

University of Alberta

What impact do same-sex classes have on a girl's academic success, personality,
and identity development, and what role do stakeholders and teachers play?

by

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A capping exercise submitted to the Department of Educational Policy Studies in
partial fulfillment of the requirements for the degree of

Master of

Education In

Educational policy studies

Faculty of Education

Edmonton,
Alberta December
12, 2023

Abstract

Indeed, the influence of school on students' lives can be long-standing and shape their personalities. Many of us discover our true selves when interacting with our peers when studying at school. According to Pittman and Richmond (2007), students are academically affected while attending school, and that is why the significance of same-sex schools comes into play. The question proposed in this research is, "What impact do same-sex classes have on a girl's academic success, personality, and identity development, and what role do stakeholders and teachers play?" As stakeholders gain a better understanding of the factors that contribute to the viability of same-sex schools, they can plan and adapt more accordingly in the future, based on new discoveries and research on how to optimize both learning and a safe environment free from stereotypes so that students in same-sex schools can thrive.

Keywords: Same-sex classes, Same-sex schools, Adaptive leadership, Adaptability, Stereotype, Gender norms.

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Background

In this section, I try to provide an overview of the background of the topic that I am studying including the history and origin of same-sex schools in the United States and why they came into existence. I will discuss gender differences in the brain and what factors need to be considered before establishing same-sex schools in order to optimize the experience. Last but not least, we must know the context, teaching, and other factors that can affect the impact of same-sex schools.

History

To unpack and have a better grasp on a topic, we need to shed light on the origin of that topic. Kabadi (2021) provides an explanation of why women in America were deprived and excluded from the educational system. According to Kabadi, it is because of some traditions and religions that were associated with systematic racism and how, in the 19th century, women advocated for having access to education equally as men. As a result, it caused the emergence of same-sex schools (Lepore & Warren, 1988).

As Johnson and Gastic (2014) mention, reforming public education with new strategies has gained popularity in recent years, especially among urban youth of color and low-income. A proposal of No Child Left Behind (NCLB) included authorizing same-sex schools to help schools struggling to meet mandates (U.S. Department of Education 2002).

A more comprehensive review of single-sex schools' history and No Child Left Behind legislation can be found in Tichenor et al. (2015). School districts that want to provide same-sex classes should have a rationale and conduct a review every two years to evaluate their performance and determine whether such classes are beneficial. Additionally, single-sex education and its popularity have soared in public settings (Bigler & Signorella, 2011). The

National Association for Single-Sex Public Education (NASSPE) reports that in the 2011-2012 academic year, around 515 public schools offered single-sex experiences in the United States, allowing parents to choose between coed or single-gender classes. In spite of this substantial increase in interest in same-sex classes, little research has been done, and what this limited research indicates is mixed results regarding whether single-sex schools are viable (Bracey, 2006; Solomone, 2013; Spielhagen, 2013; U.S. Department of Education, 2014).

There are few Canadian studies on single-sex education, and generalizing from studies from other countries should be done cautiously, according to Erling and O'Reilly (2009).

Moreover, fewer studies have been conducted on single-sex schools in elementary and high schools (Mael, Alonso, Gibson, Rogers, & Smith, 2005). It has been argued by Thompson and Ungerleider (2004), two Canadian researchers, that there are very few good quality single-sex studies. Trapline Elementary School in Yukon Territory, Canada, introduced single-sex classes in 2007 with 100 to 200 students enrolled each year.

Gender differences in the brain

The purpose of this section is to explore some stereotypes and scientific findings regarding gender differences in the brain (Pahlke et al., 2014).

In US history, researchers perceived gender differences to be significant (Eagly, 1995). Furthermore, gender differences were assumed to be biological. Nonetheless, these biological differences between genders that were assumed to exist during the twentieth century diminished in size and degree. The idea of unisex schooling became common by the mid-1970s, when educators believed genders were similar rather than different. Currently, there is a revitalization of the idea that males and females are significantly different in terms of interests and learning

(Liben, 2014). There is a popular belief that gender difference in males and females is caused by differences in the brain. It is likely that innovations in neuropsychology are responsible for the resurgence of this belief. Based on their analysis of works published about same-sex schools, Liben and Bigler (2002) found that those who advocate same-sex schools believe that gender differences are biological. On the other hand, neuroscientists contend that in terms of learning, there are no biological differences between the sexes. At very early ages, girls have different activities and toys than boys due to the interaction of biological mechanisms (Eagly & Wood 2013, for example).

