



## Female Students of Color in Special Education: Classroom Behaviors and Perceptions in Single-Gender and Coeducational Classrooms

Jennifer C. Madigan, Ed.D.

**Abstract:** The purpose of this research was to determine whether there were measurable differences in classroom behaviors and school perceptions in adolescent female students identified as learning disabled (LD) in a single-gender special education classroom (SGSEC) and a mixed-gender special education classroom (MGSEC). A mixed design was used; the study was conducted over a four-month period on a secondary level campus in an urban center in northern California. Data were collected using classroom observations, focus group and individual interviews, and document analysis. Participants included four Latina and four African American female students with learning disabilities. Findings indicated that in comparison to Latina and African American female students attending the MGSEC, female students in the SGSEC reported a greater degree of comfort and support from teachers and peers. There were higher rates of classroom participation for Latina students in the SGSEC compared to their counterparts in the MGSEC. Notable differences in classroom participation were not observed between the two groups of African American female students.

### Introduction

Since the passage of Public Law 94-142, the Education for all Handicapped Children Act of 1975, students have been identified in greater numbers for placement in special education. Of those placed in special education, males are six times more likely than females to be diagnosed with learning disabilities (American Association of University Women [AAUW], 1992; Epstein, Cullinan, & Bursuck, 1985). The disproportionate number of males with mild to moderate disabilities has resulted in special education classes in which males outnumber females by startling percentages. In special education classrooms where males consistently outnumber females, females take fewer risks and perform less proficiently than males (Grossman, 1998).

To date, more than 600,000 students in California have received special education services. Between 1993 and 2000, the number of special education students in

California increased by 41 percent (California Department of Education, 1999). Statewide, the ethnic enrollment of special education students is growing, and currently, 63% of California's special education students are ethnic minorities (California Department of Education, 2000). Recent projections have indicated that approximately 26% of students with disabilities will leave high school before graduation (United States Department of Education, 1997). With the exception of Asian Americans, minority students in special education leave school with greater frequency than White students. The percentage of dropouts in special education by gender is 50.4 % female and 49.6% male (McMillan, 1997), but this is deceptive because of the disproportionate number of males in special education.

Research in special education has seldom focused on gender issues, and the lack of research and programs focusing on the needs of females with disabilities, particularly female students of color places them at risk for failure and dropping out of school (AAUW, 1998). Given the overrepresentation of males in special education classrooms and the high-risk factors facing female students in special education, a serious problem has emerged that must be addressed. Single-gender environments may provide one viable option to encourage school continuance for these students.

There is a growing body of literature documenting the benefits of single-gender schooling in general education settings and a revived interest in single-gender education as a means of addressing the needs of at-risk students (Datnow, Hubbard, & Conchas, 2001; Datnow & Hubbard, 2000; Streitmatter, 1997; Streitmatter, 1999). The issue of single-gender education has not been examined in special education until recently (Madigan, 2003). The No Child Left Behind Act of 2001 (NCLB) contains a provision that authorizes local education agencies to use educational funds to implement single-gender programs (see [www.ws.gov/legislation/ESEA02](http://www.ws.gov/legislation/ESEA02)).

The findings of studies in general education settings have suggested that female students in mixed-gender classrooms tend to receive less attention and have fewer opportunities for participation than male students (AAUW, 1998; Grossman, 1998; Riordan, 1990; Sadker & Sadker, 1995). Studies examining outcomes for females in single-gender classrooms demonstrated greater gains, both academically and affectively, than their counterparts in mixed-gender settings (Monaco & Gaier, 1992; Posnick-Goodwin, 1997; Riordan, 1990). Nationwide, research examining the effects of ethnic group differences, in the context of single-gender settings compared to mixed-gender schools, has yielded statistically significant results for Latina and African American female students. Latina and African-American female students attending single-gender schools scored higher on measures of leadership, academic achievement, and environmental control than the comparative group of female students in mixed-gender schools (Riordan, 1994).

