

# Gifted Girls: Gender Bias in Gifted Referrals

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The goal of this mixed-methods study was to explore the effect of gender on teachers' willingness to refer students to a gifted and talented program. Teachers ( $N = 28$ ) were provided with one of two profiles (i.e., female or male) describing a gifted student. Results indicated that teachers' decisions for referral to gifted programs were significantly influenced by the student's gender; teachers were much less willing to refer a female student than an identically described male student to gifted programs. Further, qualitative analysis revealed that teachers' descriptions of students and reasons for their referral decisions differed considerably based on the student's gender. Responses illustrated gender bias in teachers' perceptions, expectations, and beliefs about the profiled students. Implications for practice are discussed.

Keywords: gender bias, gifted, girls, teacher referral

Females, as well as gifted and talented females, have historically faced many challenges and inequalities within the educational system. The challenges are complex and can inhibit females from reaching their full potential during their school years and beyond. Among the many barriers that girls face are the biases that teachers' have based on gender (M. Sadker & Sadker, 1994). Given that one of the most common methods for screening students for gifted identification includes teachers' observations and nominations (Coleman, Gallagher, & Foster, 1994; Hallahan, Kauffman, & Pullen, 2009), teachers' perceptions of students, and teachers' unintended biases, it is critically important that we examine which students teachers nominate for gifted programs and why the students were chosen. In the current study we asked what the effect of students' gender on teachers' nominations is for gifted referrals and what this means for gifted girls. We begin with a brief background on the literature regarding teacher nominations and the effects of teacher bias as well as gender bias, followed by a brief explanation of the current study. We then present the quantitative and qualitative findings followed by discussion and the implications of the current study.

## TEACHER REFERRALS

Classroom teachers play a very important role in the initial identification of gifted students. Although methods for identifying gifted and talented students vary widely between states and local school districts, it is frequently teachers' ratings and nominations that form the initial pool of students to be formally tested for identification of giftedness (Davis & Rimm, 2004; Richert, 1997). In other words, teachers' judgments and recommendations of whom to include for formal assessment often becomes the first step in the identification process. As such, gaining access to gifted/talented identification and services is often dependent on teachers' perceptions. This "gatekeeper" role is an "obvious potential source of unfairness in the entrance process" (McBee, 2006, p. 103). Relying on teachers' judgments and ability to accurately identify gifted students has been widely debated over the last several decades (Gagné, 1994; Hoge & Cudmore, 1986; Pagnato & Birch, 1959). In Pagnato and Birch's classic study, they examined the effectiveness of various methods for identifying gifted students and reported that teachers were ineffective at identifying students who had an IQ over 130. Simply stated, the results of their study indicated that teachers' judgments related to students' cognitive abilities were unreliable. Although Pagnato and Birch are frequently cited to support the notion that teachers are unreliable when asked to identify gifted students in their classrooms, their study has been criticized for the research methodology employed (see Gagné). Gagné re-evaluated Pagnato and Birch's methodology and computed a correlation coefficient

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between each method and the criterion. The results from this new analysis showed that teachers were not less effective in their prediction of identifying children for gifted services when compared to other sources of information.

Research illustrates that teachers' biases exist when nominating students for gifted services. Teachers typically nominate students who conform to their expectations of what gifted students look like, how they perform on various measures of achievement, how they behave in the classroom (Davis & Rimm, 2004), and how they use existing ideals based on dominant cultural assumptions to guide their judgments of giftedness (Peterson & Margolin, 1997).

