayes, A. R. and Li, Y., (2013). A Meta-Analytic Critique of Mael et al.'s (2005) Review of Single-Sex Schooling. *Sex Roles*, **69**(7), 423–441. (Viewed 30 May 2020). Available from: DOI 10.1007/s11199-013-0288-x

Sikes, P., (2004). Methodology, Procedures and Ethical Concerns. In: C. Opie, ed. *Doing Educational Research* (Online). London: SAGE. pp. 15-33. (Viewed 15 May 2021). Available from: https://www.doi.org/10.4135/9781446280485.n2

Sikora, J. and Pokropek, A., (2012). Intergenerational Transfers of Preferences for Science Careers in Comparative Perspective. *International Journal of Science Education* (Online). **34**(16), 2501–2527. (Viewed 6 July 2020). Available from: https://doi.org/10.1080/09500693.2012.698028

Sikora, J., (2014). Gender Gap in School Science: Are Single-Sex Schools Important? *Sex Roles* (Online). 70, 400-415. (Viewed 12 June 2020). Available from: DOI: 10.1007/s11199-014-0372-x

Silverman, D., (2006). *Interpreting Qualitative Data: Methods for Analyzing Talk, Text and Interaction*. London: SAGE Publications.

Silverman, D., (2010). *Doing Qualitative Research*. London: SAGE.

Sim, J. and Waterfield, J., (2019). Focus Group Methodology: Some Ethical Challenges. *Quality and Quantity* (Online). **53**(6), 3003–3022. (Viewed 12 June 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1007/s11135-019-00914-5

Sinclair, S., Nilsson, A. and Cederskär, E., (2019). Explaining Gender-Typed Educational Choice in Adolescence: The Role of Social Identity, Self-Concept, Goals, Grades, and Interests. *Journal of Vocational Behavior* (Online). **110**(Part A), 54–71. (Viewed 28 May 2020). Available from: https://doi.org/10.1016/j.jvb.2018.11.007

Singh, K., Vaught, C. and Mitchell, E. W., (1998). Single-Sex Classes and Academic Achievement in Two Inner-City Schools. *The Journal of Negro Education* (Online). **67**(2), 157–167. (Viewed 3 May 2020). Available from: https://doi.org/10.2307/2668225

Skelton, C. (2002). The 'feminisation of Schooling' or 'Re-Masculinising' Primary Education? *International Studies in Sociology of Education* (Online). **12**(1), 77–96. (Viewed 18 July 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/09620210200200084

Skelton, C., (2003). Male Primary Teachers and Perceptions of Masculinity. *Educational Review* (Online). **55**(2), 195–209. (Viewed 18 April 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/0013191032000072227

Smit, B. and Onwuegbuzie, A. J., (2018). Observations in Qualitative Inquiry: When What You See Is Not What You See. *International Journal of Qualitative Methods* (Online). **17**,1-3. (Viewed 30 May 2020). Available from: https://doi.org/10.1177/1609406918816766

Smith, E., (2003). Failing Boys and Moral Panics: Perspectives on the Underachievement Debate. *British Journal of Educational Studies* (Online). **51**(3), 282–295. (Viewed 3 March 2020). Available from: https://www.jstor.org/stable/1555872

Smith, R. T., (2014). *The Matrifocal Family: Power, Pluralism and Politics*. New York: Routledge. (Viewed 5 April 2021). Available from: https://doi.org/10.4324/9781315021911

Smith, S., (1984). Single-Sex Setting. In: R. Deem, ed. *Co-education Reconsidered*. Open University Press.

Smyth, E., (2010). Single-Sex Education: What Does Research Tell Us? *Revue Francaise de Pedagogie* (Online). **171**(2), 47–58. (Viewed 15 April 2020). Available from: DOI: 10.4000/rfp.1896

Sohn, H., (2016). Mean and Distributional Impact of Single-Sex High Schools on Students' Cognitive Achievement, Major Choice, and Test-Taking Behavior: Evidence from a Random Assignment Policy in Seoul, Korea. *Economics of Education Review* (Online). **52**, 155–175. (Viewed 18 July 2020). Available from: https://doi.org/10.1016/j.econedurev.2016.02.007

Sommers, C. H., (2013). *The War Against Boys: How Misguided Policies Are Harming Our Young Men*. NY: Simon and Schuster.

Spencer-Ernandez, J., (2013). Transitioning from GSAT to CSEC: A Longitudinal Study on the Impact of Literacy Development of Students in Jamaican Primary School on Their Performance in CSEC English A | SOE Publications. *Journal of Education and Development in the Caribbean*. **13**(1 & 2), 133–161.

Spencer-Ernandez, J. and George, L., Single Sex Vs Co-Educational High Schools: Performance of Caribbean Students Across School Types in Mathematics on the Caribbean Secondary Education Certificate. *Caribbean Educational Research Journal*. **4**(2), 96-121.

Sperling, G. B., Winthrop, R. and Kwauk, C., (2016). *What Works in Girls' Education: Evidence for the World's Best Investment* (Online). Brookings Institution Press. (Viewed 28 April 2021). Available from: https://www.jstor.org/stable/10.7864/j.ctt17w8hh8

Sravanti, L. and Sagar Kommu, J. V., (2020). Gender Intensification in Adolescence. *Journal of Psychosexual Health* (Online). **2**(2), 190–191. (Viewed 12 May 2020). Available from: a DOI: 10.1177/263183182092459

St John, W. and Johnson, P., (2000). The Pros and Cons of Data Analysis Software for Qualitative Research. *Journal of Nursing* (Online). **32**(4), 393–7. (Viewed 2 August 2020). Available from: **https://doi.org/10.1111/j.1547-5069.2000.00393.x**

Stake, R. E. (1995). *The Art of Case Study Research*. London: SAGE.

Stannard, K., (2019). Why (and How) Girls Thrive in Girls-Only Schools (Online). (Viewed 9 June 2020). Available from: https://www.gdst.net/education/publications/why-and-how-girls-thrive-in-girls-only-schools/

State Education Resource Center., (2013). *Single-Sex Education: The Connecticut Context - State Education Resource Center*. (Viewed 3 August 2020). Available from: https://ctserc.org/news/2013-2000/single-sex-education-the-connecticut-context

Statistical Institute of Jamaica. (2021). Education Statistics. *https://statinja.gov.jm*. (Viewed 28 February 2021). Available from: https://statinja.gov.jm/Demo_SocialStats/Education.aspx

Steffen, E., (2016). Ethical Considerations in Qualitative Research. In: E. Lyons and A. Coyle, eds. *Analysing Qualitative Data in Psychology*. London: SAGE. pp. 31–44.

Stennet, T., (2018). Government Focused on Equity and Inclusion in Education. *Jamaica Information Service* (Online). (Viewed 27 February 2021). Available from: https://jis.gov.jm/govt-focussed-on-equity-and-inclusion-in-education/

Stets, J. E. and Burke, P. J., (2000). Identity Theory and Social Identity Theory. *Social Psychology Quarterly* (Online). **63**(3), 224–237. (Viewed 28 June 2020). Available from: https://doi.org/10.2307/2695870

Stewart, S., (2015). Schooling and Coloniality: Conditions Underlying 'extra Lessons' in Jamaica. *Postcolonial Directions in Education*. **4**(1), 25–52.