Streitmatter (1999), in a qualitative study of single-gender programs across the United States, included a classroom of females identified for special education. The results of her research provided some evidence that the female students benefited in the areas of self-confidence and risk-taking. More importantly, interviews with the female

students yielded compelling insights into their changed perceptions as learners. There was consensus that without the presence of males in the classroom, female students were more focused on content and their learning experiences were heightened (Streitmatter, 1997, 1999).

The purpose of this research was to determine whether there were measurable differences in classroom behaviors and school perceptions in adolescent female students with learning disabilities who attend a single-gender special education classroom (SGSEC) and a mixed-gender special education classroom (MGSEC). Because of the high percentage of ethnic minorities in special education in California, this study examined the impact of single-gender special education classrooms for female students of color. Research questions guiding the study included:

How does classroom behavior differ for female students of color in a secondary level SGSEC and a MGSEC?

How do perceptions of school experiences differ for female students of color in a secondary level SGSEC and a MGSEC?

## **Method**

### ***Design***

A mixed method research approach was used to conduct this study. Descriptive research procedures were employed to measure the frequency counts of student classroom behaviors and qualitative methods included classroom observations and focus-group and individual interviews. In addition, classroom assignments, homework, and other classroom documents were collected and analyzed.

### ***Participants***

The participants for this study included eight Latina and African American female students identified as learning disabled. By definition, the students had:

... a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems that are primarily the result of visual, hearing, or motor handicaps, of mental retardation of emotional disturbance or of environmental, cultural, or economic disadvantage. (34 CFR Part 300.5). (California Department of Education Special Education Division, n.d.)

Four of the female students, two Latina and two African American and ranging in age from 15 to 18 years, attended a MGSEC. The other four female students, two Latina and two African American, attended a SGSEC (n = 13) and were randomly selected based on their similar demographics, background experiences, and academic performance with the MGSEC students. The eight participants were from low-income families, and three female students reported that either one or both parents did not graduate from high school.

### ***School Characteristics***

The campus where the study took place was a public, mixed-gender high school located in an urban center in northern California. The high school was one of seven in the district and had the largest special education program system-wide. The original school building was built in 1927 and had been in a state of disrepair for some time. In June 2001, the high school was shut down due to unsafe conditions in the main campus buildings. In September 2001, the campus reopened in portables located on the school property, and the special education classrooms were situated in one wing of the new campus. Students and teachers reported that they liked the new classrooms because of location (previous special education classrooms were scattered across the campus), better physical conditions, and air conditioning.

The special education program had five special day classrooms, defined as classrooms in which students with mild to moderate learning disabilities spent 51% or more of their day in the same classroom. Special education students were placed into either single- or mixed-gender classrooms in their freshman year and remained with the same group of students and teachers throughout their placement or until high school graduation. According to the program administrator, placement in single- and mixed-gender classrooms was not based on academic or behavioral criteria, but parental and student choice. In this study, the teacher for the MGSEC was a White male with 11 years of teaching experience, and the teacher for the SGSEC was a White female teacher with two years of teaching experience.

### **Classroom Characteristics**

***Mixed-Gender Special Education Classroom (MGSEC).*** The MGSEC was housed in a permanent portable and had beige carpeting and vinyl walls. All student desks faced the whiteboard, and the teacher's desk faced the students from the front. The teacher was a middle-aged, White male with 15 years of teaching experience. He described the students as a "tough group of kids that have been kicked out of classes for behavioral problems." The teacher bantered frequently with the males; the female students were largely ignored unless they spoke out. The teacher's stated goal was to teach students life skills and manners. The MGSEC consisted of four female students (two Latinas and two African Americans) and eight male students. The female students in the MGSEC were described as very "tough," and two of the females had probation officers.

**Single-Gender Special Education Classroom (SGSEC).** The SGSEC was also housed in a permanent portable located in the same hall as the MGSEC. The classroom layout was open with the teacher's desk set off to the side and student desks arranged in clusters. The teacher was a young, White female with two years of teaching experience. She interacted with the female students in a relaxed fashion, and the students were free to talk out and were not required to raise their hands during formal or informal classroom discussions. Two of the 13 students in the SGSEC had previously attended the MGSEC classroom and were placed in the SGSEC as a last resort to prevent them from dropping out. One student in the SGSEC was pregnant.

