Developing the Girl as a Leader

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Abstract

Single-sex educational environments can create young women who are engaged, active leaders. Girls receive differential treatment in combined-sex education environments. Girls often do not receive the encouragement or instruction to assume leadership. I want to identify the elements of single-sex education that foster female leadership and consider their application in the public education system.

The literature in the field clearly indicates that girls and boys develop differently, learn differently, and therefore have unique needs in education.   While girls in education have made great strides in the last forty years, a gender gap still exists in education. Girls' test scores have improved drastically in the areas of math and science since the 1980s, but girls enrollment in math and science courses are still not equal to that of their male peers. While the test scores attest to girls' abilities, classroom treatment is still differential based on gender. Studies also show that girls benefit from single-sex education, both in academics and in how they perceive their educational experience.

While test scores may indicate that girls are improving in comparison to their male colleagues, girls receive less and different attention from teachers than their male peers do. In all girls' schools, girls do not experience that differential treatment. Girls in all girls' schools are in fact learning and practicing powerful leadership skills that girls in coeducational schools are not.

Chapter 1 Introduction

My first week of work in an all-girls, kindergarten through eighth grade independent school proved full of eye-opening discovery for me, a new teacher with one year of experience in combined-sex public schools. I saw fourth grade girls taking the hands of kindergarten girls, showing them where to go, what to do, and engaging them in friendly conversation. I witnessed seventh grade girls teaching each other about concepts of physical science, and conducting experiments in teams. I spoke to a graduate of   school in her freshman year of high school; she had just secured a paid engineering internship at a firm in San Francisco usually reserved for high school seniors.   Everywhere I looked I saw girls confident and comfortable speaking with adults, leading class discussions, public speaking, and taking the lead in peer-to-peer community building exercises.

As I entered the field of education, I reflected back on my own young life and education. I noticed that my educational experience was positively influenced by my parents as well as two mentors at school. These adults gave me the confidence to strive academically, athletically, and in my community. As I began my student teaching experience in a public elementary school, I noticed that many girls were not receiving the encouragement and mentorship at school needed to create confident learners and leaders. I saw boys eclipsing girls in the classroom, speaking louder, more frequently, and with more confidence. I saw boys excelling in experimental science class, as girls shrank into the background. I was shocked-- such gender roles are supposed to be a thing of the past.

The question loomed in my mind: how could these girls be given the support they need to thrive and grow into leadership roles?

My time in an all girls school has left me astounded and impressed by the leadership the girls were taking in all aspects of their school life, especially in contrast to my previous experience in schools in which boys often dominate the classroom scene, louder and more confident than girls. I had spent the previous year wondering why the smartest girls in class did not speak up with the answer, why boys dominated faculty discussions about behavior, and watching girls make attempts to gain the attention of their male peers instead of focusing on their studies. What is the difference? Upon reflection, I believe that given full reign over the academic and social space of their school, girls in an all-girls school expand to fill the space that could be shared by both genders, taking on the role of academic, leader, and mentor as they move through their schools and their worlds.

Statement of Problem

Girls receive differential treatment in combined-sex education environments compared to their peers in single-sex education settings. Students in K-8 all-girls schools are benefiting from a different culture, different instruction, and different expectations that are contributing to a powerful leadership experience. The problem of inequitable education appears to be most egregious in two sub-groups: Latina girls and all girls in

science and mathematics. Why is single-sex education producing such engaged girls ready to take on academic and leadership opportunities?

Purpose Statement

The purpose of this study is to identify the strategies that all-girls schools use to cultivate leadership development, growth, and opportunity for female students. Strategies include academic, social emotional learning, athletics, and extracurricular activities.

Research Questions

How do all-girls K-8 schools successfully develop strong leadership in female students?

What do girls need in schools to be engaged in academics and leadership?

Theoretical Rationale

Theorist Lev Vygotsky's writing on social constructivism and students reveals that students are active participants in their acquisition of knowledge in a larger cultural context.   They do not simply absorb facts, but construct knowledge based on their experience (Vanderburg, 2006).   Individual mental functioning is derived from social interaction and social interaction underlies all higher functioning. Individual actions, functioning, and thought are shepherded by signs and tools that come from social interactions. These signs and tools not only guide action but can shape change and evolution of action within individuals. These cultural tools and signs can serve to empower, constrain, change, and shape individual thought and action. (Penuel &Wertsch, 1995).