STIOJ., (2018). *Education Statistics* (Online). (Viewed 9 March 2021). Available from: https://statinja.gov.jm/Demo_SocialStats/Education.aspx

Stockard, J., (2006). Gender Socialization. In: J. S. Chafetz, ed. *Handbook of the Sociology of Gender*. (Online). Boston, MA: Springer US. pp. 215–227. (Viewed 6 March 2021). Available from: https://doi.org/10.1007/0-387-36218-5_11

Stockard, J. and Wood, J. W., (2016). The Myth of Female Underachievement: A Reexamination of Sex Differences in Academic Underachievement: *American Educational Research Journal* (Online). **21**(4), 825-838. (Viewed 17 June 2020). Available from: https://journals.sagepub.com/doi/10.3102/00028312021004825

Stockfelt, S., (2016). Exploring Boys' Agency Towards Higher Education: The Case of Urban Jamaica. In: J.G. DeJaeghere, J. Josić, and K.S. McCleary, eds. *Education and Youth Agency: Qualitative Case Studies in Global Contexts* (Online). Cham: Springer International Publishing. pp. 121–138). (Viewed 2 August 2020). Available from: https://doi.org/10.1007/978-3-319-33344-1_7

Stoet, G. and Geary, D. C., (2020). Gender Differences in the Pathways to Higher Education. *Proceedings of the National Academy of Sciences* (Online). **117**(25), 14073–14076. (Viewed 2 July 2020). Available from: https://doi.org/10.1073/pnas.2002861117

Stunnard, K., (2018). Reports on Single-Sex Education for Girls. *Alliance of Girls' Schools Australasia*. (Online). (Viewed 26 July 2020). Available from: https://www.agsa.org.au/reports-about-girls-education/

St Vincent. Ministry of Education, National Reconciliation, Ecclesiastical Affairs and Information., (2018). St. Vincent Education Statistical Digest 2017-2018. (Online). (Viewed 24 May 2020). Available from: https://view.joomag.com/st-vincent-education-statistical-digest-2017-2018/0011831001537814524

Sullivan, A., (2009). Academic Self-Concept, Gender and Single-Sex Schooling. *British Educational Research Journal* (Online). **35**(2), 259–288. (Viewed 14 May 2020). Available from: **https://doi.org/10.1080/01411920802042960**

Sullivan, A., Joshi, H. and Leonard, D., (2010). Single-Sex Schooling and Academic Attainment at School and Through the Lifecourse. *American Educational Research Journal* (Online). **47**(1), 6–36. (Viewed 19 June 2020). Available from: https://doi.org/10.3102/0002831209350106

Swain, S. L. and Harvey, D. M., (2002). Single-Sex Computer Classes: An Effective Alternative. *TechTrends*. **46**(6), 17–20. (Viewed 9 July 2020). Available from: https://doi.org/10.1007/BF02824155

Swearer, S. M. and Espelage, D. L., (2003). *Bullying in American Schools: A Social-Ecological Perspective on Prevention and Intervention*. (Online). (Viewed 7 June 2020). Available from: https://experts.nebraska.edu/en/publications/bullying-in-american-schools-a-social-ecological-perspective-on-p

Sweeney, A. and George, L., (2019). Current Challenges and Future Directions for STEM Education in the Caribbean/Editorial. **18**(1).

Teese, R., (2007). Structural Inequality in Australian Education. In: R. Teese, S. Lamb, M. Duru-Bellat and S. Helme, (Eds.), *International Studies in Educational Inequality, Theory and Policy*. Dordrecht: Springer Netherlands. pp. 374–396. (Viewed 18 August 2020). Available from: https://doi.org/10.1007/978-1-4020-5916-2_14

Terry, G., Hayfield, N., Clarke, V. and Braun, V., (2017). Thematic Analysis. In: C. Willig and W. Station Rogers, ed. *The SAGE Handbook of Qualitative Research in Psychology* (Online). London: SAGE Publications Ltd. (Viewed 18 May 2021). Available from; http://methods.sagepub.com/book/the-sage-handbook-of-qualitative-research-in-psychology-second-edition/i425.xml

Thame, M. and Thakur, D., (2014). Patriarchal State and the Development of Gender Policy in Jamaica. (Viewed 21 February 2021). Available from: https://idl-bnc-idrc.dspacedirect.org/handle/10625/53631

The Commonwealth Education Hub., (2017). Policy Brief: Engaging Boys for Active Citizenship through Education. *The Commonwealth Education Hub* (Online). (Viewed 28 June 2020). Available from: https://www.thecommonwealth-educationhub.net/policy-brief-engaging-boys-active-citizenship-education/

Thomas, D. R., (2006). A General Inductive Approach for Analyzing Qualitative Evaluation Data. *American Journal of Education* (Online). **27**(2), 237–246. (Viewed 1 August 2020). Available from: DOI: 10.1177/1098214005283748

Thompson, D., (1989). The 'Sex/Gender' Distinction: A Reconsideration. *Australian Feminist Studies*. **4**(10), 23–31.

Tiller, E., et al., (2020). *Annual Youth Survey | Mission Australia*. Australia: Australia Mission. (Viewed 3 May 2021). Available from: https://www.missionaustralia.com.au/what-we-do/research-impact-policy-advocacy/youth-survey

Titus, J. J., (2004). Boy Trouble: Rhetorical Framing of Boys' Underachievement. *Discourse: Studies in the Cultural Politics of Education* (Online). **25**(2), 145–169. (Viewed 18 June 2020). Available from: https://doi.org/10.1080/01596300410001692120

Tobin, D. et al., (2010). The Intrapsychics of Gender: A Model of Self-Socialization. *Psychological Review* (Online). **117**(2), 601–622. (Viewed 14 March 2020). Available from: DOI: 10.1037/a0018936

Tobin, G. A. and Begley, C. M., (2004). Methodological Rigour within a Qualitative Framework. *Journal of Advanced Nursing* (Online). **48**(4), 388–396. (Viewed 6 June 2020). Available from:DOI: 10.1111/j.1365-2648.2004.03207.x

Totten, M., (2003). Girlfriend Abuse as a Form of Masculinity Construction among Violent, Marginal Male Youth. *Men and Masculinities* (Outline). **6**(1), 70–92. (Viewed 2 June 2020). Available from: DOI: 10.1177/1097184X03253138

Trent, F., et al., (2001). *Declining Rates of Achievement and Retention: The Perceptions of Adolescent Males* (Outline). Australia: Canberra, A.C.T.: Dept. of Education, Training and Youth Affairs. (Viewed 13 July). Available from: **http://hdl.voced.edu.au/10707/88509**.

Tsang, M., Fryer, M. and Arevalo, G., (2002). *Access, Equity and Performance: Education in Barbados, Guyana, Jamaica, and Trinidad and Tobago* (Online). Washington: IDB Publications. (Viewed 27 February 2021). Available from: https://publications.iadb.org/publications/english/document/Access-equity-and-performance-Education-in-Barbados-Guyana-Jamaica-and-Trinidad-and-Tobago.pdf

Twycross, A. and Shorten, A., (2016). Using Observational Research to Obtain a Picture of Nursing Practice. *Evidence-Based Nursing* (Outline). **19**(3), 66–67. (Viewed 30 May 2020). Available from: http://dx.doi.org/10.1136/eb-2016-102393

Tyack, D. and Hansot, E., (1992). *Learning Together: A History of Coeducation in American Public Schools*. Russell Sage Foundation.