Also, sex-based learning can be employed to yield the best results by assuming that learning behaviors are inherited biologically (Eliot, 2011; Tavris, 1992). In a study of 115 teachers in a single-sex school, Pahlke et al. (2014) found that proponents of single-sex schools are in favor of brain-based differences in learning and that these views might be influenced by stereotypes. Their prior entrenched beliefs about biological differences may unconsciously influence some pedagogical strategies they use. It is possible that these teachers perpetuate the belief that boys and girls learn differently for biological reasons. A teacher's pedagogical approach can, however, be influenced by a number of variables, such as the social context of school or teaching experience, according to Maher and Tetreault, 1993; Martino and Frank, 2006; Parker et al., 2002; Speilhagan, 2015.

What to know before establishing same-sex schools.

Some research findings highlight that female students have better academic accomplishments in same-gender classrooms. For example, Polish female adolescents who attended all-girls schools were compared to those who attended coed schools, all run by Roman Catholic sisterhoods. Female adolescents in single-sex schools scored on average 0.17

SDs, and compared to those in coed schools, had higher scores in science and humanities (Eisenkopf et al., 2015). The same thing goes for male students who are from a lower socio-economic background (Erling & O'Reilly, 2009). The brain development and the degree that these differences can be impactful on learning and the classroom and how generalized it is are also questioned by some researchers (e.g., Bracey, 2006; Mead, 2006).

Also, providing single-sex classes and extracurricular activities to students not only in elementary schools but also in secondary schools while ensuring that enrollment is voluntary must be considered as a means of making sure that those who are not inclined to attend single-sex schools can attend coed schools (Schemo, 2006). As Valdes (1995) points out, there is an assumption that gender is no longer a factor in same-sex schools since students are separated by their gender. The entanglement of sex and gender is deeply embedded in our social institutions and stems from the misconception that biological sex and gender are distinct. Moreover, students' experiences and issues in other segregated same-sex contexts such as events, gym locker rooms, and restrooms can be used to improve the experience of students in same-sex schools (Johnson and Gastic, 2014).

A study conducted by Spielhagen (2006) concluded that single-sex classes can be viable if developed appropriately so they can become an alternative to coed classes for middle school students. More than 81% of students who participated in the Tichenor et al. (2012) study expressed enthusiasm for single-sex classes the following year. In this study, teachers' preparedness was related to the success of single-sex classes. There was professional development for teachers at this school focused on single-gender pedagogy. Additionally, the school offered some book studies that encouraged teachers to incorporate research about positive impact on single-sex learners, teachers need to alter the way they

teach and change their pedagogy.

According to Blakesley (2015), many factors influence the effectiveness of single-sex classes, including parental income, curriculum, and teacher experience. The arduous task of controlling these variables makes research on single-sex schools difficult. Additionally, in their study, they found that a combination of single and coed classes works best for some students as recommended by some students. In the beginning, students can start single-sex classes and switch in late elementary to coed classes, so students can prepare themselves for high school.

The impact of single-sex classes on different disciplines

Among some reasons that female adolescents might flourish in all-girls classrooms can be the fact that they tend to be less disruptive than males (Hayes & Liben, 2014; Hoxby, 2000; Jackson, 2016; Lavy & Schlosser, 2011). For example, these researchers found that achievement can spike in all-girl classrooms because of less time spent on disciplinary issues and more activities related to learning.