Vygotsky wrote that human thought is grounded in the individual's culture, historical setting, and institutional participation. As such, thought and learning are rooted in social milieu and activity-- social context affects the learnings absorbed by students. Vygotsky felt that individual development is a process of the transformation of the individual based on social interactions. He thought that these social interactions were more influential in development than individual functioning (Penuel and Wertsch, 1995). Each social experience provides a student with information and meaning that can be applied to an idea or fact, thus allowing for individual growth in a social context. Vygotsky felt that in this respect, social interactions were especially important to building knowledge in students, providing students with information about how to apply learning in society. Vygotsky noted the importance of students' social interactions with more experienced members of society (a peer or a teacher) to transmit these learnings. From these experiences, students can assign meaning to new ideas and revise meaning of existing ideas. These ongoing interactions also hone communication skills, problem solving skills, and social skills. As students become more adept in these exchanges, they can become more active participants in their own learning, shaping the interactions and thinking critically about the learnings they draw from them (Vanderburg, 2006).

Assumptions

Single-sex education gives girls more leadership training and empowerment that girls in a combined-sex environment are not receiving. Girls in public combined-sex education are

experiencing differential treatment in the classroom compared to their male peers. This differential treatment is causing girls to fall behind in higher academics and self-esteem. All girls have the right to an equitable education.

Background and Need

In 1972 the United States government enacted Title IX of the Education Amendments law. Known commonly as Title IX, this law states that no person shall be denied equal access to education in the United States based on gender. This act became most well known in terms of its impact on college athletics, but pertains to all federally funded education programs. This includes students' equal access to education in public school classrooms in the K-12 years.

Chapter 2 Review of the Literature

Introduction

This section addresses the previously published material pertinent to the topic of single-sex education for girls in the K-8 years. Proponents of equitable education for girls and women date back to the 18th century in the United States. Over time, all-girls schools have gone in and out of favorability. Currently, all-girls schools are experiencing a resurgence in popularity due to extensive research since the 1980s on the unique social, developmental, and academic needs and abilities of girls and boys, respectively. At present, the majority of single-sex schools are private schools, both independent schools and schools with religious affiliation, with notably few exceptions in the public school sphere.   The application of single-sex education in the public school system is limited because as a public institution, gender segregation is strongly discouraged. However, there have been experiments with single-sex schools and classrooms that report great success for students.

The literature strongly shows that single-sex education benefits girls compared to their peers in traditional coeducational schools. Within the areas of need and impact three sub-groups emerge: girls in math and science; Latina girls; and access to resources. The literature is predominately focused on the high school years, with more studies of primary education coming from researchers in Europe.

Historical Context

The 1991 publication of the AAUW's report *How Schools Shortchange Girls* much

progress had been made in public education to achieve gender equity in classrooms, yet

girls continue to face a unique set of challenges in schools (AAUW, *Gender Gaps*, p. iii).

In fact, the report postulates that girls leave public schools with lower levels of self-

confidence and self-esteem than their male peers. While girls have seen increases in

academic performance since the 1970s, the general inequity of women in society

continues to present barriers for success. The larger scope of society has yet to catch up

to the improving performance of girls (Younger and Warrington 2007).

Review of the Previous Literature

Developmental Differences

Developmental research on girls speaks to the idea that girls and boys develop

differently, and accordingly have different needs as they develop.   Girls need healthy

self-confidence to thrive and points to three critical factors in the development of self-

confidence in girls: confidence, competence, and connection (Deak, 2002). Primary

school girls from co-educational schools polled on their attitudes toward school reported

higher levels of engagement than their male peers; however, boys reported higher self

esteem at school (Gray & McLellan, 2006). For most girls, education and socialization

around development and social-emotional learning takes place at schools, but most co-ed

schools do not provide girls with appropriate support in this arena (Sprague, 2003).

Passages Northwest (an all-girls outdoor education program) studied and evaluated their

ability to provide girls with opportunities to build courage. They found that an

environment where girls were able to build relationships, acquire new skills, and test

those new skills in a supportive environment resulted in increased measures of courage

among participants (Whittington & Mack, 2010).   A study of bright boys and girls

revealed a critical difference in the way boys and girls viewed difficulty. Girls were

quicker to blame themselves and their abilities if a task was difficult, and the resulting

drop in confidence made them less efficient learners (Halvorson, 2011). Boys saw the

difficult material as a challenge to be taken on, and redoubled their efforts to succeed.

The difference in their reactions likely can be traced back to the feedback boys and girls

receive from parents and teachers. Girls who are quiet and controlled in the classroom

and at home fit the model "girl" role, and are praised for their behavior. Girls who do

well in school are often praised for being smart, or clever, not for being diligent workers

or experimenters.   Boys on the other hand, are not expected to be quiet and controlled,

and as a result get more feedback from parents and teachers on paying attention,

focusing, working a little harder, and other effective learning strategies. When faced with

a difficult challenge, the bright girls in the study seemed to look to intrinsic intelligence,

feel they were not smart enough, and then hit a wall with the material. Boys did not

blame their inborn intelligence, and instead coached themselves to pay better attention or

work a little harder when faced with new, challenging material (Halvorson, 2011).