Ullah, R. and Ullah, H., (2019). Boys versus Girls' Educational Performance: Empirical Evidences from Global North and Global South. *African Educational Research Journal* (Online). **7**(4), 163–167. (Viewed 14 April 2020). Available from: DOI: 10.30918/AERJ.74.19.036

UNESCO., (2020). *Boosting Gender Equality in Science and Technology A Challenge for TVET Programmes and Careers* (Online). France: United Nations Educational, Scientific and Cultural Organization. (Viewed 25 June 2021). Available from: https://unevoc.unesco.org/home/Publications+UNEVOC/lang=fr/akt=detail/qs=6430

United Nations., (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development* (Online). (Viewed 7 September). Available from: /resources/transforming-our-world-2030-agenda-sustainable-development

United Nations., (2017). *Household Size and Composition around the World* (Online). (Viewed 14 May 2021). Available from: n.org/en/development/desa/population/publications/pdf/popfacts/PopFacts_2017-2.pdf

Vail, K., (2002). Same-Sex Schools May Get a Chance. *Education Digest*, **68**(4). (Viewed 7 August 2020). Available from: http://connection.ebscohost.com/c/articles/8684672/same-sex-schools-may-still-get-chance

Van Houtte, M., Vervaet, R., Mickelson, R. and Stevens, P., (2018). The Ethnic Prejudice of Flemish Pupils: The Roles of School Gender Composition and Laddish Culture. *Gender and Education* (Outline). **31**(8). Available from: https://doi.org/10.1080/09540253.2018.1440283

Veas, A., et al., (2016). The Influence of Gender, Intellectual Ability, Academic Self-Concept, Self-Regulation, Learning Strategies, Popularity and Parent Involvement in Early Adolescence. *International Journal of Information and Education Technology* (Outline). **6**(8), 591–597. (Viewed 20 August 2020). Available from: DOI: 10.7763/IJIET.2016.V6.757

van der Vleuten, M., Jaspers, E. and van der Lippe, I. and T., (2016). Boys' and Girls' Educational Choices in Secondary Education. The Role of Gender Ideology. *Educational Studies* (Online). **42**(2), 181–200. (Viewed 19 June 2020). Available from: https://doi.org/10.1080/03055698.2016.1160821

Wahab, A., (2016). Calling 'Homophobia' into Place (Jamaica). *Interventions* (Online). **18**(6), 908–928. (Viewed 1 February 2021). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/1369801X.2015.1130641

Walford, G., (2001). Site Selection within Comparative Case Study and Ethnographic Research. *Compare (Online).* 31(2), 151–164. (Viewed 12 June 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/03057920120068485

Walker, A. J., (1999). Gender and Family Relationships. In: M. B. Sussman, S. K. Steinmetz, and G. W. Peterson, eds. *Handbook of Marriage and the Family*. (Online). Boston, MA: Springer US. pp. 439–474. (Viewed 21 February 2021). Available from: https://doi.org/10.1007/978-1-4757-5367-7_17

Walters, G. K. and Carpenter, K., (2017). Gender-Role Stereotypes and Culture in Jamaica and Barbados. In: K. Carpenter, ed. *Interweaving Tapestries of Culture and Sexuality in the Caribbean*. Cham: Springer International Publishing. pp. 15–34. (Viewed 18 May 2020). Available from: https://doi.org/10.1007/978-3-319-58816-2_2

Warrington, M. and Younger, M., (2001). Single-Sex Classes and Equal Opportunities for Girls and Boys: Perspectives through Time from a Mixed Comprehensive School in England. *Oxford Review of Education* (Online). **27**(3), 339–356. (Viewed 12 January 2020). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/03054980120067393

Warrington, M. and Younger, M., (2003). 'We Decided to Give It a Twirl': Single-Sex Teaching in English Comprehensive Schools. *Gender and Education* (Online). **15**(4), 339–350. (Viewed 12 December 2019). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/09540250310001610553

Watson, S., (1997). Single-Sex Education for Girls: Heterosexuality, Gendered Subjectivity and School Choice. *British Journal of Sociology of Education* (Online). **18**(3), 371–383. (Viewed 14 February 2021). Available from: https://doi-org.sheffield.idm.oclc.org/10.1080/0142569970180304

Watson, A., Kehler, M., Martino, W., (2010). The Problem of Boys´ Literacy Underachievement: Raising Some Questions. *Journal of Adolescent and Adult Literacy* (Online). **53**(5), 356-61. (Viewed 3 February 2020). Available from: DOI:10.1598/JAAL.53.5.1

Weinberger, C. J., (1999). Mathematical College Majors and the Gender Gap in Wages. *Industrial Relations: A Journal of Economy and Society* (Online). **38**(3), 407–413. (Viewed 12 September 2019). Available from: **https://doi.org/10.1111/0019-8676.00134**

Weller-Clarke, A., (2011). Underachievement. In: S. Goldstein and J. A. Naglieri, eds. *Encyclopedia of Child Behavior and Development*. (Online). Boston, MA: Springer US. pp. 1514–1515. (Viewed 1 March 2021). Available from: https://doi.org/10.1007/978-0-387-79061-9_2984

West, P., (2002). 'It Ain't Cool to Like School': Why are Boys Underachieving Around the World and What Can We Do about it? Sydney: Men's Health Information & Resource Centre.

White, R. C. and Carr, R., (2005). Homosexuality and HIV/AIDS Stigma in Jamaica. *Culture, Health and Sexuality* (Online). **7**(4), 347–359. (Viewed 23 February 2021). Available from: https://www.jstor.org/stable/25764389

Whittemore, R., Chase, S. K. and Mandle, C. L., (2001). Validity in Qualitative Research. *Qualitative Health Research* (Online). **11**(4), 522–537. (Viewed 12 May 2020). Available from: https://doi.org/10.1177/104973201129119299

Wilkinson, L. C. and Marrett, C. B. eds., (2013). *Gender Influences in Classroom Interaction*. NY: Academic Press, INC.

Williams, J., (2016). *The Separation Solution?: Single-Sex Education and the New Politics of Gender Equality* (Online). California: University of California Press. (Viewed 23 February 2020). Available from: https://www.jstor.org/stable/10.1525/j.ctt19893h7

Willis, P. E. and Willis, P. P., (1981). *Learning to Labor: How Working-Class Kids Get Working Class Jobs*. New York: Columbia University Press.

Wills, R., Kilpatrick, S. and Hutton, B., (2006). Single-Sex Classes in Co-Educational Schools. *British Journal of Sociology of Education* (Online). **27**(3), 277–291. (Viewed 15 January 2020). Available from: https://www.jstor.org/stable/30036140

Wilson, E. O. (2000). *Sociobiology: The New Synthesis, Twenty-Fifth Anniversary Edition*. Massachusetts: Harvard University Press. Retrieved February 19, 2021, from https://www.jstor.org/stable/j.ctvjnrttdd

Wilson, G., (2013). *Breaking Through Barriers to Boys' Achievement: Developing a Caring Masculinity*. 2nd ed. London: Bloomsbury Publishing.