### ***Procedure***

***Focus-Group and Individual Interviews.*** Female students from the SGSEC and MGSEC were interviewed in two homogeneous (single- or mixed-gender) focus groups with four participants. Interview queries addressed the research questions pertaining to classroom behaviors and school attitudes. When necessary, individual student interviews were conducted to clarify issues. A transcription from each interview was generated to record the responses.

***Interview Protocols.*** The interview protocols for this study were adapted with permission from those used by Datnow and her colleagues (Datnow, Hubbard, & Conchas, 2001). The instruments were originally developed by the research team from Johns Hopkins University based on their involvement in a three-year longitudinal study of California's single-gender academies. The protocols were later piloted and adapted for use in the single- and mixed-gender special education environments (Madigan, 2002).

***Observations.*** Over the span of four months, the researcher and a graduate assistant observed participants two days a week, four hours per visit, resulting in more than 25 classroom observations in SGSEC and MGSEC scheduled classes (e.g., Study Skills/ Language Arts). In addition to instructional time, observations occurred before school started, at lunchtime and breaks, and after school.

The researcher and graduate assistant used descriptive field notes (Bogdan & Biklen, 1998) and a rubric to measure classroom behaviors (see Appendix A). The rubric was designed by the researcher to measure classroom behaviors that included raising hands during discussions, asking questions, interacting during classroom discussions, being on task (e.g., taking notes or reading), and completing in-class and homework assignments during classroom observations (see Tables 1 and 2 in **Results**). The rubric allowed the researcher and graduate assistant to be focused and systematic throughout the observational process. Observational findings supported data collected from the student interviews. Observations of the female students in SGSEC and MGSEC also provided specific information pertaining to their classroom behaviors and attitudes.

***Inter-Rater Reliability.*** A two-hour session was conducted by the researcher to train the graduate assistant to use the rubric to measure classroom behaviors. Training continued until satisfactorily high levels of agreement were obtained on a pilot test of one female student with disabilities. Rating equivalence, defined as agreement between coders, was established by the percent of agreement between the researcher and the graduate assistant. The inter-rater reliability coefficient for observed classroom behaviors on one female participant was .89.

### ***Data Analysis***

The transcribed interviews, field notes, and information from the classroom observation rubric were organized according to dates, classroom configuration, behaviors and attitudes. The researcher reviewed the data to obtain insight into the themes emerging from the various information sources. The classroom rubric was used to measure the number of times students demonstrated five classroom behaviors. The behaviors were observed, recorded, and tabulated to provide a comparison between female students in the SGSEC and the MGSEC. Additionally, interview questions directed to the teachers of the SGSEC and MGSEC were designed to triangulate and verify the observation of these behaviors.

The notes and data collected from the interviews and classroom observations were transcribed to provide information related to school perceptions of the students. Transcribed data were coded according to the emergent themes. Detailed description and in-depth quotations were included to provide understanding and insights into the themes that arose throughout the data analysis process. The researcher looked for quotations and observations that fit together to highlight a particular theme, issue, or idea. The data were labeled and indexed to organize the material into meaningful and manageable categories. Questions that developed from the transcribed reports were presented to students on an as need, individual basis in an interview format to verify data previously collected. These interviews were transcribed, read, and tallied. A second analysis of data was conducted from the transcribed notes to identify other themes that emerged from the study.

***Triangulation of the Data.*** In order to support the validity and reliability of the findings, a variety of triangulation methods were employed (Lincoln & Guba, 1985). The three data sources included: (a) observations by the researcher and a trained graduate assistant in the MGSEC and SGSEC; (b) interviews of the eight female students, the special education teachers in the MGSEC and SGSEC, and program administrators; and (c) analysis of site documents (e.g., class assignments, school communication bulletins, and school philosophy).