In 2005, the National Coalition of Girls Schools conducted a study of alumnae of all-girls schools to poll graduates on how they perceived their education. The majority of girls polled felt that their education prepared them to flourish in college and the careers they anticipated having post-college. When asked to determine their level of satisfaction with certain aspects of their schooling, alumnae noted as being very or extremely satisfied with the following at their schools: fostering of self-confidence, encouragement to meet new challenges, leadership opportunities, and sense of community belonging. Moreover, these alumnae felt that these crucial aspects of their education were better provided to them at their all-girls schools than to their peers who had attended co-ed schools (NCGS, 2005).   Girls felt that their all-girls schools provided them with superior opportunities to engage in public speaking, technology, science, math, and writing than co-ed schools provided their peers.

A study of schools in Britain reveals that the developmental differences between boys and girls can color classroom environment and access to instructional time. Boys tend to dominate classroom situations with disruptive, loud, off-task behavior that lead teachers to think the boys needed more direct teaching and educational encouragement to achieve academic success. Girls, seen as quick to get to work and more diligent in the classroom, received less learning support and teacher attention than their male peers (Younger, Warrington & Williams, 1999).

School Culture

Research suggests that identity and culture of a school has an impact on student's self perception and the tone set by the institution can encourage students to adhere to or disrupt the traditional notions of idealized gender roles (Wardman, Hutchesson, Gottschall, Drew, & Saltmarsh, 2010). Attitude of students about school, about gender, and about self-confidence vary from school to school based on the culture of each individual school (Gray & McLellan, 2006).Additionally, college age women's self-confidence is impacted by their interactions with faculty, which is not the case for male students (Sax, 2009). Traditional gender roles, including ideas of femininity often do not include academic success, outspoken participation, and competitive drive. A study of primary schools in Wales revealed that girls who were able to balance typical "girl" behaviors with academic success were more popular and well liked by their peers than those girls who chose not to engage in typically female dynamics. Further, the study found that there was a stark difference between what makes a "good" male and female student. For girls, academic success was not included in the definition of a good girl pupil. In fact, girls who focused on academic drive and success without tempering their social identity with typical "girl" behaviors were described by peers as acting like a boy or a man (Renold & Allan, 2006). Because typically "girl" behavior is quiet and studious, teachers can fall in to the habit of viewing girls as the model pupils in class, recruiting them to help control the boys in class, and relying on them to behave well (Epstein et al., 1998). The NCGS notes that all-girls schools provide a milieu in which

girls put academic first, in which they have access to every opportunity rather than equal opportunity, in which girls feel comfortable taking on new challenges and risks (NCGS, 2005). It is this environment in which girls are able to thrive, to expand, and to develop into young leaders.

Girls often go unnoticed or unrecognized in schools because they are seen by teachers as more cooperative, docile, diligent, and quiet than their male peers. Because girls are seen as less confrontational and less outspoken in classrooms than boys, their off-task behavior often goes unnoticed, as it falls under the guise of accepted female behavior. Girls then are not receiving the guidance and attention from teachers who are directing their attention to louder, more needy male peers. The same report suggests that in single-sex classes, students felt more confident about their work and felt better able to concentrate. All students felt they could participate more openly and freely during class discussions, asking more questions and not feeling embarrassed about their contributions. These classes were especially successful when teachers viewed all students as individuals, and addressed needs as such. By not assigning any student a general role based on gender, the needs of each student were more authentically addressed. Success in single-sex classrooms also hinges on a common culture and set of values shared by teachers and students, creating an environment of collaboration, encouragement, common purpose, and community (Younger & Warrington, 2008). In a study of student attitudes toward school in a co-educational school, 53% of boys felt that the boys in their class

were very well behaved, where as 26% of girls felt that those same boys were well-behaved (Gray & McLellan, 2006).

Girls in Math and Science

Girls' enrollment in advanced sciences does not equal that of their male peers. Similarly, schools continue to reinforce stereotypes that girls' strengths lie in the humanities while boys' lie in math and science through the messages schools send students by way of counseling, teacher attention, and role models. In primary schoolchildren, the gender gaps are less significant in test scores. As students enter secondary school, test results show that girls tend to out perform boys in language arts but boys out perform girls in math and science (Corbett, Hill, & St. Rose, 2008). In England, despite rises in girls' scores on tests in math and science, girls are still choosing more traditionally gendered career paths. This would indicate that despite ability in math and science, girls are being encouraged by school culture and wider society to pursue more "female" career paths (Younger and Warrington).

A study of middle school children in Belgium examined the effect of single-sex school and single-sex classrooms within mixed gender school on score in math and language for both girls and boys. Gender had no effect on the achievement of boys, however, in the area of mathematics girls in single-sex schools made more progress than girls in coeducational schools, even in single-sex classrooms within those schools (Van de gaer, Pustjens, Van Damme, & De Munter, 2004). For girls, it was not just being in

mathematics class with other girls, but being in an all female educational institution that proved to be most beneficial to their academic achievement.