### Teacher Bias: Effects on Referrals

Recent research has demonstrated that teachers' biases and stereotypic expectations of students have contributed to the underrepresentation of students from certain populations receiving gifted services (Bianco, 2005; Bianco & Leech, 2010; Ford, 1996; Ford, Grantham, & Whiting, 2008; McBee, 2006; Minner, 1989, 1990; Minner, Prater, Bloodworth, & Walker, 1987). For example, Bianco and Leech examined the effects of disability labels *learning disabilities* (LD) and *emotional and behavioral disorders* (EBD) on teachers' willingness to refer students to gifted programs using three vignettes describing a gifted student. Results indicated that when given identical student profiles and asked to make referral decisions, special education, general education, and teachers of the gifted were significantly influenced by the LD and EBD disability labels. All teacher groups were much less willing to refer students with a disability label to gifted programs than students with no disability label. According to Bianco, the emphasis on identifying and remediating deficit areas may prevent teachers from recognizing gifted abilities within their students. From this study, it appears that teachers' lowered expectations for students with disabilities apparently prohibit referral to gifted programs.

Teacher bias has also contributed to the underidentification and underrepresentation of culturally and linguistically diverse gifted students (Ford & Grantham, 2003; Ford et al., 2008). Ford et al. suggested that deficit thinking and lack of teacher referral for gifted programs are key factors in the continued underrepresentation of diverse students in gifted programs. When teachers view students through a deficit lens, their perceptions are blurred; the focus is on what students cannot accomplish. As a result, students' gifted abilities go unrecognized and they are not considered for gifted screening, even when they meet or exceed a school district's requirements. Ford's (1996) research found that for some African American high-school students who met and surpassed district criteria for gifted programs (some since elementary school), many had never been referred by their teachers for initial screening. More recently, McBee (2006) conducted a study examining

referral sources, including teacher nominations, for gifted identification screening. Although McBee offered several explanations for the results, the findings suggest that bias exists in teachers' nominations, and this may be a contributing factor in the continued underrepresentation of students of color and students from low-socioeconomic-status (SES) backgrounds in gifted programs. These findings are particularly disturbing when one considers recent research indicating that general-education classroom teachers "feel the most important determinant in whether or not a child receives gifted services should be teacher nominations" (Schroth & Helfer, 2008, p. 169). When untrained teachers become the gatekeepers for admission to gifted programs, many qualified students get overlooked.

Fortunately, however, researchers have documented the positive effects of professional development training for classroom teachers in identifying gifted learners (Robinson, Shore, & Enersen, 2007). When provided with information and coaching on the nature and needs of gifted learners, teachers are better equipped to identify gifted characteristics and make more informed referral decisions. In fact, in an early study by Gear (1978), teachers became twice as effective in making accurate referrals for gifted services with as little as 10 hours of training in recognizing the characteristics of gifted learners.

As discussed, research has documented the effects of teacher biases and stereotypic perceptions of students based on disability (Bianco, 2005; Bianco & Leech, 2010; Minner, 1989, 1990; Minner et al., 1987). Furthermore, researchers have discussed the effect of teacher bias on the continued underrepresentation of racially, ethnically, and linguistically diverse students in gifted programs (Ford, 1996; Ford & Grantham, 2003; Ford et al., 2008; Valdés, 2003). Yet, what do we know about the effect of gender bias in schools or the effects of gender bias in teachers' referrals to gifted programs?

## GENDER BIAS IN SCHOOLS

Much has been written about gender bias in schools over the last few decades. This topic was brought to national attention with the publications of *How Schools Shortchange Girls* (Wellesley College Center for Research on Women, 1992) and *Failing at Fairness: How America's Schools Cheat Girls* (M. Sadker & Sadker, 1994). These reports, and many others, have documented years of research in classrooms across the country examining the inequitable educational experiences and opportunities girls face in schools. School communities and individual teachers convey gender-biased messages to students each and every day. These messages and unintended biases are communicated to students by what is expected of them, how they are treated, how and what they are taught, how learning is assessed, and the type of encouragement they receive relative to pursuing different paths throughout their school trajectory and beyond.