## **Results**

### ***Classroom Behaviors***

Twelve structured observations using the classroom observation rubric were conducted in the SGSEC and MGSEC during scheduled classes (e.g., Study Skills/Language Arts). Tables 1 and 2 present the frequency counts for the observed classroom behaviors exhibited by the eight participants. Classroom behaviors were analyzed according to classroom configuration, student gender and ethnicity, and classroom behaviors (e.g., raising hands during discussions, answering questions prompted by the teacher, interacting in the classroom, being on task during class activities, and turning in completed assignments).

**Table 1**

**Frequency Count of Classroom Behaviors for Students in Single-Gender Special Education Classroom (SGSEC) (N = 4)**

<b>Behavior</b>	<b>S1-L</b>	<b>S2-L</b>	<b>S3-AA</b>	<b>S4-AA</b>	<b>Total</b>
Hand Raising Independently/ Prompted by Teacher	2	4	3	2	11
Answers Questions Prompted by Teacher	8	13	14	16	51
Interacts in Classroom Discussion	15	17	22	13	67
On Task During Class (e.g., taking notes, reading, seatwork)	6	8	12	4	30
Turns in Completed Assignments	3	3	3	3	12
Total Number of Observable Classroom Behaviors	34	45	54	38	171

**Note:** S1-L = Latina Student, S2-L = Latina Student, S3-AA = African American Female Student, and S4-AA = African American Female

**Table 2**

**Frequency Count of Classroom Behaviors for Students in Mixed-Gender Special Education Classroom (MGSEC) (N = 4)**

<b>Behavior</b>	<b>S1-L</b>	<b>S2-L</b>	<b>S3-AA</b>	<b>S4-AA</b>	<b>Total</b>
Hand Raising Independently/ Prompted by Teacher	2	6	12	14	34
Answers Questions Prompted by Teacher	2	5	10	14	31
Interacts in Classroom	1	6	11	14	32

Discussion					
On Task During Class (e.g., taking notes, reading, seatwork)	4	3	7	12	26
Turns in Completed Assignments	N/O	N/O	N/O	N/O	N/O
Total Number of Observable Classroom Behaviors	9	20	40	54	123

**Note:** S1-L = Latina Student, S2-L = Latina Student, S3-AA = African American Female Student, and S4-AA = African American Female; N/O = Not Observed

**Behavior 1: Hand Raising Independently and/or Prompted by Teacher.** Hand raising refers to behavior on the part of the student to raise her hand during class discussion or to receive assistance from the teacher. The total frequency count for hand raising for the two Latina students in the SGSEC was six, and the two Latina students in the MGSEC raised their hands eight times. The total frequency count for hand raising for the two African American female in the SGSDC was five, and the two African American female students in the MGSEC raised their hands 26 times. The total frequency count for Behavior 1 (hand raising) was 11 in the SGSEC and 26 in the MGSEC.

Female students in the SGSEC raised their hands 301% less frequently than their counterparts; it is important to note that the teacher in the MGSEC required students to raise their hands in response to teacher-initiated and student-generated questions, whereas the teacher in the SGSEC did not have this rule. Students in the SGSEC were also encouraged to speak out in class during discussions. The Latina and African American female students in the SGSEC had comparable frequency rates on this behavior.

**Behavior 2: Answers Questions Prompted by Teacher.** Question-answer behavior refers to action on the part of a student to directly respond to a question posed by the teacher to the class as a whole or to individual students. The total frequency count for answering questions prompted by the teacher for the two Latina students in the SGSEC was 21, and the two Latina students in the MGSEC answered seven questions. The frequency count for answering teacher-prompted questions for the two African American female students in the SGSEC was 30, and the two African American female students in the MGSEC engaged in question-answer behaviors 24 times. The total frequency count for Behavior 2 (question-answer) was 51 in the SGSEC and 31 in the MGSEC.

Overall, female students in the SGSEC demonstrated question-answer behaviors with 61% more frequency than their counterparts in the MGSEC. Latina students in the MGSEC answered only seven questions during the six-week period.

