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## Single-Gender Classrooms Archival Data Case Study

### Executive Summary

Advocates promote single-gender classrooms as a means of improving student outcomes. They have argued that the benefits of single-gender classrooms include higher self-concept and better focus than those students in coeducational classrooms. This study examined four CCSD elementary schools with established records of implementing single-gender classrooms.

- Results of student achievement between single-gender and coeducation classrooms is mixed, meaning neither is clearly better
- Teachers expressed highly positive support for single-gender classrooms
- Teachers reported higher student engagement
- Teachers reported more focused students and higher confidence

## Single-Gender Classrooms Archival Data Case Study

Single-gender classrooms have been explored recently as a means of improving student outcomes. Much of the promotion for single-gender classrooms comes from Leonard Sax, director of the National Association for Single Sex Public Education (NASSPE). Sax established NASSPE nine years ago and has written three trade publications related to single-gender issues related to education. The NASSPE website reports that there are 116 public schools characterized as single-gender schools and 390 schools with single-gender classrooms. This excluded schools which are single-gender only for physical education or health classes. Sax argues the benefits of single-gender classrooms are that students have higher self-concept and better focus than those students in coeducational classrooms.

There has been extensive discussion about single-gender classrooms but limited research. For example, in one analysis 2,221 quantitative studies were evaluated but only 40 were considered to have sufficient methodological rigor (Mael, et al., 2005). This review found no clear support for single-gender classes. Most studies found no differences between students who attended coeducational or single-gender classes. These studies examined student self-concept, aspirations, attitudes, attendance, and student achievement.

Proponents of single-gender classrooms point to the Young Women's Leadership School in Harlem as the paragon for single gender education (Bracey, 2006). This school has high graduation rate and college attendance, but they also have low SAT scores. On the other hand, proponents of coeducation refer to the California Pilot Program, a state sponsored three-year pilot study (Hubbard & Datnow, 2005). Evaluations of the program identified parents and principals used the pilot program to obtain specific resources (Datnow, Hubbard, & Woody, 2001). California officials determine the program was not sustainable and removed support.

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Some single-gender research had been conducted within the Clark County School District. Hoffman, Badgett, and Parker (2008) evaluated gender specific classes at one CCSD high school. They looked at differences in Mathematics and English classes. No consistent advantages were found in student achievement for single-gender or coeducational classes. Classroom observations were indicative of single-gender classes being more supportive of female students. Teachers believed single-gender classes benefited the students; while students reported disdain for single-gender classes.

In 2007/2008, the CCSD Instructional Unit reported five schools implementing single-gender classrooms: two elementary schools, two middle schools and one high school. The following school year the number of participating schools increased to seven elementary schools, three middle schools, and one high school. The most recent data (2010/2011) has shown a drop in schools participating in single-gender classrooms. Five elementary schools reported dropping single-gender classes. Two elementary schools began their first year 2010/2011. Two middle schools discontinued their single-gender classes and one middle school initiated their first year in 2010/2011. No high schools had single-gender classes in 2010/2011.

Table 1

*Number of schools within CCSD reporting single-gender classrooms*

<b>School</b>	<b>2007/2008</b>	<b>2008/2009</b>	<b>2009/2010</b>	<b>2010/2011</b>
Elementary	2	7	8	5
Middle	2	3	1	2
High	1	1	0	0
Total	5	11	9	7

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### **Current Study**

This case study examined four CCSD elementary schools with established records of implementing single-gender classrooms. Schools selected had implemented single-gender classes between two and four years. Each principal has lead single-gender classes at these schools for two years. All four schools have full-day kindergarten. The average (mean) student retention rate is 4.1%, slightly larger than the District average of 1.2%. The average number of teachers not high qualified as defined by the Nevada Department of Education is 3.7%.

Three schools (Diaz, Cortez, and Sunrise Acres) were highly similar, while the fourth (Neal) serviced a different population. The three schools are predominantly Hispanic students (77.2%) with an equal percentage of White (17.0%) and African American students (15.7%). These schools have a high English Language Learner population as well (58.8%). The student transient rate is high (48.3%) as is the percentage of students receiving Free or Reduced Lunch (81.2%).