Latina Girls

Latina girls drop out of school more than black girls and white girls and more than any group of boys (New York Times, March 25, 2001.) Socioeconomic status is a factor not only in dropout rates but in school life and student health. Students of low socioeconomic status can often not afford to participate in extracurricular activities, which have been proven to create a positive impact on student's self-confidence, feeling of community, and overall health. Girls from low-socioeconomic backgrounds and families face graver challenges than their peers in higher-socioeconomic brackets. Family socioeconomic status affects girls' access to school resources, which directly affects educational outcomes (*How Schools Shortchange Girls,*1992).

Latina girls are underrepresented in GATE, special education, and Advanced Placement (AP) classes. Of the Latina girls who do take AP classes and are less likely to pass the AP exams than their white and Asian counterparts. Amongst the Latina population, girls of Mexican Americans decent comprise the largest share of the Hispanic population but they comprise the lowest level of AP test takers.   Latina girls do well on national tests in comparison to Latino boys, but their scores still fall far short of Asian American or white students of both genders (Ginorio, 2001).   Hispanic girls experience greater drops in self esteem between elementary school and high school than do white or black girls. (S*hortchanging Girls, Shortchanging America,* 1991)

In addition to these statistics, Latina girls face a set of challenges that navigating the relationship between home and school that their white peers do not. A student's conception of herself as a learner and as a girl is largely shaped by her socio-economic status, class, race, ethnicity, and age, among other factors (*Gender Wars,* 2001). For white middle class Americans the goals, values, and norms of family, peers, are school reflected in one another. Cultural and social actions that are rewarded at home correspond to those valued at school and exhibited by peers. The systems of home, school, and friends reinforce each other.   Schools can either support Latina students' culture with inclusivity or send a message of exclusion that forces Latina students to make a difficult choice between school and home. For Latina girls, the systems in which they move do not necessarily reinforce one another and may in fact come into conflict with one another. The Latina girl may face challenges such asking her to choose between school and home, ethnicity and cultural norm, or individualism and community-centric thinking. This creates confusing and incongruous options of self conception for a young Latina.

Family context is the first context in which any girl forms images, ideas, and dreams of who she is and what she can be in her life. Latino families frequently experience low socioeconomic status, distrust of the dominant culture (due to political marginalization), and segregation in poor neighborhoods. All of these factors can shape a family's relationship to schools, their ability to advocate for their students, and provide

the background knowledge and support to help their students prepare for continuing education.

Access to Resources

Women and children experience poverty (*How Schools Shortchange Girls,*1992) at a much higher rate in the United States than men and boys. Despite recent progress in academics and the workplace, women are still largely represented in traditionally gendered occupations. This is compounded by interactions with race, women of color are more likely to have marginalized jobs that are impacted by both race and gender (Andersen & Hill Collins). Both racial background and total family income impact student academic performance. As American schoolchildren continue to face divisions based on race, ethnicity, and socio-economic status, students in marginalized groups will continue to face inconsistent support and progress (Corbett, Hill, & St. Rose, 2008). The gap between students from high income families and low income families is significant: 23 points on the National Assessment of Educational Progress (NAEP) reading exam and 24 points on the NAEP mathematics exam. Reading scores are similarly affected by family socio-economic factors. On the same exam, 61 % of 12th grade students from low income households scored below basic in math proficiency while 66% of students from higher income families preformed at or above basic proficiency (Corbett, Hill, & St. Rose, 2008).

Among the challenges facing low-socioeconomic status students are expectations from family, peers, and teachers. Too often, expectations are low for students from minority cultures and low income families (Younger & Warrington, 2007).

Statistical Information

The National Center for Education Statistics (NCES) provides statistical information and research on educational topics. The NCES published a report by Catherine Freeman (2004) in which she reported that women have made improvements in education and the large gap between males and female achievement is decreasing. Women are still underrepresented in some fields as well as in doctoral programs.

Special Collections

The NCES published this researched-based report called *Encouraging Girls in Math and Science: IES Practice Guide* as a resource for teachers. The report uses evidence to inform recommendations to teachers on how to provide support to girls in math and science. The report is designed to be practical and usable, giving classroom teachers new strategies to work with girls that do not require restructuring their classroom systems.

Responsive Classroom is a behavior management and social-emotional learning program that focuses on teaching through modeling behaviors. Responsive Classroom aims to aid student academic achievement while simultaneously reducing problematic behavior and encouraging responsible behavior.   Responsive Classroom provides an excellent framework for teaching students how to work in groups, and how to make each

role in a group a position of leadership and significance by teaching the appropriate academic and social skills needed to thrive within a group environment.