**Behavior 3: Interacts in Classroom Discussion.** Classroom interaction behavior refers to verbal participation on the part of a student during any kind of class discussion, formal or informal. Formal discussion is defined as discussion related to academic or content areas of instruction; informal discussion refers to discussion that takes place between students and the teacher and students on topics such as movies or weekend activities. The total frequency count for classroom interactions for the two Latina students in the SGSEC was 32, and the two Latina students in the MGSEC interacted seven times. The frequency count for the two African American female students in the SGSEC was 35, and the two African American female students in the MGSEC interacted 25 times. The total frequency count for Behavior 3 (classroom interaction) was 67 in the SGSEC and 32 in the MGSEC.

Classroom interactions were recorded with 201% greater frequency in the SGSEC compared to the MGSEC. In the SGSEC, frequency counts were evenly distributed between Latina and African American female students. The Latina students in the MGSEC interacted with 357% less frequency than their African American peers.

**Behavior 4: On Task During Classroom Activities.** On-task behavior refers to nonverbal behaviors such as taking notes, working on class assignments, or reading class materials. The frequency count for the two Latina students in the SGSEC was 14, and the Latina students in the MGSEC were counted on task seven times. The frequency count for the two African American female students in the SGSEC was 16, and the two African American female students in the MGSEC demonstrated on-task behaviors 19 times. The total frequency count for Behavior 4 (on task during class) was 30 in the SGSEC and 26 in the MGSEC.

Overall, on-task behaviors were observed with comparable frequency in the SGSEC and MGSEC; however, Latina students in the MGSEC had 271% fewer recorded incidents of on-task behavior than their African American classmates. Observational notes indicated that the Latina students in the MGSEC often had their heads on their desks, asked to go to the bathroom for extended periods of time, or drew pictures. In general, the teacher did not comment on these behaviors.

**Behavior 5: Turns in Completed assignments.** A completed assignment refers to teacher-directed activities that resulted in a final product collected by the classroom teacher. The frequency count for completed assignments for the two Latina students in the SGSEC was six, and the two Latina students in the MGSEC were not observed turning in a completed assignment. The frequency count for completing assignments for the two African American female students in the SGSEC was six, and the two African American students in the MGSEC were not observed turning in a completed assignment. The total frequency count for Behavior 5 (turns in completed assignments) was 12 in the SGSEC and zero (0) in the MGSEC.

The female students in the SGSEC turned in one completed assignment during three of six class periods observed (one assignment per student/per class). An example of one completed assignment was a report turned in by student pairs as part of a history

unit. The SGSEC students had specific assignments listed on the board during each class session, whereas the MGSEC students worked individually on “classwork packets” (e.g., math worksheets and question-answer worksheets geared to the ability level of individual students). Classwork packets are used by some teachers in special education as a method for giving academic work over a long period of time in an individualized format. The packets are usually turned in at various points during the semester or when completed, and students generally work at their own pace. Over the twelve week period of data collection, there were no recorded incidents of classwork packet collection.

### ***Perceptions of School Experiences***

The interviews with participants examined how perceptions of school experiences differed for female students in a secondary-level SGSEC and MGSEC. Perceptions were measured by general affective statements indicating positive or negative feelings toward school reported in focus group and individual interviews. Perceptions included relationships between students, teachers, and peers, and student perceptions of the special education environment according to classroom configuration (SGSEC or MGSEC). Focus group interview data were organized into two categories - student perceptions of the environment in the classroom and student perceptions of disability and gender.

***Perceptions of the Special Education Environment.*** Students had strong views about their placement in single- and mixed-gender special education classrooms. Overall, there appeared to be contradictions in their feelings about special education. On one hand, the female students felt that they were being helped by the individualized attention and lower student numbers in special education classes. They also experienced more success because of the modified instruction and adaptations of the curriculum. Special education classes, whether single- or mixed-gender, were perceived as a place to catch up on work assigned in general education classes and to learn academic skills without feeling intimidated by non-disabled peers. On the other hand, the female students in both classrooms expressed feelings of shame and frustration about the misconceptions other students have about being a student with a learning disability. The following excerpt from an interview with students in the SGSEC highlighted this theme:

Researcher: How do you feel about being in special education?