Wilson, H. E., et al., (2014). A Model of Academic Self-Concept: Perceived Difficulty and Social Comparison Among Academically Accelerated Secondary School Students. *Gifted Child Quarterly* (Online). **58**(2), 111–126. (Viewed 26 March 2020). Available from: https://doi.org/10.1177/0016986214522858

Wilson, N., (2014). Small Class Sizes Don't Guarantee Better Students — Expert. *Jamaica Observer* (Online). 18 January 2014. (Viewed 12 June 2021). Available from: https://www.jamaicaobserver.com/magazines/career/Small-class-sizes-don-t-guarantee-better-students----expert_15771178

Wilson-Harris, N., (2016). Reading, Writing, Worrying - JFLL Targets 235,000 Illiterate Jamaicans. *Jamaica Gleaner.* (Online). 21 January 2016. (Viewed 1 March 2021). Available from: http://jamaica-gleaner.com/article/lead-stories/20160124/reading-writing-worrying-jfll-targets-235000-illiterate-jamaicans

Wolff, S., (2001). A Companion to Qualitative Research. In: U, Flick, E. von Kardorff and I. Steinke, eds. *Ways into the Field and Their Variants*. London: SAGE Publications. pp. 195–202.

Wolter, I. B. and Hannover, B., (2016). Gender Role Self-Concept at School Start and Its Impact on Academic Self-Concept and Performance in Mathematics and Reading. *European Journal of Developmental Psychology* (Online). **13**(6), 681–703. (Viewed 3 April 2020). Available from: https://doi.org/10.1080/17405629.2016.1175343

Wong, L., (2008). Data Analysis in Qualitative Research: A Brief Guide to Using Nvivo. *Malaysian Family Physician: the Official Journal of the Academy of Family Physicians of Malaysia* (Online). **3**(1), 14–20. (Viewed 14 May 2020). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4267019/

Wong, W. I., Shi, S. Y. and Chen, Z., (2018). Students from Single-Sex Schools Are More Gender-Salient and More Anxious in Mixed-Gender Situations: Results from High School and College Samples. *PLoS ONE* (Online). **13**(12). (Viewed 16 August 2020). Available from: https://doi.org/10.1371/journal.pone.0208707

World bank., (2020). Government Expenditure on Education, Total (% of GDP) - Jamaica | Data. (Viewed 27 February 2021). Available from: https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?locations=JM

Yemane, Y., et al., (2017). Assessment of Gender Difference on Learning Styles Preferences among Regular Undergraduate Students of Mekelle University College of Health Science. *Journal of Stem Cell Biology and Transplantation* (Online). **1**(2), 14. (Viewed 7 April 2021). Available from: DOI: 10.21767/2575-7725.100014

Yasin, B., Azim, M. and Qayyum, A., (2020). Co-Education versus Single-Gender Education: Influence of Different Education System on The Student Self-Esteem, Confidence Level, and Academic Achievement in Pakistan. *Gomal University Journal of Research* (Online). **36**(2), 94–106. (Viewed 30 March 2020). Available from: DOI: 10.51380/gujr-36-02-09

Yin, R. K., (2009). *Case Study Research: Design and Methods*. Thousand Oaks, Calif.: Sage Publications.

Yin, R. K., (2011). *Applications of Case Study Research*. California: SAGE.

Yin, R. K., (2014). *Case Study Research: Design and Methods*. Los Angeles: SAGE.

Youcef, O. L., (2016). Gender Differences in Learning Style Preferences Case Study: 3rd Year LMD Students. In: Pixel, ed. *Conference Proceedings: ICT for Language Learning*, (p. 3). Italy: libreriauniversitaria.it Edizioni. Pp. 290-293. (Viewed 5 July 2020). Available from: https://books.google.de/books?id=vJWSDQAAQBAJ&printsec=frontcover#v=onepage&q&f=false

Younger, M. and Warrington, M., (1996). Differential Achievement of Girls and Boys at GCSE: Some Observations from the Perspective of One School. *British Journal of Sociology of Education*. **17**(3), 299–313. (Viewed 18 April 2020). Available from: https://doi.org/10.1080/0142569960170304

Younger, M., Warrington, M. and Gray, J., (2005). *Raising Boys' Achievement*. Great Britain: Department of Education. (Viewed 10 June 2020). Available from: http://dera.ioe.ac.uk/5400/1/RR636.pdf

Zainal, Z., (2007). Case Study As a Research Method. *Jurnal Kemanusiaan* (Online). **5**(1), 1–6. (Viewed 30 May 2020). Available from: https://jurnalkemanusiaan.utm.my/index.php/kemanusiaan/article/view/165

Zakkamaris, Z. and Balash, F., (2017). Gendered Teacher-Student Interaction in Junior Secondary Mathematics Classrooms in Nigeria. *The Eurasia Proceedings of Educational and Social Sciences (EPESS)*. (Online). **6**, 73–83. (Viewed 14 July 2020). Available from: https://dergipark.org.tr/en/pub/epess/issue/30769/332642

Zubrzycki, J., (2012). Single-Gender Schools Scrutinized. *Education Week*, 31(17), 1. (Viewed 21 June 2020). Available from: https://eric.ed.gov/?id=EJ972488

APPENDIX A – Sample Questionnaire

QUESTIONNAIRE

1. What is your sex?

   Male ☐   Female ☐

2. Which grade are you in?

3. What do you like about your school?

4. Do you know why the sex segregation programme was implemented at your school?

5. What reasons were you given?

6. How do you feel about the decision to educate boys and girls apart?

7. Who do you think benefits most from the programme?

8. What do you see as the main advantages of having some single sex and some mixed classes?

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9. What do you think are the disadvantages of educating boys and girls apart?

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10. Do you prefer the single sex or mixed classes?

11. Explain why.

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12. What is your favourite subject and why do you like this subject?

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13. What is your least favourite subject and why don't you like this subject?

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14. How do students usually behave in your single sex classes?

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15. How do students usually behave in your mixed classes?

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16. What methods of reprimands and praise are used by your teachers?

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17. Which language do teachers usually use while dealing with boys as opposed to girls?

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18. Do you feel comfortable asking for help in classes?

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19. Who do you usually ask for help?

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20. Do you think the combination of single-sex and mixed classes allows students to improve their academic performance?

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21. Do you think other coeducational institutions should adopt this sex segregation style of teaching? Give reasons for your answer.

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APPENDIX B – Focus Group Interview Guide

FOCUS GROUP QUESTIONS

1. What do you know about the sex segregation programme?
   - Why was the programme implemented?
   - What were the reasons given to the students?
2. What do you think of the arrangement (boys and girls being educated apart)?
   - Who does the programme benefit and how are these benefits evident?
   - Does the separation impact student behaviour?
   - Does it impact student academic performance?
3. What do you see as the advantages and disadvantages of the programme?
   - What is the classroom atmosphere like?
   - Does the separation help or hinder student academic performance?
   - Does it help or hinder healthy social interaction among students and between students and teacher?
   - Are students more motivated in one type of class or is there no difference?
   - Is there healthy competition (to improve grades) within a particular class (i.e. single-sex as opposed to mixed classes)?
   - Are students more inclined to ask for help in one group?
   - Are different teaching strategies used in single-sex and mixed classes?
   - Should the programme continue?
4. Is there a difference between student-teacher interaction in single-sex classes and mixed classes?
   - Do students behave differently and if so, why do you think this happens?
   - How do teachers motivate boys/girls in each class?
   - Is there a difference in how boys and girls are reprimanded?
   - Is there a difference in the tone and language used while dealing with boys and girls?
5. Do you think other coeducational institutions could benefit from adopting this programme?