The Education Resources Information Center (ERIC) is an online database that catalogs research in education. This article *Gender Differences in Educational Achievement within Racial and Ethnic Groups (*ERIC Digest Number 164) argues that gender is not the only factor to consider; gender interacts with class, race, and ethnicity. The article notes that while girls no longer face the same disenfranchisement they did previously, gender still colors course selection and paths of study to traditionally subject areas. The ERIC website provides a powerful resource to educators to leverage current evidence-based research in their teaching practice.

The Women's Equity Research Center website provides teachers with guidance in teaching science, math, engineering, and technology to female students with an emphasis in helping girls feel confident in these areas.   These are the areas of study that are typically gendered as "male," and in which girls continue to be underrepresented.

Administrative Records

A review the strategic plan for an all-girls school revealed that the school was intentional in using research about the development of girls to better both best teaching practice and the school culture. Collaborative projects are a vehicle for both academic instruction and an opportunity for girls to work together, form bonds, and navigate group dynamics.   A clear emphasis is placed on community development, inclusivity, and a culture of safety

where girls can feel confident in their ability to make mistakes, grow, and try on new roles and skills. Community engagement is also encouraged through a service learning program that focuses on teaching students to care about their larger communities. A premium is placed on experiential learning, including hands-on activities and exploration to help girls on their paths of educational, intellectual, and social-emotional growth. The school is both aware that an all-girl student body has a unique set of needs and strengths spanning the intellectual, the social-emotional, and the developmental.

Interview with an Expert

Sample and Site
In this study, the sample was a Head of School of an all-girls K-8 Independent school in

Northern California.

Ethical Standards
The research adheres to guidelines for the study of human subjects as articulated by the

American Psychological Association (2010). Additionally the research proposal was

reviewed by the Dominican University of California Institutional Review Board for the

Protection of Human Subjects (IRBPHS) approved, and assigned number 8285.

Audrey Wellington, Head of School, Northern California.

Audrey Wellington (pseudonym) has worked in girls' education for over fifteen years,

both as a teacher and as an administrator. She began her career as a high school history

teacher. Wellington served as head of school for an all-girls high school for eleven years,

then as the head of a K-8 all-girls school for three years. Wellington is now the

headmistress of an all-girls Pre-K to 12 school.

Wellington feels that research clearly indicates that there is a fundamental

difference in the way men and women, and thus, boys and girls, see themselves. Girls are

more prone than boys to being afraid of failing and being afraid of something they think

they cannot achieve. In an all girls environment there is less hesitancy around trying new

things. If an all-girls school has a math or science club, if girls do not join, no such club

will exist; however, the idea of expanded opportunity goes beyond the idea that girls inhabit all space in an all girl's school. Wellington has seen that when a school truly embraces its identity as a single sex school, girls are taught in classrooms where getting your hands dirty is part of the pedagogy. Girls are pushed to think of themselves in all possible roles and to try things. Wellington notes that sometimes in an coed environment, it is too easy for girls to play the perfectionist and there is not room for a girl to form her identity when the role of "typical" boys and girls are espoused. The class clown is typically a "boy role," but in a single sex school, it's a girl's role.
In Wellington's experience, all-girls schools allow for expanded definitions of what it means to be a girl-- there is room for the class clown, the jock, the girly girl, and everything in between. Girls are free to form their identifies without comparing themselves to boys.

Wellington feels that one of the strengths of a girl's school is that girls try on different roles in a much greater degree in an all girls environment than they do in a coed school. In the case of academics, girl's schools fully inhabit the classroom. Girls are encouraged and forced to play the role of listener, of do-er, and mediator, learning what it means to embody each role. The classrooms in girls' schools are often collaborative in nature because all-girls schools do a lot of process oriented work, and research in child development reveals that girls thrive in a more collaborative setting. Wellington says this emphasis on collaboration is a psychology the education community recognizes about the way girls' brains work. Within this context, girls are then encouraged to find their own

leadership style. The social emotional intensity of the all girl environment gives girls the opportunity to practice mediation and negotiation. Wellington warns that without proper adult guidance, that intensity can turn to mean girl-victim dynamic, but if teachers are doing their jobs correctly, then girls become advocates for themselves.   Girls need opportunities to collaborate and compete. Girls need to feel safe and have the ability to compete in an environment that respects who they are. This respectful competition gives girls a chance to test their mettle but not in a way that results in feeling of rejection. As girls develop in an all girl's school, they do not see themselves through a lens that compares them to their male peers. By removing this piece, Wellington sees that girls are able to develop academically and socially without viewing themselves as being judged or evaluated by boys.