Latina Student in SGSEC: At first, I was kind of ... ashamed, I really didn't want to be in special education (special day class at the high school) because of the stories, lies, and the rumors that I heard about it. But special ed is not that way at all; it's a place where you get attention ... one on one attention. It's not that we're doing anything different. We're smart and intelligent too. We just have a couple of learning disabilities and we need help with them. There's nothing wrong with special ed.

Latina Student in SGSEC: I feel more comfortable, because, like she said, one on one, not one teacher with thirty kids... In the other classes, you have to wait for the other kids to finish with the teacher and then you don't get the answer when the bell rings. In here you can stay over lunch ... and if the teacher is with another student, they come back to you. In other classes, they do sometimes, but with a lot of kids they forget.

Researcher: What do kids outside of the class say about special education?

African American Female Student in SGSEC: They'll say, "Is that [class] for dumb people?"

Latina Student in SGSEC: Yeah, that's what I don't like. They make fun of you and say, "It's going to be all girls, and you don't have any guys."

Differences emerged when female students described their comfort levels with and without male peers in the special education classes. The female students in the SGSEC commented repeatedly on the degree of comfort they experienced in the all-female environment. This perception was also reflected in the comment of one Latina student: "It's comfortable to be in here. You get a lot of help in here; you just feel good being here."

Students in the MGSEC, on the other hand, expressed feeling tense and guarded. It seemed that they experienced the environment in terms of "us and them;" the females felt that they had to defend themselves against harassment by males.

African American Female Student in the MGSEC: Pretty much they're not thinking with their heads, they're thinking with their [expletive] ..... 99% of the time, sex is on a guy's mind, just because they're guys.

Latina Student in the MGSEC: They [the males] feel overpowering. They feel that they have power over us because they are boys and there are more of them.

African American Female Student in the MGSEC: They're always distracting me, but I try not to let it get to me. If I'm being distracted, I'm trying to put myself in a position to where I'm not gonna be distracted.

***Student Perceptions of Disability and Gender.*** The challenges of a disability are compounded for female students in mixed-gender special education classrooms as a result of the alienation they experience from non-disabled peers and the teasing and name calling that occurs from male students in their special education classes. The female students in the SGSEC reported feeling supported and encouraged by their teacher and peers. This encouragement, however, was not the experience of the female students in the MGSEC.

Latina Student in the MGSEC: Everybody from this school thinks that special ed is for dumb people...

African American Female Student in the MGSEC: Retarded people ...

Latina Student in the MGSEC: People think we're retarded, but we're not ... it's just a class, it's a normal class.

African American Female Student in the MGSEC: But what I don't understand is that my friends know I'm in special ed, and they don't have a problem with it. But when I am with them [males in the MGSEC], they'll say "You're in special ed, huh?" I'll say, "Yeah, so?" They'll say, "You're dumb." I'll say, "You're in it, too, so what's the big point?" That's what gets on my nerves.

## **Discussion**

This study examined the identifiable differences between the classroom behaviors and perceptions of school experiences for female students of color attending single- and mixed-gender special education classes as well as compared results with earlier studies investigating the impact of single-gender programs on general education students in public school settings (Datnow, Hubbard & Conchas, 2001; Streitmatter, 1994; 1999). Consider the following:

### ***Classroom Behaviors***

Data from the present study suggest that single-gender special education environments provide an atmosphere for greater class participation, opportunity for increased learning and productivity, and greater completion rates of schoolwork for female students. In this study, classroom behaviors were measured by observations of classroom activities that included raising hands during discussions, answering questions prompted by the teacher, interacting in the classroom, being on task during class activities, and completing and turning in assignments. Overall, female students in the SGSEC interacted with greater frequency, were observed on task during class activities, and produced more completed assignments than their counterparts in the MGSEC. However, when comparing "intra-gender" differences between the classroom behaviors of Latina and African American female students in the SGSEC and MGSEC, Latina students interacted with greater frequency in the single-gender environment than their counterparts in the mixed-gender classroom. The African American female students, on the other hand, did not demonstrate measurable differences in classroom behaviors based on class configuration. It is interesting to note, however, that the qualitative interview data provided evidence that African American female students were more comfortable and less distracted in the single-gender environment.