APPENDIX C – Interview Guide

INTERVIEW QUESTIONS - Teachers

1. Can you tell me about the sex segregation programme?
   - Why it was implemented.
   - Areas targeted by the programme.
   - How classes are structured.
   - What difference (if any) it has made.
   - What you think are the advantages and disadvantages.
   - Who benefits most and how are these benefits manifested?
   - Impact on student behaviour.
   - Impact on confidence and participation.
   - Impact on student academic performance.
   - Students' interaction among themselves and with the teacher.
   - Overall benefits to the school.
2. What kinds of support were you given after the programme was implemented?
   - Is there ongoing monitoring and evaluation?
3. What kinds of teaching strategies do you employ in your classes?
   - Do they differ based on sex?
   - Are they meant for a targeted group?
4. Which classes do you find most difficult and how do you address these issues?
   - Most disruptive students.
   - Strategies for dealing with disruptive students.
   - Are the same strategies used for all classes?
5. How do you feel about the programme overall?
   - Success/failure
   - Would you like to see anything changed?
6. Would you recommend that other coeducational institutions adopt this programme?

APPENDIX D – Consent Form

CONSENT FORM

Study Title: Sex Segregation in one Jamaican High School: The perspectives of the teachers and students.

Researcher: Jenese Wray

Before consenting to participate in the study, I suggest that you read the following information on the study which explains the purpose and procedures of the study. This study has been approved by the Research Ethics Board at the University of Sheffield.

Research Procedures

The study is designed to examine the sex segregation programme which exists at Seaview High School. This programme exists on a very small scale in Jamaica and not enough research has been done in this area. Consequently, very little is known about the programme. Participation in this research process will involve completion of questionnaires by students, focus group discussions (involving two groups of students), observation of lessons and face-to-face interviews which will last for about one hour.

The interviews and observation will be recorded utilizing audio- tape recorders and videotape recorders. These will be later transcribed for data analysis.

Risks

There are no risks that are anticipated if you decide to participate in this research process.

Benefits

Participation in the study will allow you to share your experience and perceptions of the sex segregation programme. By doing this, it will become clear whether or not the program can be emulated by other institutions which desire an improvement in the academic achievement of their students.

Confidentiality

The information which will be gathered will be stored in a safe area and will be accessible only to the researcher. The identifying names of the participants will not be used but will be

coded and identifiable only by the researcher. The names will not be used in the finished study. Instead, pseudonyms will be utilised. The audio and video recordings which will be collected in data collection will be destroyed at the end of the research process.

Expectations of the Participants

1. Be very candid during the pre-research sessions. Ensure a complete understanding of what the research involves and the purpose of the research, before agreeing to participate.
2. Be honest in sharing your experiences or opinions.
3. Provide as many details as possible.
4. Share any feeling of discomfort which may arise (if any) during our discussion of various topics.

Withdrawal from Participation

Participation in this process is voluntary. You may refuse to participate or withdraw from the process at any time during the process. You may also refuse to answer any question during the research process.

Questions

You are welcome to ask any questions during or after you participate in this research process. If you have any concerns/ questions, you may contact the researcher.

Researcher contact:
Jenese Wray
xxxx@sheffield.ac.uk
Tel: 0000000000

Consent

I _____ (print name), have read the above information and freely agree to participate in the study. I understand that my information will be confidential, and I am free to refuse to respond to specific questions or to withdraw from the process at any time.

_____   _____
        Participant's Signature   Date

APPENDIX E - Sample of CSEC results for Seaview High School (2018 & 2019).

Table 1: Sample of Caribbean Secondary Examination Certificate (CSEC) results for Seaview High School (2018 & 2019).

SUBJECT	FEMALE				MALE			
	Entered	Sat	Passed	% Passed	Entered	Sat	Passed	% Passed
BIOLOGY	37	36	21	58,3	9	9	5	55,6
CARIBBEAN HISTORY	32	28	12	42,9	12	6	0	0,0
CHEMISTRY	44	44	20	45,5	14	14	7	50,0
ECONOMICS	30	25	6	24,0	25	19	5	26,3
ELECTRONIC DOCUMENT PREPARATION AND MANAGEMENT	91	85	82	96,5	61	52	48	92,3
ENGLISH A	189	188	143	76,1	163	160	80	50,0
ENGLISH B	34	34	28	82,4	5	5	3	60,0
FAMILY AND RESOURCE MANAGEMENT	29	28	27	96,4	3	2	2	100,0
FOOD NUTRITION AND HEALTH	62	61	56	91,8	20	18	16	88,9
GEOGRAPHY	19	18	3	16,7	45	38	10	26,3
HUMAN AND SOCIAL BIOLOGY	76	74	35	47,3	50	47	22	46,8
INDUSTRIAL TECHNOLOGY (BUILDING)	7	3	1	33,3	18	15	8	53,3
INDUSTRIAL TECHNOLOGY (ELECTRICAL)	3	2	2	100,0	25	22	7	31,8
INDUSTRIAL TECHNOLOGY (MECHANICAL)	1	1	1	100,0	13	13	12	92,3
INFORMATION TECHNOLOGY	37	34	25	73,5	39	37	27	73,0
INTEGRATED SCIENCE	191	185	31	16,8	152	146	14	9,6
MATHEMATICS	190	187	48	25,7	163	162	35	21,6
OFFICE ADMINISTRATION	34	33	30	90,9	18	18	14	77,8
PHYSICAL EDUCATION AND SPORT	15	13	13	100,0	39	26	21	80,8
PHYSICS	26	25	15	60,0	19	18	6	33,3
PRINCIPLES OF ACCOUNTS	23	23	15	65,2	13	13	6	46,2
PRINCIPLES OF BUSINESS	52	51	47	92,2	34	32	27	84,4
RELIGIOUS EDUCATION	55	52	39	75,0	26	25	14	56,0
SOCIAL STUDIES	202	201	101	50,2	184	182	62	34,1
SPANISH	21	20	8	40,0	3	3	1	33,3
TECHNICAL DRAWING	15	13	9	69,2	79	67	46	68,7
TEXTILES CLOTHING AND FASHION	9	9	8	88,9	3	3	3	100,0
THEATRE ARTS	10	10	10	100,0	6	6	6	100,0
VISUAL ARTS	3	3	0	0,0	13	9	6	66,7
TOTAL	1537	1486	836	56,3	1254	1167	513	44,0