Wellington asserted that many credential programs do not do well in preparing teachers to teach leadership to children. Teacher training should focus on how to do group work and how to create a dynamic in group work that values all roles. True leadership involves consensus building and leading from within. Wellington sees a need for the education community to do a better job as schools and educators recognize that group work takes more skill and teaching then having a student work on their own. Teachers must be prepared to provide instruction on negotiation, evaluation, how to train students to determine who is responsible for what work within the group. This is the definition Wellington works with in her school, the idea that real leadership development is recognizing how to get the best out of a group. Schools need to do more training and

practicing these strategies as part of professional development.   Wellington noted that

the Responsive Classroom program provides a good framework for group work

instruction. Wellington has experience implementing conflict resolution training and a

good social-emotional curriculum as further ways to teach leadership to students.

Wellington stated that benefits of single-sex education would be even greater for

girls of low socioeconomic status. Many girls in private schools are often already

experiencing enrichment in their life, building leadership skills in other arenas such as

dance or sports.   In the cases of single-sex schools in the public sector, benefits for the

girls participating have been significant. Wellington referenced the Young Women's

Leadership School in Harlem is an excellent success case, as it boasts an extraordinarily

high number of their graduates are going on to college compared to their peer schools.

Wellington has read research showing girls and boys who are separated by sex for math

class in middle school both experience increased academic success. Wellington strongly

advocated that single-sex education should not be a practice that is confined to people

who can pay for it. There are people that feel strongly that public school should not

discriminate against gender, however, and that is a large hurdle to widespread public

application.

Anecdotally, Wellington hears from heads of high schools that they love getting

girls from single-sex K-8 schools. She hears that these girls go into a coed environment

and they take on leadership in their schools--they build community and start clubs. Their

experience in an all girls K-8 environment hugely impacts what girls do in the high

school environment, and builds the skills and social-emotional foundation girls need to

thrive in leadership roles.

Chapter 3 Method

Sample and Site

My class has 17 third graders who have been at the school since kindergarten. The research approach for gathering information follows a qualitative design. I serve as an associate teacher of the group.

Access and Permissions

The head of school was informed of this project, as well as the teacher in charge of the class. They gave their permission for data to be collected.

Data Gathering Strategies

Students participated in a focus group discussion where they were asked to reflect on their experiences in a school setting for girls. The questions focused on getting the girls to recall their questions experience. Some girls made comparisons to a co-ed school experience.

Data Analysis Approach

Comments were examined for themes and differences in responses. The classroom teacher took notes while the researcher was conducting the class discussion. The students' responses were typed verbatim.

Chapter 4 Findings

Description of Site, Individuals, Data

The researcher conducted a focus group discussion with a class of seventeen third graders at an all-girls school in California. The school is an Independent School that gathers the bulk of its funding from tuition and from fundraisers within the parent population.   The school serves families in multiple counties. The student and family population contains 2/3 white students and families and 1/3 students of color.

Findings

The researcher began the group discussion with a short reflection on what the girls liked to do best at school. The class eagerly listed off events, projects, and activities-- everything from acting in the class play to using robots in technology to playing soccer at recess. The researcher then asked the girls to think about how their school is unique, and why being an all-girls school made their school different than other school experiences. As the girls began to discuss what would be different if the school was co-ed it became clear that for the most part, the girls highly valued the all-girls environment. They articulated their beliefs along two overarching themes: the feelings of freedom and safety.

The girls felt that in their all-girls school all the students were generally kind to one another, and that everyone was able to get along quite well. The students felt that in the absence of boys there was less bullying and physical fighting. There was consensus

based on experience with brothers and co-educational preschools that boys play to rough on the playground, always pushing, shoving, and hurting others. One girl noted that if boys were rowdy on the playground, "I don't want to see what they're like in the classroom!" There was a sense among girls that boys would like to do all the same things they like to do on the playground like soccer, tag, and other ball games. There was also the sense that boys would play differently than the girls like to play, that they would not feel comfortable playing against boys who think rough-housing is fun. One particularly athletic girl felt that this was not the case, that she would in fact feel comfortable playing alongside and against boys, but she was the only one. Many girls felt they would be less likely to try new games on the playground as boys tend to verbally call out failure in games. With all girls on the playground, they felt safe to try any sport without fearing they would be judged for their level of ability.

The researcher asked what the benefits of having all-girls in the classroom were. The girls' responses focused on the freedom to do one's work without disturbance in the classroom, particularly on the idea of noise level and order. The girls felt that in an all female setting, the mood is calmer, and the volume is much quieter-- making it easier for them to think and do their work. Girls felt that boys would make noises in the classroom that would be distracting. One girl referenced her co-ed preschool experience, noting that boys had "different reactions" than girls, which were louder, more disruptive, and sometimes overly physical. One girl agreed, saying, "boys can be really loud and you can't concentrate." Another girl added that at her co-ed religious weekend school boys

shout across the room to one another while the teacher is talking and it's really hard to hear the teacher. Additionally, during roll call at her weekend school, boys will repeat the girls' names after the teacher calls them, which makes her feel picked on. On the last day of the weekend school they boys "went crazy" and threw pencils, ran around, and laughed loudly, making her feel uncomfortable and unhappy. The girls felt strongly that boys tend to "take over" a room, both with the noise they make and their physical presence.