The fourth school has a majority of White students (52.2%) with representation of Hispanic (25.1%), African American (16.0%), and Asian students (6.3%). The English Language Learner population is small (9.8%). The student transient rate is 21.0% while the percent of students receiving Free and Reduced Lunch is 28.3%.

According to interviewed principals and assistant principals, no criterion was used to identify which students would be assigned to single-gender or coeducational classrooms.

Parents' desires to remove or include a student from single-gender classes were honored.

One aspect of single-gender classrooms is the implementation of single-gender strategies. For example, proponents propose that boys respond better to clear boundaries and reward systems. Girls respond to hands-on activities in mathematics. Nevertheless, strategies that were

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identified by principals and proponents are identical in name though may be different in execution; such as teacher voice intonation. Others strategies, like seat choice, probably are not different between boys-only, girls-only, or co-education classrooms. The following table lists identified strategies used in single-gender CCSD elementary school classrooms.

Table 2

### *Reported gender-specific classroom strategies*

Boys	Girls
<b>Major Strategies</b>	
Definitive consequence/reward system	Hands-on activities for math and science
Few changes in seating	Frequent changes in seating
Team building activities	Confidence (and team) building activities
<b>Minor Strategies</b>	
Boy focused decor	Girl focused decor
Small group seating (3-4 students)	Small group seating (5-6 students)
Teacher voice intonation	Teacher voice intonation
Competition	Competition
Literacy choice	Literacy choice
<b>Not Gender Specific</b>	
Seat Choice	Seat Choice
Structured movement	Structured movement

Each school was expected to report student outcomes between single-gender and coeducational classrooms biannually with many schools submitting annual reports. All four schools in this case study utilized state CRT scores as their measure of student achievement. This includes the Nevada Writing Examination. One school included the Scholastic Reading Inventory (Diaz). No other student outcomes, such as discipline, attendance, or self-concept, were measured. Two of these schools conducted several action research projects based on single-gender classrooms.

Schools reported mixed results in student achievement. Boys in single-gender classrooms performed at the same level as coeducational and single-gender girls classes. Some of these gains

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were only in one grade or one content area. One school (Neal) reported more fifth grade single-gender students were proficient compared to coeducational classes; however, coeducational fifth grade girls outperforming the single-gender female classes. No differences existed for other grades. Sunrise Acres Elementary School students in single-gender classrooms had higher CRT scores, specifically among the boys. CCSD action research studies conducted by teachers related to single-gender classrooms promoted a smaller achievement gap between males and females for single-gender classrooms. Teachers also reported more engaged and focused students. Teacher perceptions were that students from single-gender classes were more confident. None of these reports provided tests of significance and it is doubtful that difference between single-gender and coeducational classrooms are statistically significant. Data is not available that identified students in single-gender or coeducational classroom to conduct independent tests.

Two schools principals reported that professional development was available for teachers regarding single-gender strategies. One school survey teachers and found teachers “overwhelmingly positive.” Teacher perceptions parallel those of other teacher surveys in the literature. Teachers prefer single-gender classrooms, but student outcome measures have not demonstrated any benefit for single-gender classrooms.

## Conclusion

Analysis of available resource provides results that parallel the literature. Teachers and administrators engaged in single-gender classes are very positive about the approach. Student outcomes, specifically student achievement, are mixed. There is some support that single-gender classrooms may affect student achievement for specific grades in local school analysis. The same result does not apply to larger, published studies. Evidence is lacking that single-gender classes

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are superior to coeducation classes. There is no clear evidence that single-gender classrooms close the achievement gap between the genders. The evidence for greater gains in self-concept and focus is insufficient from available sources to evaluate. More in-depth research is required to determine if differences between coeducational and single-gender classrooms exist, or that single-gender classrooms can close the gender gap in student achievement.



References

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