2019

SUBJECT	FEMALE				MALE			
	Entered	Sat	Passed	% Passed	Entered	Sat	Passed	% Passed
BIOLOGY	22	22	14	63,6	7	6	3	50,0
CARIBBEAN HISTORY	36	33	11	33,3	14	12	2	16,7
CHEMISTRY	28	28	19	67,9	14	13	6	46,2
ECONOMICS	20	19	9	47,4	16	14	4	28,6
ELECTRONIC DOCUMENT PREPARATION AND MANAGEMENT	36	36	22	61,1	29	27	11	40,7
ENGLISH A	156	153	138	90,2	97	91	73	80,2
ENGLISH B	31	31	20	64,5	1	1	1	100,0
FAMILY AND RESOURCE MANAGEMENT	20	20	19	95,0	11	8	8	100,0
FOOD NUTRITION AND HEALTH	50	49	48	98,0	15	15	15	100,0
GEOGRAPHY	32	31	20	64,5	29	23	17	73,9
HUMAN AND SOCIAL BIOLOGY	83	80	49	61,3	24	23	11	47,8
INDUSTRIAL TECHNOLOGY (BUILDING)	5	5	5	100,0	11	10	10	100,0
INDUSTRIAL TECHNOLOGY (MECHANICAL)	1	1	1	100,0	23	22	14	63,6
INFORMATION TECHNOLOGY	29	25	21	84,0	4	3	3	100,0
INTEGRATED SCIENCE	160	157	98	62,4	33	31	25	80,6
MATHEMATICS	114	112	35	31,3	100	95	54	56,8
OFFICE ADMINISTRATION	26	26	22	84,6	80	76	36	47,4
PHYSICAL EDUCATION AND SPORT	5	3	3	100,0	5	4	4	100,0
PHYSICS	12	12	7	58,3	24	19	18	94,7
PRINCIPLES OF ACCOUNTS	39	39	26	66,7	15	14	6	42,9
PRINCIPLES OF BUSINESS	51	50	49	98,0	20	19	12	63,2
RELIGIOUS EDUCATION	32	31	24	77,4	33	31	29	93,5
SOCIAL STUDIES	167	166	111	66,9	6	5	3	60,0
SPANISH	12	12	10	83,3	121	119	73	61,3
TECHNICAL DRAWING	10	9	8	88,9	4	4	3	75,0
TEXTILES CLOTHING AND FASHION	12	11	11	100,0	50	45	41	91,1
THEATRE ARTS	12	12	12	100,0	2	2	2	100,0
VISUAL ARTS	5	3	3	100,0	2	1	1	100,0
TOTAL	**1206**	**1176**	**815**	**69,3**	**790**	**733**	**485**	**66,2**

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APPENDIX F – A Summary of the Beliefs held by Teachers regarding Sex Segregation.

A Summary of the beliefs held by teachers regarding sex segregation at Seaview High school.

Teacher one	Business	Female	Girls are the top performers in general.
			Girls dominate the numeral subject while the boys dominate the reading subject.
			Sex separation may lead boys to develop homosexual tendencies.
			Boys are more disruptive. Disruption is best addressed by allowing students to focus their energy on meaningful activities.
			Evaluate to determine the effectiveness of the sex separation strategy.
Teacher two	Math, Science Language, and Social Science	Female	Sex separation is more beneficial to female students.
			Girls regard boys as being lazy and do not enjoy working with them.
			Boys participate in lessons when they find the topics to be interesting.
			Separation provides teachers with the opportunity to plan sex-specific lessons.
			Mixed classes are always disadvantageous for boys. They think teachers are partial to girls and likely believe boys´ opinions are less valuable.
			Students are sometimes unable to relate to the material in the literature.
			Male teachers should act as role models for their male students.
			Careful monitoring of the sex separation strategy is required to determine its success.
Teacher three	Math, Languages	Female	Students ´attitudes, not class composition determine students´ performance.
			Some students regard sex separation as punishment.
			Boys' classes respond well to me, even those regarded as being among the worst (behaviour) in the school.

			Encouragement and motivation produce improved male behaviour and academic performance.
			Boys are more competitive and more disruptive in all-boys classes.
			To address this, they must be kept active with a constant flow of activities.
			Students in all-boys classes tend to be homophobic.
Teacher four	Sciences	Male	Girls participate more in classes and outperform boys in both types of classes.
			Boys need hands-on tasks and activities with visual appeal, to hold their interest and prevent disruption.
			Separation facilitates sex-specific lesson planning.
			Parents should be sensitized about the purpose of the sex separation initiative. This will cause them to be more aware and involved.
			Some parents and teachers believe that sex separation leads to larger numbers of homosexuals.
			Male teachers should be role models for the boys.
Teacher five	Social Sciences	Female	Students in mixed classes perform the best.
			Sex separation encourages competition and allows boys the opportunity to be placed first in class.
			Students perform better in mixed classes.
			Boys require more activities to keep them engaged during lessons.
			The program is being monitored. That is why there is a decision to mix two grade seven classes.
Teacher 6	Language Arts	Female	Boys participate in language classes but tend to attain lower grades than girls.
			Boys do not compete to attain high grades in all-boys classes. Instead, they try to sit at the back of the classroom.
			Students in the coeducational classes are cooperative and perform better academically.

			Parents need to be more involved to help in managing students´ behaviour. Homophobia, which is prevalent in the boys´ classes is influenced by the Jamaican culture. The program can be adopted by other schools if it has been assessed and proven to be effective.
Teacher 7	Social Sciences	Male	Disagrees with sex separation. The program was implemented to improve male underachievement. There is no evidence that boys are improving because of this separation. Boys always dominate my classes. It is easier to maintain class control in the all-boys groups. There needs to be careful monitoring of the program to determine its effectiveness.
Teacher 8	Sciences	Female	Single-sex classes tend to outperform coeducational groups. Separation is more beneficial to boys. Boys and girls distract each other in the mixed groups but are more focused when they are separated. Boys display leadership skills in all-boys groups. Sex Separation allows teachers to plan sex-specific lessons. Boys require more activities to keep them focused. Parents need to be more involved as this would mitigate the disruptive behaviour which is often connected to issues experienced at home. The large class sizes impact student participation and performance. Smaller classes would facilitate better class control. Finds the male students tend to interact well with both male and female teachers. The students are experiencing difficulties that are affecting both their conduct and achievement. The cause/s of these issues need to be explored.

			Sex separation would be more effective in a smaller school where it could have a greater impact on the male students.
Teacher 9	Sciences	Male	Boys dominate the vocational subjects. They tend to outperform girls in the numerical subjects, but girls perform better at tasks that involve theory.

Sex separation causes the boys to display leadership roles.

Lack of resources and large classes prevent the Jamaican teacher from performing optimally.

All-girls classes are deliberately smaller than all-boys classes.

When a parent is involved and s/he invests resources in the child, there is usually a positive outcome.

Widely held belief among the staff that homosexuality exists in the single-sex classes.

Utilises harsh punishment, such as manual labour, to address disruptive behaviour by male students.

Thinks male role-models can have a positive impact on male students.

For this initiative to be successful, there needs to be clear objects that are communicated to the staff. |
| Teacher 10 | Languages | Female | The boys are well-behaved and participate in the lessons because they chose to study the language.

The greatest issue is the class size. Boys' classes are generally larger, but more girls choose to study languages.

Girls are more participative and willing to engage in the class activities.

The students are homophobic which is evident in the language used in classes.