Several studies have documented differential treatment of students based on gender. Researchers suggest that boys are consistently given more instructional time, teacher attention, and praise and are called on more often than girls (Wellesley College Center for Research on Women, 1992). Teachers also tend to expect more from and interact more with gifted boys than gifted girls (Cooley, Chauvin, & Karnes, 1984). These teacher–student interaction patterns appear to be even more pronounced when dealing with high-achieving students; that is, in the top 10–20% of school population and in science and math classes American Association of University Women (AAUW). For example, Baker (1986) found that in science classes teachers questioned boys 80% more often than they did girls. In another study, Tobin and Garnet (1987) reported that 79% of science experiments were conducted by boys. Although teachers state that they want to treat students equitably, boys and girls continue to receive different treatment (D. Sadker & Zittleman, 2005). Siegle and Reis (1998) found that although teachers perceived gifted girls as working harder and producing better quality work than gifted boys, they still assigned higher grades to the boys. As a result of this differentiated treatment, gifted girls may accept teachers' evaluations of their "lower" ability and believe this to be true.

There has been a shift in focus in recent years. Increased attention has been focused on boys' underachievement, particularly in the areas of reading and writing (Neu & Weinfeld, 2007). Additionally, researchers have called attention to the overidentification of boys receiving special education, especially in the areas of emotional and behavior disorders, learning disabilities, and intellectual disabilities (Donovan & Cross, 2002). This is particularly true for African American and Latino boys. Gender bias does not only affect girls.

Although gender bias persists in the classroom and can be seen in teachers' expectations and gender stereotypes (Fleming, 2000), too many educators assume that gender bias no longer exists. According to Fox and Soller (2007), many teachers of the gifted "assume that gender inequity is a thing of the past and fail to monitor for [gender] differences in participation rates" (p. 579). Teachers' unintended gender biases may also influence who they will consider for gifted referral.

### Gender Bias in Gifted Referrals

Despite decades of attention to gender equity in schools and, more specifically, gender issues in gifted education, there is a limited body of recent research specifically examining the role that gender plays in referring students for gifted programs. Some research suggests that gender bias exists. For example, researchers found that gender stereotypes may play a role in teacher identification practices for gifted and talented programming. Powell and Siegle (2000) surveyed 92 educators by providing them with profiles of a child who could potentially be gifted. The researchers gave the participants 15 profiles that contained a mixture of male and

female depictions and asked them to make recommendations about which of the children should be included in a gifted and talented program. The classroom teachers and gifted and talented specialists appeared to conform to certain gender stereotypes, because boys were more likely to be excused for being disorganized and introverted. Male students were also rated higher than their female counterparts if they were not interested in reading. When students fail to conform to gender stereotypes, their likelihood of being nominated for gifted and talented programs may increase. The authors concluded that some students may be nominated for gifted and talented programming because they do not "fit the mold." According to Siegle (2001), gender bias in the nomination process for gifted services may be a function of the characteristics being rated. When teachers have preconceived notions of gender specific behavioral characteristics, they may be more likely to nominate students when their assumptions are challenged (Powell & Siegle, 2000).

Powell and Siegle (2000) explored the interaction of gender with student interests and work habits (producers and nonproducers) on teachers' nominations for gifted programs. They also explored which student characteristics promoted student nomination to gifted programs. Teachers were asked to nominate students for gifted programs based on hypothetical student profiles. The findings suggested that teachers were more likely to select students when the behaviors did not match expected gender stereotypes. For example, teachers who believed that boys are better at math rated the profile of a female student who excelled in mathematical problem solving higher than the identical profile of a male student who also excelled in math. Similarly, teachers who believed that female students were better at reading rated the profile of a male student who was an avid reader higher than a female student with the same skill set.

### PURPOSE OF THE STUDY

Scholars in the field of gifted education have recognized the paucity of research concerning gifted girls (Kerr, 1991, 2000; Reis, 1991; Reis & Callahan, 1996; Siegle & Reis, 1998). Because teacher ratings and nominations play a critical role in the initial identification process, it is important to explore the effects of their biases, including gender bias, on the referral process. Given the limited empirical research specifically examining gender bias in gifted referrals, this study was designed to explore the effect of students' gender on teachers' referrals to gifted programs. Further, teachers' narrative comments regarding their decision making in the referral process are explored. Two research questions were investigated:

1. Do referral ratings for gifted programs differ by gender of the student?
2. What reasons do teachers provide for their referral decisions?