Equity research has just begun to explore the diversity of female students as opposed to the presentation of these students as a uniform group, and studies are being

conducted to investigate the differences among females in public-school settings within the context of ethnicity and socioeconomic background (Rogers & Gilligan, 1998). The findings of these studies may provide some insights into the varying participation rates between the two groups of female students in this study.

### ***Student Perceptions of School Experiences***

***Single- and Mixed-Gender Special Education Classrooms.*** The female students in the SGSEC remarked with consistency on the comfort level they experienced in their classroom. This finding is not surprising given the dynamics that take place between male and female students in mixed-gender special day classrooms. The female students in the MGSEC expressed frustration toward their male peers and teacher for various reasons (e.g., distractions they experienced in the MGSEC).

It is well documented in the literature that female students in mixed-gender classrooms receive less opportunity to participate and less feedback from teachers than male students (Grossman, 1998; Riordan, 1990; Sadker & Sadker, 1995). These conditions are heightened for female students with learning disabilities in mixed-gender special education classrooms for three reasons:

The number of male students in special education classrooms exceeds female students by 6 to 1 (Epstein, Cullinan, & Bursuck, 1985);

Female students referred to special education usually have more severe learning disabilities than males, and this increases their difficulty to participate in class (Callahan, 1994); and

Male students tend to bully female students in special education classes (Madigan, 2002).

These findings are clearly reflected in the experiences of the participants attending the MGSEC in this study.

***Student Perceptions of Disability and Gender.*** The SGSEC and MGSEC students shared similar perceptions of the experience of being a female in special education. The special education classroom was viewed as a place to get needed time and support to do schoolwork that they were unable to keep up with in general education classes. They voiced concerns about the misunderstandings non-disabled peers had of their special education placements. While appreciative of the opportunities afforded them in special education classes, such as modified instruction and adaptations to the curriculum, they were frustrated, and at times, ashamed at being labeled as “retarded” or “dumb.”

Gender is a complex variable for female students in special education and having a disability further complicates gender identity for these students. Female students not

only experience put downs from male peers but also are the target of derogatory comments concerning their disabilities from male students.

Overall, in the present study, female students attending the SGSEC had higher rates of classroom participation and interaction with the classroom teacher than students attending the MGSEC. However, special education classrooms, single- and mixed-gender, may provide vital support for female students in the areas of instructional support and curricular adaptation despite the misconceptions of peers about the function of special education.

### ***Limitations of the Study***

The classroom teaching styles of the teachers in this study are clear limitations that require replication. In this study, female students in the single-gender environment clearly benefited from the relaxed, collaborative atmosphere provided by the female teacher in the SGSEC. Discussion was encouraged and rules about classroom behavior, such as eating in class and raising hands during discussions, were not enforced. On the other hand, the classroom style of the male teacher in the MGSEC was more structured and laden with rules that included raising hands during classroom discussions and staying in one's seat. Many of these rules were for the benefit of the teacher to control the behavior of the males and were detrimental to the female students in the classroom. Additionally, there were notable differences in schoolwork expectations of the teachers; assignments in the SGSEC were process and product oriented and the teacher in the MGSEC assigned work packets without an emphasis on due dates or completion rates. Finally, the small sample size of the study was a significant limitation and future studies should use larger samples to determine whether the noted differences can be attributed to teaching style, classroom configuration (single- or mixed-gender), or individual differences and experiences of female students.

### ***Implications for Practice and Research***

Gender and disability are complex factors for female students in single- and mixed-gender special education classes and should be addressed by administrators, teachers, and researchers. Since 1992, research on female students has shifted from an assumption of homogeneity to an in-depth focus of differences among females or "intra-gender differences" (AAUW, 1998). The AAUW (1992) publication, *How Schools Shortchange Girls*, reported that White and Latina female students experience a decline in self-esteem during adolescence while African American female students do not. Intra-gender differences between ethnically diverse groups of female students represented in special education classrooms are an important topic for future research.