Harsher punishment is meted out to male students for misbehaviour. |

APPENDIX G – Sample Data Analysis (Code Sheet)

Color	Parent code	Code	Code alias	Cod. seg. (alldocuments)
●	RE	Reasons for separation	Reason	8
●	EFF	The effect of the teacher´s sex	Teacher´s Sex	6
●	DRAW	Drawbacks to the program	Disadv	22
●	BENP	Benefits of the program	Advantage	20
●	STI	Student-teacher interaction	Interaction	16
●	FP	Prospects (+)	Future	24
●	HPH	Homophobia	Homo	26
●	GSP	Perception of the sex segregation program	Gen Percep	16
●	STR	Strategies for correcting undesirable conduct	Disruption	29
●	SEF	The social effects of the separation	Soc Effect	42
●	ACEF	The academic impact of the program	Acad Eff	48
●	PO	Program organisations	Gen View	21

APPENDIX H – Sample Data Analysis Process (Code System)

Code System

Code System	Frequency
Code System	579
Reasons for separation	8
students´ perception of school and the separation	4
The effect of the teacher´s sex	6
Male teachers as role models	7
InVivo (+) (+) (+) (+) (+) (+) (+) (+) (+) (+) (+) (+)	20
to protect the cause of pregnancy because boys are assaulting	1
to see if some girls or boys can Focus more without the op	1
Drawbacks to the program	22
Group work challenges	2
Parental involvement (+)	3
class size	7
Benefits of the program	20
Impact on students	6
Student - teacher interaction	16
Prospects (+)	24
Program evaluation	11
Homophobia	26
YELLOW	3
Perception of the sex segregation program	16
single-sex vs mixed classes	41
Teacher´s experience of the separation (+)	10
General idea of single sex	4
students' attitude towards separation	9
Teacher´s Attitude towards the program	19
Differences in teaching strategies	9
General Knowledge of the program	20
Strategies for correcting undesirable conduct	29
praise vs reprimand	8
student conduct - in class	8
strategy to address male issues	7

Strategies for dealing with disruption (+)	17
Social effects of the separation	42
sexual assault	3
Physical appearance	1
Male-Female difference	36
Academic impact of the program	48
Students´ Participation	11
Teaching strategy	6
Performance impacted by external factors (+)	6
Program organisations	21
Organisation of school processes	5
general: subject area and classes taught (+)	16

APPENDIX I – Themes and Findings in the Study

Themes and Findings in the Study

Themes	Sample Response
Fostering Competition in the classroom	"Among the male classes, they have a spirit of competition where everybody tries to reach the top spot or get the highest average"
Reduces Distraction and Improves Focus	"When the classes mix the students tend to communicate more causing the males to average lower than the girls although the girls average will also be low."
Student Participation	"You will have 10 students who have the interest - with the boys you will find one or two that are interested in school - right now they are the ones who pay attention in class and participate."
Increased Focus	"I feel 100% great that we boys can get to focus more on schoolwork with no distraction from the other gender."
Disruptive Behaviour in the classroom	"We learn better (in SS classes) because some of the boys are too disruptive.
Class Size	"What I would change you see, is to make the classes smaller. If you have smaller classes, you would have better control."
Homophobia	"I don't think it's right I think that influence people to go the other way" (homosexuality).
Conflicting Academic Effect	"I think that if the boys put their heads to their lessons, they can achieve their goals schoolwork is awful but with the girls' classes know the all-girls behaviour is much better and their performance is better as opposed to the boys."
Cultural influence	"With the boys, I feel a lot of what is happening currently in society they will bring it right into school so with the music the trend in dancehall music everybody is Tommy- Lee and Vybz Kartel."
Leadership Skills	"One thing I have seen is because some of them are put on a spot in terms of responsibility in terms of class monitor, you might have more of the boys getting involved."
Targeted Teaching strategies	"As I mention some things you give the girls to do you won't give the boys so the same method you use for the girls isn´t the same for the boys."

APPENDIX J – CSEC Performance by Sex in Jamaica (2017-2019)

CSEC Performance by Sex 2017-2019

Female	2017			2018			2019		
	Total	Total	Percent	Total	Total	Percent	Total	Total	Percent
SUBJECT	Sitting	I-III	I-III	Sitting	I-III	I-III	Sitting	I-III	I-III
Additional Mathematics	642	426	66.4	515	361	70.1	512	384	75.0
Agri. Science (Da)	195	193	99.0	140	135	96.4	110	107	97.3
Agri. Science (Sa) As	1930	1789	92.7	1989	1689	84.9	1898	1746	92.0
Agri. Science (Sa) C&S									
Biology	4443	3075	69.2	4480	3306	73.8	4270	3275	76.7
Building Tech.: Constr.									
Building Tech.: Woods									
Caribbean History	2857	2204	77.1	2735	1982	72.5	2626	1748	66.6
Chemistry	3633	1902	52.4	3635	2070	56.9	3491	2306	66.1
Economics	719	601	83.6	812	616	75.9	935	691	73.9
Elec. Doc. Prep. And Mgmt	3622	3211	88.7	3849	3702	96.2	3337	2972	89.1
English A	15185	11488	75.7	14179	11459	80.8	13837	12135	87.7
English B	5225	3136	60.0	4864	4134	85.0	4905	3545	72.3
Family and Resource Management *formerly Home Economics Management*	2936	2629	89.5	2845	2434	85.6	2417	2073	85.8
Food Nutrition and Health *formerly Food And Nutrition*	4341	4062	93.6	4368	3966	90.8	3929	3591	91.4
French	692	544	78.6	699	561	80.3	603	415	68.8
Geography	1846	1230	66.6	1932	1412	73.1	1961	1495	76.2
Human And Social Biology	5806	3436	59.2	5670	3603	63.5	5408	2839	52.5
Industrial Technology (Building)	158	134	84.8	175	151	86.3	194	180	92.8

SUBJECT	Total Sitting	Total I-III	Percent I-III	Total Sitting	Total I-III	Percent I-III	Total Sitting	Total I-III	Percent I-III
Industrial Technology (Electrical) *formerly Elect. & Electronic Tech.*	152	106	69.7	162	133	82.1	163	146	89.6
Industrial Technology (Mechanical) *formerly Mechanical Engineering Technology*	55	49	89.1	61	53	86.9	63	55	87.3
Information Technology	6878	5846	85.0	6815	6212	91.2	6862	6340	92.4
Integrated Science	3189	1637	51.3	2832	932	32.9	2718	1487	54.7
Mathematics	13698	7068	51.6	13025	7627	58.6	12466	6878	55.2
Music	75	49	65.3	90	60	66.7	92	67	72.8
Office Procedures	2692	2337	86.8	2862	2474	86.4	2454	2174	88.6
Phys. Ed. & Sports	1761	1709	97.0	1826	1784	97.7	1857	1816	97.8
Physics	2785	1731	62.2	2729	1935	70.9	2554	1913	74.9
Principles Of Accounts	4043	3193	79.0	3887	2968	76.4	3890	3072	79.0
Principles Of Business	5897	5368	91.0	5868	5273	89.9	5581	5093	91.3
Religious Education	1486	1299	87.4	1540	1324	86.0	1379	1096	79.5
Social Studies	8830	5320	60.2	8532	5630	66.0	7608	5150	67.7
Spanish	3255	2203	67.7	3000	2132	71.1	2834	1997	70.5
Technical Drawing	412	328	79.6	465	412	88.6	492	440	89.4
Textile, Clothing and Fashion *formerly Clothing And Textiles*	1314	1020	77.6	1328	1041	78.4	1295	1130	87.3
Theatre Arts	596	537	90.1	691	599	86.7	732	637	87.0
Typewriting									
Visual Arts	914	670	73.3	974	631	64.8	879	682	77.6