## METHODS

This study is a fully mixed concurrent equal status design mixed methods study (Leech & Onwuegbuzie, 2009). This type of design involves mixing qualitative and quantitative approaches across more than one step of the research process. As stated by Leech and Onwuegbuzie:

A fully mixed concurrent equal status design involves conducting a study that mixes qualitative and quantitative research within one or more or across the following four components in a single research study: the research objective, type of data and operations, type of analysis, and type of inference. In this design, the quantitative and qualitative phases are mixed concurrently at one or more stages or across the components. Both elements are given approximately equal weight. (p. 270)

Therefore, in this study, at the data collection, analysis, and interpretation stages, the qualitative and quantitative approaches were mixed. These data are part of a larger study examining the effects of race, gender, ethnicity, and English-language proficiency on teachers' referrals to gifted programs.

## Participants

Teachers from P-12 schools in Colorado and Florida participated in the study. There were a total of 189 participants in the larger study. In the larger study, the participants were randomly assigned 1 of 11 conditions, with each condition differing by one variable being explored (e.g., race, ethnicity, English-language proficiency, gender). Of the 189 participants in the larger study, 28 participants were randomly assigned into one of two profiles of interest for the present study: either a Caucasian female (i.e., Doreen) or a Caucasian male (i.e., Darin).<sup>1</sup> Specific demographic information regarding the participants in each condition is reported below.

*Doreen: Caucasian Female Profile*

A total of 14 participants were randomly assigned the profile of Doreen, a Caucasian female student. Table 1 presents specific demographic information for the participants.

The socioeconomic status of the student population at the schools where these teachers worked was measured through the percentage of students who qualified for free/reduced priced lunches. Four teachers reported working at schools that had less than 10% of the student population qualifying

for free/reduced priced lunch, two had 10–20%, two had 21–40%, two had 41–60%, one had 61–80%, and two had 81% or more of the student population qualifying for free/reduced priced lunch.

*Darin: Caucasian Male Profile*

There were 14 randomly selected participants assigned to Darin, the Caucasian male profile. Table 1 presents specific demographic information for the participants.

Two teachers in this group reported working at schools that had 10% of the student population at the school qualifying for free/reduced priced lunch, one had 21–40%, two had 41–60%, five had 61–80%, and one had more than 81% of the student body qualifying for free/reduced priced lunch.

TABLE 1  
Participant Demographic Information

	<i>Doreen</i>	<i>Darin</i>
<i>n</i>	14	14
Location		
CO	8	6
FL	4	7
Missing	2	1
Gender		
Male	3	3
Female	10	10
Missing	1	1
Racial background		
African American	1	1
Caucasian	11	11
Hispanic	1	1
Missing	2	2
Level of education		
Undergraduate	2	1
College graduate	5	4
Master's degree	5	5
Specialist	0	1
Doctorate	1	0
Other	0	2
Missing	1	1
Teaching assignment		
General classroom	7	5
Special education	2	4
Gifted	1	0
Other	3	4
Missing	1	1
Grade level taught		
Elementary	5	5
Middle school	3	1
High school	3	2
Graduate school	1	2
Missing	2	2
Years of experience		
0–3 years	5	5
4–7 years	6	3
8–11 years	2	2
12–15 years	0	2
16+ years	0	1
Missing	1	1

<sup>1</sup>The profiles used in the current study were designed to examine differences in teachers' referrals by gender; therefore, we did not introduce other confounding variables such as diverse racial and ethnic backgrounds since there is a significant body of literature demonstrating teacher bias in this regard; see, for example, Ford (1996) and Ford et al. (2008).



## Procedure

In the larger study from which these data were drawn, participants were randomly assigned to one of 11 different conditions. Two treatment conditions were analyzed: a Caucasian male student with gifted characteristics (i.e., Darin) and an identically described Caucasian female student with gifted characteristics (i.e., Doreen).