In another study, Halpern et al. (2011) concluded that no empirical evidence supports the claim that single-sex schools enhance academic achievement. Contrary to popular belief, they argue that same-sex education can reinforce gender stereotypes. Cohen (2008) argues that single-sex schooling reinforces the idea of masculinity and subsequently leads to more violence. According to Glasser (2011), males argue more in single-sex classes than females despite the fact that the curriculum is the same. Johnson and Gastic (2014) discuss another aspect of same-sex schools that affects boys and girls. According to the study, chi-square statistics showed that students who attended coed schools face more bullying than those who attend single-sex schools. They also found that girls attending coed high schools experienced

more bullying than girls attending single-sex high schools. Students who attended single-sex schools were also less likely to be bullied if they were female gender-nonconforming. In contrast, female gender-nonconformity students attending coed schools were more likely to experience bullying. The study also focuses on extracurricular activities and how these activities relate to the school's culture and gendered values.

Researchers Tichenor, Piechura and Heins (2012) conducted a study in which parents of elementary school students expressed their support for single-sex classes and how these classes impacted their children's attitude, self-confidence, motivation, and independence positively. According to this study, most students and their parents were in favor of single-sex classes. In terms of findings, this study was similar to South Carolina's studies on single-sex classrooms. A study conducted by the South Carolina Department of Education in 2010 found that more than 65% of students felt that single-sex classes were helpful academically and positively affected their attitudes. According to Tichenor et al. (2012), girls share their opinions in all-girl classes more than boys and ask more questions. In this way, it speaks to a single sex class objective of breaking down gender stereotypes. There is a tendency for girls to be more reserved and less likely to ask questions when they are in a class with boys.

Blakesley (2015) interviewed some volunteers from Trapline Elementary School and found that students in single-sex classes would share their concerns and opinions more. Moreover, teachers were more likely to take risks because of the safe environment. Some students also cited the dread of speaking up as a reason for less participation in mixed classes. For some students, single-sex classes let them focus better due to fewer distractions, and teachers were able to select topics and activities that students enjoyed, which motivated them to learn better. Teachers considered exploring some non-traditional activities such as bride

building for girls to be valuable. During the discussion about the negative aspects of single classes, teachers and parents expressed concern about social disadvantages and inadequate interaction between boys and girls, later leading to problems when they must be in the same class. It is also possible for girls-only classes to result in some drama due to confrontational girl-on-girl behavior.

Project Design

Through single-sex classes, the aim is to improve the learning environment for students by focusing on some specific needs that by being in a coed class, these needs cannot be addressed. It has been discussed throughout that girls and boys may not be able to reach their full potential in coed schools for a variety of reasons. Establishing same-sex schools relies on stakeholders and teachers who at the forefront are faced with a formidable task of improving what is lacking in coed schools and so many variables are already in play to complicate the task. These variables can include religious or faith-based differences that make one context entirely different from another, which makes utilizing available resources and research on same-sex schools for some contexts impractical and inapplicable. As Berenbaum and Blackmore, 2011(see also Muehlenhard & Peterson, 2011; Signorella & Bigler, 2013; Zosuls, Miller, Ruble, Martin & Fabes, 2011), argue, social dimensions and social construction influence students' learning styles. In light of this, Johnson and Gastic (2014ab) as well as Speilhagan, (2011), note some stereotypes may be socially constructed by the same-sex class. Meanwhile, some male teachers may believe in the greater ability of boys to do technology, science, and math (STEM), which is implicit, and they often associate girls with non-STEM abilities (de Kraker-Pauw et al., 2016, p. 337). In same-sex schools, it would be quite dangerous if teachers or other stakeholders held on to some beliefs, such as teaching

techniques that reinforce gender stereotypes and presumptions about learning potential for girls and boys without scientific basis (Signorella & Bigler, 2013). The difference in values, experiences, beliefs, and ideologies among the stakeholders involved in single-sex schools is always a concern, according to Pahlke, Bigler and Patterson (2014).