The results of this study suggest that the instructional style of individual teachers in single- and mixed-gender special education classrooms merits further examination. The results also support the findings of Streitmatter (1999); this researcher provided

qualitative insights into the environmental factors that contribute to the success of female students in single-gender classrooms. The female students identified for special education services benefited academically from the informal, cooperative environment (Streitmatter, 1999).

Teacher beliefs about gender in the classroom would be another area recommended for future research. Specifically, interactions between students and classroom teachers as they relate to gender, teacher beliefs about females in special education, and special education teachers' management of the classroom in single- and mixed-gender environments are all important topics for investigation.

A more fundamental issue raised by this investigation and similar studies is how reported findings will impact the legal debate surrounding single-gender public school programs (e.g., the potential of the Notice of Intent to Regulate single-gender public school programs by the U.S. Secretary of Education to provide more flexibility for single-gender classrooms and schools (see [www.ed.gov/ PressReleases/05-2002/05082002.html](http://www.ed.gov/PressReleases/05-2002/05082002.html)). In special education, the high number of male students often leads to the establishment of single-gender classes, and this is not intentional but a result of the low number of females eligible for and receiving special education services. This issue of over-identification of male students in special education is beyond the scope of this research but merits further examination.

### **Conclusion**

The findings presented in this article suggest that there should be careful examination of the specific needs of female students in special education programs, particularly female students of color. Also, the results of this study, together with those reported in other studies of single-gender public school programs for at-risk students (Datnow, Hubbard, & Conchas, 2001; Streitmatter, 1999), suggest that ethnically diverse female students significantly benefit from participation in single-gender special education programs. Female students of color in special education are at serious risk for school failure and ultimately dropping out. Within six months of the completion of this research, the MGSEC was converted to an all male classroom. Also, one Latina and one African American female student in the MGSEC had dropped out of school, one Latina student moved out of the district, and the remaining African American female student was transferred to the SGSEC. The students in the SGSEC, to date, have remained intact. The issue of gender in special education is understudied and time critical, and it crucial that future research provides further examination along this line of inquiry.

**About the Author.** Dr. Jennifer C. Madigan is an assistant professor in the Department of Special Education at San Jose State University. Her research interests include gender issues in special education, with an emphasis on female students with mild to moderate disabilities, and single-gender public schooling. Address correspondence to the author at San Jose State University, Department of Special Education, One Washington Square, San Jose, CA 95192-0078, USA; e-mail

Jennifer.Madigan@sjsu.edu.

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## Appendix A

### Classroom Observation Rubric

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Grade: \_\_\_\_\_ Class Type: \_\_\_\_\_

Teacher Gender: \_\_\_\_\_ Teacher Ethnicity: \_\_\_\_\_ Observer: \_\_\_\_\_

**Instructions for Rubric Use:** Use the key below to indicate the ethnicity/race and gender of students. Place a P (check) in the appropriate box for each observed classroom behavior.

	S1	S2	S3	S4	S5	
S6	E <input type="checkbox"/>					
G	G <input type="checkbox"/>	G <input type="checkbox"/>	G <input type="checkbox"/>	<input type="checkbox"/> G	<input type="checkbox"/> G	<input type="checkbox"/>

#### Classroom Behavior

<b>Arrives to class on time</b>							
<b>Hand raising independently/prompted by teacher</b>							
<b>Asks/Answers questions prompted by teacher</b>							
<b>Asks/Answers questions independently</b>							
<b>Interacts in classroom discussion</b>							
<b>On task during class assignments</b>							
<b>Turns in completed assignments</b>							
<b>Attentive to teacher instruction/direction</b>							
<b>Total Number of Observable Class Behaviors</b>							

<b>Key: P= One observable behavior</b>
--

**S1, S2, S3, S4, S5, S6=Student**  
**E= Student Ethnicity: AA-African American, H-Hispanic, W-White, PI-Pacific Islander,**  
**NA-Native American, A-Asian**  
**G=Gender: M=Male, F=Female**

Rubric developed by Jennifer Madigan, Ed.D. 2002