Each participant was given a vignette to read that described a student with gifted characteristics. The vignette stem can be found in the Appendix. In the current analysis, each vignette described a gifted student who was delineated as either a Caucasian male (i.e., Darin) or Caucasian female (i.e., Doreen). All other describing features in the vignettes were identical. Participants were randomly assigned to one of the two conditions. The vignette stem describing the gifted student remained constant across both conditions. Half of the participants ( $n = 14$ ) received the vignette stem identifying the student as Doreen (i.e., Doreen is a 9-year-old Caucasian fourth grader who recently arrived at your school) while using the pronoun *she* throughout the vignette to delineate gender. The other half of the participants ( $n = 14$ ) received the vignette stem identifying the student as Darin (i.e., Darin is a 9-year-old Caucasian fourth grader who recently arrived at your school) while using the pronoun *he* throughout the vignette to delineate gender.

After reading the vignettes, participants completed a survey. The survey consisted of six Likert-scale statements, ranging from 1 (*strongly agree*) to 4 (*strongly disagree*). Five of the statements served as distracters. These included:

1. I would recommend that this student join one of the after-school art clubs.
2. I would recommend that this student participate in our school sports program.
3. I would recommend that this student participate in our math-tutoring program.
4. I would recommend that this student be referred for counseling services provided at our school or by an outside agency.
5. I would recommend that this student participate in social skills training.

A different statement read, "I would recommend that this student be referred for placement in our school's gifted program." Once the survey was complete, participants were asked to complete a survey addendum consisting of one open-ended question that asked participants to reflect on their response to the gifted referral item: "Briefly state why you strongly agreed, agreed, disagreed or strongly disagreed with the statement."

Surveys were distributed by one of two methods. Colorado teachers were given hard copies of the survey in a graduate class for administrator licensure. Teachers in Florida were asked to participate through e-mail with a URL

provided for the respondent to complete the survey online within 2 weeks.

### Vignette: Content Validity

The vignette describing the hypothetical gifted student was developed based on an extensive review of the literature describing characteristics of gifted learners. Several gifted education textbooks (i.e., Colangelo & Davis, 2003; Davis & Rimm, 2004) were reviewed and characteristics were drawn from these descriptions of gifted learners. The vignette used in the current study was very similar to one used previously by Bianco (2005) and had been validated by distributing it to teachers certified in gifted education (i.e., experts) working at a special school for gifted learners. These teachers were asked to read the vignette stem and respond to questions to determine whether the characteristics resembled those displayed by gifted learners they had observed. There was unanimous agreement among experts that the characteristics described in the vignette strongly resembled those of gifted students they had encountered in their classrooms and no suggestions were made to alter the vignette in any way. Because the current study took place in a different state and the vignette had been slightly modified, the researchers distributed the vignette to several local experts with advanced degrees in gifted education and asked them to respond to the same questions regarding the content of the vignette stem. Again, these experts were unanimous in agreement that the described student resembled a gifted learner and had no suggestions for change.

## RESULTS

### Quantitative Data Analysis

The research question, "Do referral ratings for gifted programs differ by gender?" was answered through quantitative analysis. To investigate whether there was a statistically significant difference in referral of students by gender (male and female) a *t* test was conducted. The assumptions of groups being of similar size, independent observations, homogeneity of variance, and normality were checked and met.

Table 2 shows that that ratings for males were statistically significantly different from ratings for females,  $t(26) = 2.13$ ,  $p = .043$ ,  $d = .81$ , 95% confidence interval (CI; 0.02, 1.13). Inspection of the two group means indicates that the average

TABLE 2  
Gender Comparison of Referrals to Gifted Program

Variable	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Rating			2.13	26	.043
Male ( $n = 13$ )	1.86	.77			
Female ( $n = 14$ )	2.43	.65			

rating for females is significantly higher than the rating for males. This indicates that males are more likely to be referred for gifted services than identically described females. The effect size,  $d = .81$ , is larger than typical (Cohen, 1988).