Due to the fact that there is only one gender in same-sex schools, some people think gender discrimination would not exist. However, we also need to remember that sexism, discrimination, and gender bias are social issues that can affect students even in same-sex schools (Johnson & Gastic, 2014a; Kearns, Mitton-Kukner & Tompkins, 2017; Pahlke et al., 2014ab). My first thought after reading these studies and different opinions that teachers may hold is the importance of adaptability. Adaptability is especially important in an area like same-sex schools where ideas are forming and evolving depending on the latest findings and research. Teachers and other stakeholders should align themselves with these ideas rather than rigidly referring to some inaccurate ideas, such as the idea that boys are better at STEM than girls or that having same-sex schools will eliminate discrimination and gender bias. This is why I think adaptive leadership is applicable for same-sex schools. In these circumstances, Northouse (2022) argues that leadership of this type encourages people to show adaptability skills despite the fact that switching from coed classes or coed schools might be challenging for students and teachers. Therefore, it is predictable that issues may arise in a single-sex school and leaders are required to focus on adaptations as a response to these circumstances and environments. Essentially, this kind of leadership focuses on preparing people for change and how to deal with it. Leaders in adaptive leadership act in accordance with followers' situations, so their behavior is determined by their followers.

Heifetz's 'Without Easy Answer (1994) has been influential in adaptive leadership and

the idea of productive change, which encompasses societal, organizational, and communal changes. As a matter of fact, this kind of leadership pertains to my case since it assists people with difficult challenges like sexism and provides them with opportunity and space to deal with unavoidable changes in beliefs, attitudes, perceptions, and behaviors (Heifetz, 1994; Heifetz, Grashow, & Linsky, 2009; Heifetz & Laurie, 1997; Heifetz & Linsky, 2002; Heifetz, Sinder, Jones, Hodge, & Rowley, 1991). This style of leadership requires leaders to motivate people to explore and change their values as a result of learning a new behavior. Biological bias explains that the ability to adapt would allow people to progress and thrive under new circumstances. As physicians diagnose a problem and utilize their expertise, leaders who use this style do the same. Additionally, adaptive leaders use psychotherapeutic bias to help people learn new behaviors and attitudes by providing a supportive environment.

Adaptive leadership involves identifying and solving challenges and problems that are not easy to identify. Through adaptive challenges, leaders encourage others to define challenging situations and work on and carry out solutions. People would resist adaptive challenges since they require them to change their priorities, beliefs, and values. A metaphor for adaptive leadership is to get on the balcony, which means to see what is going on a dance floor when people are dancing, one needs to be above the dance floor to be able to see the bigger picture by stepping out of the chaos of the dance floor to take a clear view. This metaphor can be better understood by thinking of a principal in an elementary school. You can observe all the factors that go into educating children from the balcony, such as teachers and staff, budgets, teacher evaluations, parents, and discipline with the children themselves. Additionally, people usually feel more comfortable if their beliefs, values, and attitudes are consistent. Adaptive challenges may cause distress and uncertainty for individuals because

they force them to change. While some distress can be productive, too much can be counterproductive (Northouse, 2022). It is the leader's role to provide clarity, certainty, and reduce stress in this situation.

When girls are in a class they might send a greater level of anxiety to their classmates so same sex classmates might show the same level of anxiety, and also girls can express a variety of emotions at a higher level than boys, including anxiety, and this could be due to existing social norms associated with gender (Weinclaw, 2023). In these norms, it may be implied or explicitly stated how girls should behave, and this makes it more acceptable for girls to express anxiety (Charbonneau et al, 2023). Weinclaw (2023) also discusses these longstanding stereotypes that little girls should be proficient in home arts and have good verbal skills. In the classroom, girls and boys can show conformity to these gender norms or break free from them. It is possible that a hidden curriculum is responsible for all of this, and girls and boys are told from an early age that they are different (Tompkins, Kearns & Mitton-Kukner, 2017). Consequently, a hidden curriculum would reinforce some norms that already exist in society and are considered appropriate. Furthermore, teacher expectation can reinforce these stereotypes as teachers might believe girls are better at art and boys at math, and students might work harder to please their teachers in these areas (Briskin, 1990; Martino & Frank, 2006; Weiler, 2001; Breunig, 2009).