Male				2018			2019		
	Total	Total	Percent	Total	Total	Percent	Total	Total	Percent
SUBJECT	Sitting	I-III	I-III	Sitting	I-III	I-III	Sitting	I-III	I-III
Additional Mathematics	577	370	64.1	465	326	70.1	483	351	72.7
Agri. Science (Da)	178	168	94.4	139	131	94.2	81	80	98.8
Agri. Science (Sa) As	1215	1081	89.0	1146	942	82.2	1196	1067	89.2

Subject									
Agri. Science (Sa) C&S									
Biology	1852	1312	70.8		1765	1326	75.1	1706	1317	77.2
Building Tech.: Constr										
Building Tech.: Woods										
Caribbean History	1516	1092	72.0		1356	934	68.9	1228	753	61.3
Chemistry	1885	1085	57.6		1888	1149	60.9	1798	1230	68.4
Economics	416	354	85.1		518	369	71.2	582	414	71.1
Elec. Doc. Prep. And Mgmt	1804	1626	90.1		1842	1729	93.9	1927	1552	80.5
English A	11136	7135	64.1		9899	6692	67.6	9657	7317	75.8
English B	1815	757	41.7		1589	1134	71.4	1549	897	57.9
Family and Resource Management *formerly Home Economics Management*	472	387	82.0		465	374	80.4	384	302	78.6
Food Nutrition and Health *formerly Food And Nutrition*	870	733	84.3		870	751	86.3	808	697	86.3
French	235	177	75.3		198	155	78.3	194	130	67.0
Geography	2124	1284	60.5		1987	1372	69.0	2006	1399	69.7
Human And Social Biology	3195	1545	48.4		3285	1921	58.5	2942	1304	44.3
Industrial Technology (Building)	1779	1299	73.0		1716	1306	76.1	1777	1501	84.5
Industrial Technology (Electrical) *formerly Elect. & Electronic Tech.*	1838	1203	65.5		1883	1362	72.3	1992	1640	82.3
Industrial Technology (Mechanical) *formerly Mechanical Engineering Technology*	1111	756	68.0		1153	846	73.4	1172	928	79.2
Information Technology	4875	3859	79.2		4875	4184	85.8	5019	4483	89.3
Integrated Science	2721	1411	51.9		2468	650	26.3	2282	1139	49.9
Mathematics	9869	4770	48.3		9189	5218	56.8	8854	4767	53.8
Music	92	57	62.0		88	57	64.8	100	80	80.0
Office Procedures	1272	1039	81.7		1258	1030	81.9	1198	1013	84.6
Phys. Ed. & Sports	2690	2571	95.6		2780	2650	95.3	2964	2862	96.6

SUBJECT	Total Sitting	Total I-III	Percent I-III	Total Sitting	Total I-III	Percent I-III	Total Sitting	Total I-III	Percent I-III
Physics	2630	1444	54.9	2441	1603	65.7	2434	1693	69.6
Principles Of Accounts	1999	1537	76.9	1985	1363	68.7	2089	1563	74.8
Principles Of Business	3392	3120	92.0	3534	3151	89.2	3273	2934	89.6
Religious Education	695	489	70.4	709	540	76.2	667	493	73.9
Social Studies	6118	3047	49.8	6132	3324	54.2	5401	3098	57.4
Spanish	1063	673	63.3	1064	702	66.0	981	646	65.9
Technical Drawing	3252	2245	69.0	3284	2508	76.4	3296	2652	80.5
Textile, Clothing and Fashion *formerly Clothing And Textiles*	144	79	54.9	141	91	64.5	112	77	68.8
Theatre Arts	221	183	82.8	225	175	77.8	220	166	75.5
Typewriting									
Visual Arts	994	626	63.0	893	529	59.2	777	533	68.6

Total				2018			2019		
	Total	Total	Percent	Total	Total	Percent	Total	Total	Percent
SUBJECT	Sitting	I-III	I-III	Sitting	I-III	I-III	Sitting	I-III	I-III
Additional Mathematics	1219	796	65.3	980	687	70.1	995	735	73.9
Agri. Science (Da)	373	361	96.8	279	266	95.3	191	187	97.9
Agri. Science (Sa) As	3145	2870	91.3	3135	2631	83.9	3094	2813	90.9
Agri. Science (Sa) C&S									
Biology	6295	4387	69.7	6245	4632	74.2	5976	4592	76.8
Building Tech.: Constr									
Building Tech.: Woods									
Caribbean History	4373	3296	75.4	4091	2916	71.3	3854	2501	64.9
Chemistry	5518	2987	54.1	5523	3219	58.3	5289	3536	66.9
Economics	1135	955	84.1	1330	985	74.1	1517	1105	72.8
Elec. Doc. Prep. And Mgmt	5426	4837	89.1	5691	5431	95.4	5264	4524	85.9
English A	26321	18623	70.8	24078	18151	75.4	23494	19452	82.8
English B	7040	3893	55.3	6453	5268	81.6	6454	4442	68.8
Family and Resource Management formerly (Home Economics)	3408	3016	88.5	3310	2808	84.8	2801	2375	84.8

Subject									
Food Nutrition and Health *formerly Food And Nutrition*	5211	4795	92.0	5238	4717	90.1	4737	4288	90.5
French	927	721	77.8	897	716	79.8	797	545	68.4
Geography	3970	2514	63.3	3919	2784	71.0	3967	2894	73.0
Human And Social Biology	9001	4981	55.3	8955	5524	61.7	8350	4143	49.6
Industrial Technology (Building)	1937	1433	74.0	1891	1457	77.0	1971	1681	85.3
Industrial Tech, Electrical formerly (Elect. & Electronic Tech.)	1990	1309	65.8	2045	1495	73.1	2155	1786	82.9
Industrial Tech Mech. Formerly (Mech. Eng. Tech.)	1166	805	69.0	1214	899	74.1	1235	983	79.6
Information Technology	11753	9705	82.6	11690	10396	88.9	11881	10823	91.1
Integrated Science	5910	3048	51.6	5300	1582	29.8	5000	2626	52.5
Mathematics	23567	11838	50.2	22214	12845	57.8	21320	11645	54.6
Music	167	106	63.5	178	117	65.7	192	147	76.6
Office Procedures	3964	3376	85.2	4120	3504	85.0	3652	3187	87.3
Phys. Ed. & Sports	4451	4280	96.2	4606	4434	96.3	4821	4678	97.0
Physics	5415	3175	58.6	5170	3538	68.4	4988	3606	72.3
Principles Of Accounts	6042	4730	78.3	5872	4331	73.8	5979	4635	77.5
Principles Of Business	9289	8488	91.4	9402	8424	89.6	8854	8027	90.7
Religious Education	2181	1788	82.0	2249	1864	82.9	2046	1589	77.7
Social Studies	14948	8367	56.0	14664	8954	61.1	13009	8248	63.4
Spanish	4318	2876	66.6	4064	2834	69.7	3815	2643	69.3
Technical Drawing	3664	2573	70.2	3749	2920	77.9	3788	3092	81.6
Textile, Clothing and Fashion *formerly Clothing And Textiles*	1458	1099	75.4	1469	1132	77.1	1407	1207	85.8
Theatre Arts	817	720	88.1	916	774	84.5	952	803	84.3
Typewriting									
Visual Arts	1908	1296	67.9	1867	1160	62.1	1656	1215	73.4