### Qualitative Analysis

The qualitative portion of this study was designed to explore and understand the reasons why teachers would refer a student for gifted services or not, based on the students' gender. All participants were asked to complete an open-ended question that asked them to reflect on their response to the gifted referral question: "Briefly state why you strongly agreed, agreed, disagreed or strongly disagreed with the statement." These data were utilized for the qualitative analysis.

Constant comparative analysis (Glaser & Strauss, 1967) and classical content analysis (Berelson, 1952) were used to conduct the qualitative analysis. The constant comparison analysis was conducted by breaking down the data into meaning units, attaching codes to the meaning units, and then constructing themes from the codes. The classical content analysis was conducted by counting the number of times each code (identified through the constant comparison analysis) was utilized. The following codes were identified: (a) gifted characteristics, (b) deficit mentioned, (c) needs challenge, (d) need IQ data, (e) not gifted/does not have requisite skills, and (f) gifted and talented program would be detrimental to the student. The coding was conducted by two of the authors, with the initial interrater reliability found to be at 80% agreement. Codes were derived inductively by the first researcher and then used deductively by the second researcher. After discussion, the codes of "negative characteristics" and "deficit mentioned" were collapsed into "deficits mentioned." All data were coded again, with 87.5% agreement for interrater reliability. To better understand the results from the analysis, the results from the classical content analysis are presented by gender in Table 3.

#### *Vignette Type: Female Student*

When the vignette specified the student as being a female, 54% of the participants agreed to refer the student for gifted and talented services. Most ( $n = 8$ ) participants who agreed

TABLE 3  
Classical Content Analysis Results by Gender

	Female	Male
Gifted characteristics	8	7
Needs challenge	5	3
Need IQ data	3	2
Not gifted/does not have requisite skills	3	1
Deficit mentioned	9	4
Gifted and talented program would be detrimental	4	0

to referral discussed gifted characteristics as reasons to refer. Positive characteristics of the student that were mentioned most frequently included creative abilities, being imaginative, and needing challenge. For example, one participant stated, "She seems to be creative and imaginative but it seems like she is having difficulty reaching her potential in the traditional classroom." Interestingly, more than 16 comments were negative such as: "Her oppositional attitude combined with high ability but lower achievement can be indicative of a gifted student." One participant noted that the student had gifted and talented characteristics and agreed to refer the student for gifted services, but hesitated to strongly agree because no IQ data were given.

For participants who did not refer (46%), comments focused on the student's perceived negative characteristic, needing IQ data, deficits with interpersonal skills, and participants' beliefs concerning the negative impact of competitive environments in gifted and talented programs for girls. Even when some participants believed that the student would succeed in a gifted program, they chose not to refer. The following comment illustrates how participants believed the female in the vignette (Doreen) would succeed in a gifted program but did not refer based on assumptions of how gifted placement would negatively affect the student:

I only disagreed [with referring] because it seems this young girl is intelligent, creative, and a good critical thinker, however not necessarily a genius! I believe that she would succeed if placed there, but if she were to constantly be told that she is "gifted" it might intensify her already domineering and arrogant personality. Through sports and drama she'll have a chance to develop the social skills needed while learning the world does not revolve around her. [Teacher comment]

Most participants who did not agree to refer the student were clearly focused on identifying perceived negative characteristics and were keen to mention social aspects of placement in gifted and talented programs. Many participants noted how Doreen was not socially ready for a gifted learning environment as evidenced in the following comments: "Even though she has some of the higher levels of thinking skills, she does not demonstrate positive interpersonal relationships with her peers," and "she is not ready socially for the gifted program. It is very competitive and she would not be able to accept the criticism."

#### *Vignette Type: Male Student*

Of the 77% of the teachers who agreed to refer the male student ( $n = 10$ ), 7 focused on positive gifted characteristics such as: independence, taking initiative, creativity, academic achievement, being self-directed, and motivated. Many comments focused on the student's need to be challenged:

“The student may not be challenged enough causing boredom and frustration, as well as lack of attention.” Another participant stated, “It sounds to me like Darin is bored with his current placement. It is not challenging enough for him. He is smart, imaginative, self-directed, and needs more opportunities to be creative.” Other comments highlighted Darin’s strengths as reasons to refer: “He is committed to completing tasks, self-selected, self-directed, independent learner, prefer finding solutions independently—solves problems in unconventional ways.” Another participant noted how Darin would succeed in a gifted program because “he is self-directed and motivated.”