A teacher can relieve the stress of students in a situation like this by utilizing adaptive leadership and psychotherapeutic bias (Northouse, 2022). Due to these norms, girls may exhibit emotions and, as a result, express more anxiety, causing same-sex classes to have a high level of anxiety as the girls interact with each other all the time (Weinclaw, 2023). By switching a stressful environment to a safe one, a teacher and other stakeholders can create a

space in same-sex classes that is safe for students and teachers to discuss stereotypes. A website titled 'Ten ways to challenge gender stereotypes in the classroom' (2021) it emphasizes that teachers need to adapt some new ideas when confronted with stereotypes. According to this website, when a boy wishes to wear a mummy bear outfit or princess dress, even though it was not the norm, he is encouraged to do so as it was his choice. Stereotypes like girls cannot play soccer or boys cannot wear pink can be challenged and questioned. By having a conversation, all these stereotypes can be discussed freely. An adaptive leadership approach can involve challenging gender norms by eliminating boys and girls jobs and using an inclusive language.

Limitations and further research required

According to Blakesley (2013), single sex schools have some limitations. In the case of single-sex schools, it is difficult to have a discussion based on evidence because there are not enough studies. Blakesley (2013) raises concerns about the difficulty in expressing whether there is academic gain in same-sex schools with certainty due to the lack of sufficient evidence. Secondly, the findings of a study cannot be generalized since they may differ in another culture. According to Johnson and Gastic (2014), same-sex schools also deal with traditional gender roles. They point out that there is a need for more than anecdotal evidence regarding whether boys can open up emotionally in a same-sex school or if girls are capable of excelling in math, and how empirical evidence is beneficial in this context. Shapka and Keating (2003) recommend further research on the possibility of hidden gender curriculum, particularly in mathematics and science. By participating in professional development courses, teachers can stay up-to-date and adapt. However, further research is needed to assess the effectiveness of these courses to determine if they aid teachers in adapting and changing their

pedagogy (Hanceroglu, n.d.).

Conclusion

This paper examines how same-sex classes affect girls' academic success, personality, and identity development. Furthermore, I discussed the crucial role stakeholders and teachers play in this regard. To better understand same-sex classes, it is important to understand how the idea of same-sex classes originated. Women who advocated for equal access to education in the 19th century are pivotal to the creation of same-sex classes (Lepore & Warren, 1988). The idea of reforming same-sex schools remains a priority in education, which is why proposals like No Child Left Behind (NCLB) that oblige schools to meet mandates (U.S. Department of Education 2002) have been popular to ensure that schools are effective for kids. In order to discuss single-sex schools properly, we have to discuss stereotypes associated with gender differences in the brain (Pahlke et al., 2014). In the twentieth century, many believed that gender differences were biological, but that belief faded over time (Eagly, 1995). The idea that males and females have remarkably different learning abilities and interests has recently gained popularity (Liben, 2014).

To optimize the efficacy of same-sex schools, we ought to examine other cases and examples. Parents and children should have the freedom to choose whether or not to attend single-sex schools, and extracurricular activities play an important role in elementary and secondary schools (Schemo, 2006). A good example of how to enhance learning in single-sex classes is by having professional development for teachers that emphasizes single-sex pedagogy, according to Tichenor et al. (2012). Cohen (2008) argues that single-sex schools reinforce gender stereotypes like masculinity, which can lead to greater violence in the future. Johnson and Gastic (2014) concluded that bullying is more prevalent in coed schools than

single schools in a study they conducted. Tichenor, Piechura and Heins (2012) discuss another positive aspect of same-sex schools and how they found that children in same-sex schools were motivated and self-confident. It becomes increasingly evident that same-sex schools are evolving and that stakeholders and teachers must adapt in order to help students reach their fullest potential. As we dive deeper into this topic, we find a number of new ideas about how to help students reach their fullest potential. Adaptive leadership, according to Northouse (2022), encourages people to adapt to new situations and change their values and beliefs if needed, which can be helpful in some schools, as well as the fixed ideas that some teachers have about different genders, such as believing boys are better at STEM than girls (de Kraker-Pauw et al., 2016, p. 337).

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