When the girls were asked what made their school special or what they loved most about the school, two main themes emerged: exploration and community. They cherished the sense of belonging and community at the school. The girls focused particularly on their "school families," groups that meet monthly and contain two staff members and two girls from every grade level. These family events involve community building activities that fosters friendship and mentorship across grade levels. The girls felt that as younger students, these families represented a safe space, a support group, and people to turn to if ever they felt they needed help with something at school. One girl said "In kindergarten it's a natural feeling for you to be scared because you're so comfortable in your old school. When you start your new school you feel like an ant wandering around in a huge valley but your school family help you understand and know other people and feel safe."

They felt that the school was a safe space in which they could explore and have freedom. The campus of this particular school is physically open, with much outdoor

space. The girls loved the idea of coming to school and having open space, places to

explore and places to wander. They felt that this openness was non-threatening or " not

scary" when compared to schools that are housed in one large building. They felt that

such large buildings would frighten younger students, and would deny them the ability to

move freely and explore. One girl said that she doesn't "feel very tight and tucked in

because there's open space and time to feel free." In this space they felt free physically,

safe and cared for.

Chapter 5 Discussion /Analysis

Summary of Major Findings

In their discussion of their school experience, the girls echoed the developmental themes in the literature. The girls felt that they needed different things from their school and their classrooms than boys did. They felt strongly that including boys in their school environment would be detrimental to their ability to learn in school. The girls felt that boys could be fun to play with, and enjoyed their company socially, but noticed that girls and boys behave differently. These differences, namely their level of physicality and ability to tolerate noise and disruption, were deemed to be too distracting to contribute to a positive learning environment. Further, they felt that because the school comprises all girls the ties of community and respect were stronger. In the opinion of the students the all-girls environment allows them to be free to explore safely.

Comparison of Findings to Previous Research

The findings of this study confirm the aspects of the research that address girls' development as unique and best served in an all-girls environment. The ideas that girls expressed as valuable and important to them and their well-being in school are in line with developmental studies about girls that show that girls like a collaborative trustful community in which they can try, fail, succeed, and learn.

Limitations of the Research

The research is limited by the size of the sample in that only one class participated in the focus group. Because of the population studied, the responses do not address the significance of all-girls schooling in low-socioeconomic communities.

Sample size

The research is limited in scope because the sample size was small and came from one school. Thus, the findings must be interpreted to apply to this site only.

Implications for Future Research

Further research on this topic could address: the impact of all-girls education on girls of low-socioeconomic status and girls of color; or the instructional techniques used in schools to produce girls that are prepared to become society's builders, not consumers.

Overall Significance of the Study

This study confirms the trends in the literature that state that boys and girls have different developmental, social-emotional, and environmental needs in education. Most teacher training programs do not address these needs, and as such elementary school students are often not receiving the education that best suits them. Girls in single-sex educational environments feel positively about their education, themselves, and their communities, which they attribute to their single-sex education. The applications of single-sex education go beyond the private school. Successful cases of all girls' schools

have been noted in public school settings, and such programs should be considered in wider application.

References

Allan, A. J. (2009). The importance of being a 'lady': Hyper-femininity and

heterosexuality in the private, single-sex primary school. *Gender & Education,*

21(2), 145-158. doi:10.1080/09540250802213172

American Association of University Women. (1991). Shortchanging Girls, Shortchanging

America. Retrieved 08/23, 2011, from http://aauw.org

American Association of University Women. (1992). The AAUW report: How schools

shortchange girls. *Women's International Network News, 18*(2), 72. Retrieved

08/23/2011, from http://aauw.org

American Association of University Women. (1998). Gender gaps: Where schools still

fail our children. Retrieved 08/23, 2011, from http://aauw.org

American Association of University Women. (2000). AAUW report says girls

shortchanged in computer age. *Reading Today, 18*(1), 36. Retrieved from

http://web.ebscohost.com.ezproxy.dominican.edu

American Association of University Women. (2011). *Breaking through barriers for

women and girls.* Retrieved 08/23/2011, from http://aauw.org

American Association of University Women. (2001). Beyond the "gender war"

    A conversation about girls, boys, and education. Retrieved from

    http://www.aauw.org/learn/research/all.cfm

Andersen, M. L., & Hill, C. P. (2010). *Race, class, and gender: An anthology* (7th ed.).

    Belmont, CA: Wadsworth Cengage Learning.

Candy, D. (2001, Troubling label for Hispanics: 'girls most likely to drop out'. *New York*

    Times,

Corbett, C., Hill, C.,& St. Rose, A. (2008). Where the girls are. Retrieved from

    http://www.aauw.org/

Deak, J. M., & Barker, T. (2002). *Girls will be girls : Raising confident and courageous*

    daughters. New York: Hyperion.