For the few teachers who did not agree to refer ( $n = 3$ ), comments included needing IQ information and the student not being gifted. For example, one participant commented, “Disagree because his academic scores are average, it doesn’t indicate above average (top 10%).”

### *Comparison of Male and Female Students*

When the comments for the male and female student were compared, there were profound differences. The participants’ beliefs regarding the female student were expressed with descriptors focusing on negative characteristics such as oppositional behaviors, bossiness, self-critical, or arrogant and were seen as undesirable personality traits of the student; these were frequently cited as reasons to not refer the student for gifted programs. On the other hand, these same characteristics were considered a strength for the male student. This is depicted in the following quote:

His apparent lack of tolerance for such perspectives and reluctance to change procedures directed by others is indicative of individuals who are self-absorbed in their own perspectives. This has been displayed by highly recognized artistic individuals who often care not for the perceived “intrusion” of space created by others which they see as threatening to their freedom as an individual. [Teacher comment]

Furthermore, the female student was considered to be unprepared for the gifted and talented program due to perceived social incompetence. One participant stated, “Doreen needs to improve her social skills in an environment with a variety of learners in regular classroom. Placing Doreen in a gifted program will only reinforce some of her inappropriate behaviors towards her peers and teachers.” Conversely, the comments regarding the male student did not address social readiness for gifted programs in any form. In fact, Darin was seen as needing to be challenged, independent, self-directed, and exhibiting leadership skills. Interestingly, Darin was never referred to as bossy or arrogant. Lastly, gifted programs were seen as too competitive and potentially detrimental environments for the female student, yet no such concern was expressed for the male student. The following comments illustrate this belief: “The competitive

environment in a school’s gifted program will only promote Doreen’s bossy attitude” and “It is a very competitive environment and she would not be able to accept the criticism at this point.”

## DISCUSSION

The findings of this study clearly indicate that referral recommendations for gifted services were influenced by gender. Statistically significant differences were observed between educators who were randomly assigned to either the male or female vignette; educators assigned to read Darin’s profile, the profile of the male student, were much more likely to refer him for gifted programs than were educators assigned to read Doreen’s profile, the profile of the female student. Despite the fact that the vignettes described two students with identical characteristics, gender biases were evidenced in teachers’ referral patterns, based on whether they believed the student to be male or female.

Gender biases were not only apparent in educators’ referral rates—they were also evident in how each student was described and the reasons given for referral choices. The qualitative analysis uncovered striking gender differences in these areas. The discussion will be organized by the general themes that emerged from the qualitative analysis and contrasting teachers’ responses by the gender group condition to which they were randomly assigned. First, we discuss the characteristics teachers identified to support their referral choice. Next we explore comments within the categories of teachers focusing on student deficits and not having either the requisite skills to be considered gifted or not having IQ data with which to make confident decisions. Lastly, we discuss the implications of these findings, particularly as they relate to teacher preparation and professional development in the areas of gifted education and gender equity.

### *Characteristics to Support Referral Decisions*

Teachers perceived students differently as illustrated in their dissimilar descriptions of Doreen and Darin. Doreen was frequently described in negative terms and viewed largely from a deficit perspective—even when teachers agreed to refer her for gifted services. For example, one teacher who strongly agreed to refer Doreen commented on her creativity and strong imagination but also mentioned “trouble with social skills and relating to others” as indicators of Doreen’s giftedness. Although nothing in the vignette described the student as egotistical, teachers referred to Doreen as arrogant, bossy, domineering, oppositional, or other terms with similar connotations. Teachers who did not agree to refer Doreen frequently cited these negative descriptors as supporting evidence that Doreen was not gifted or not ready for gifted placement. Teachers were also concerned that Doreen lacked self-confidence and therefore would be intimidated

by the challenge of a gifted classroom environment. As one teacher stated, gifted classes are “very competitive and she would not be able to accept the criticism.”