Epstein, D., & University of London. (1998). *Failing boys?: Issues in gender and*

    achievement. Buckingham, UK: Open University Press.

ERIC Clearinghouse on Urban Education. (2001). *Gender differences in educational*

    achievement within racial and ethnic groups. New York, NY: ERIC

    Clearinghouse on Urban Education. Retrieved on 09/19/2011 from

    http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ER

ICExtSearch_SearchValue_0=ED455341&ERICExtSearch_SearchType_0=no&a
ccno=ED455341

Freeman, C. E. (2004). Trends in educational equity of girls and women: 2004.
Retrieved on 09/23/2011 from http://nces.ed.gov/pubs2005/equity/

Gaer, E. V. d., Pustjens, H., Damme, J. V., & Munter, A. D. (2004). Effects of single-sex
versus co-educational classes and schools on gender differences in progress in
language and mathematics achievement. *British Journal of Sociology of Education,
25*(3), pp. 307-322. Retrieved from http://www.jstor.org/stable/4128691

Ginorio, A. B. & Huston, M. (2001). Si se puede! Yes we can. Latinas in school.

Ginorio, A. B., & Martinez, L. J. (1998). Where are the Latinas? *Psychology of Women
Quarterly, 22*(1), 53. Retrieved from
http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=758280&site=eho
st-live

Gray, J., & McLellan, R. (2006). A matter of attitude? developing a profile of boys' and
girls' responses to primary schooling. *Gender & Education, 18*(6), 651-672.
doi:10.1080/09540250600980238

Halpern, D. F., & National Center for Education Research (U.S.). (2007). Encouraging
girls in math and science. Washington, D.C: U.S. Dept. of Education, National

Center for Education Research, Institute of Education Sciences. Retrieved on 09/19/2011 from

http://nces.ed.gov/PUBSEARCH/pubsinfo.asp?pubid=NCER20072003

Halvroson, H. G. (2011). The trouble with bright girls. Retrieved on 09/19/2011 from

http://www.psychologytoday.com

Katherine Delmar Burke School For Girls. (2011). Retrieved 09/23/011, from

http://kdbs.org/

National Coalition of Girls Schools. (2005). The girls' school experience: A survey of

young alumnae of single-sex schools: Executive summary. *National Coalition of

Girls' Schools,* Retrieved from http://web.ebscohost.com

Northeast Foundation for Children, Inc. (2011). *Responsiveclassroom.org.* Retrieved

09/19, 2011, from http://www.responsiveclassroom.org/

Penuel, W. R., & Wertsch, J. V. (1995). Vygotsky and identity formation: A sociocultural

approach. *Educational Psychologist, 30*(2), 83. Retrieved from

http://web.ebscohost.com.ezproxy.dominican.edu

Renold, E., & Allan, A. (2006). Bright and beautiful: High achieving girls, ambivalent

femininities, and the feminization of success in the primary school. *Discourse:*

Studies in the Cultural Politics of Education, 27(4), 457-473.
doi:10.1080/01596300600988606

Sax, L. J. (2009). Gender matters: The variable effect of gender on the student
experience. *About Campus, 14*(2), 2-10. doi:10.1002/abc.283

Sprague, M. M. (2003). An academy for Ophelia? *Clearing House, 76*(4), 178. Retrieved
from http://web.ebscohost.com.ezproxy.dominican.edu

Vanderburg, R. (2006). Reviewing research on teaching writing based on Vygotsky's
theories: What we can learn. *Reading & Writing Quarterly, 22*(4), 375-393.
doi:10.1080/10573560500455778

Wardman, N., Hutchesson, R., Gottschall, K., Drew, C., & Saltmarsh, S. (2010). Starry
eyes and subservient selves: Portraits of 'well-rounded' girlhood in the prospectuses
of all-girl elite private schools. *Australian Journal of Education, 54*(3), 249-261.
Retrieved from http://web.ebscohost.com.ezproxy.dominican.edu

Whittington, A., & Mack, E. N. (2010). Inspiring courage in girls: An evaluation of
practices and outcomes. *Journal of Experiential Education, 33*(2), 166-180.
doi:10.5193/JEE33.2.166

Women's Educational Equity Act. (2003). *Equity resource center.* Retrieved 09/19/2011,
from http://www2.edc.org/WomensEquity/resource/MST/index.htm

Younger, M., Warrington, M., & Williams, J. (1999). The gender gap and classroom

   interactions: Reality and rhetoric? *British Journal of Sociology of Education, 20*(3),

   325-341. doi:10.1080/01425699995290

Younger, M., & Warrington, M. (2007). Closing the gender gap? issues of gender equity

   in English secondary schools. *Discourse: Studies in the Cultural Politics of

   Education, 28*(2), 219-242. doi:10.1080/01596300701289276