On the other hand, Darin was seen as smart, imaginative, independent, in need of challenge, self-motivated, self-directed, and a leader. Teachers frequently commented on Darin’s need to be challenged in order to keep him engaged. One teacher who strongly agreed to refer Darin stated, “It sounds to me like Darin is bored with his current placement. It is not challenging enough for him. He is smart, imaginative, self-directed, and needs more opportunities to be challenged.” For Darin, teachers perceived a gifted program as something that would offer him the challenge he needed in order to be more successful. The few teachers who disagreed with referring Darin for gifted services ( $n = 3$ ) focused on his perceived lack of academic skills or lack of IQ data to support his giftedness: “It doesn’t indicate above average (top 10%).”

Researchers have noted that teachers value individuality in boys and generally encourage male students to “try harder,” whereas female students are often rewarded for their ability to get along with others and being cooperative (Lindley & Keithley, 1991). Perhaps teachers in this study perceived Darin as needing to try harder and believed that a gifted placement would allow him to do so. For Doreen, it appears her (perceived) lack of social skills inhibited teachers from referring her for gifted services.

An important finding from the qualitative analysis is that teachers believe that higher levels of social skills are more important for females than for males and that these social skills are requirements for success in gifted programs. This finding supports Peterson and Margolin’s (1997) study in which they analyzed how teachers conceptualize giftedness. One finding from their study was that the types of relationships students have with their teachers influences teachers’ referrals for gifted services. For example, teachers identified prosocial behaviors and the ability to communicate with students effectively as a potential indicator of giftedness. Yet, females generally are rewarded for being conformists and getting along with others (Lindley & Keithley, 1991). Thus, it is not surprising that in the current study teachers were reluctant to refer Doreen for gifted services because of a perceived lack of prosocial behavior.

Peterson and Margolin (1997) also found that teachers were less likely to refer students for gifted programming if they displayed negative social skills. Though social skills by gender were not explicitly discussed, some of the teacher comments in their study mirror comments made by participants in the current study. For example, in Peterson and Margolin’s study, teachers focused on students’ lack of social skills when questioning whether a student was gifted or not. Comments such as “she can be bossy” or “kind of arrogant” were given as part of the rationale for not identifying a female as gifted. In the current study, educators frequently

commented on Doreen’s underdeveloped social skills (e.g., “she is not ready socially”) as a reason to decline referral. Interestingly, as noted earlier, bossy and arrogant were also terms used to describe Doreen.

Many teachers in the current study felt that a gifted program would be detrimental for Doreen. Her perceived lack of social skills coupled with a concern that she would not succeed in a competitive environment apparently influenced teachers’ referral decisions. Interestingly, however, these concerns were only present for Doreen. Previous studies demonstrate that behavioral expectations vary by gender (Underwood, Galenand, & Paquette, 2001); aggressive and physical behaviors are viewed as being more appropriate for boys and more passive behaviors are more socially acceptable for girls. When filtered through a gender lens, social competence (not typically included in definitions of giftedness) may in fact influence teachers’ perceptions of giftedness.

One finding, which did not appear to be influenced by gender, was teachers’ reluctance to nominate a student for gifted programs without having IQ data on which to rely. Teachers frequently wanted IQ data to help them determine whether or not the student was indeed gifted. These findings are consistent with the literature on how giftedness is narrowly perceived by some teachers (Bianco, 2005). Although *giftedness* is operationally defined by states and local districts in a variety of ways, rigid and narrow definitions of intelligence, coupled with an overreliance on IQ for entry into gifted programs, has contributed to the continued underrepresentation of gifted learners from diverse populations (i.e., students with disabilities, racially and ethnically diverse learners). For example, the most frequently cited reason for homogeneous populations in gifted services is the use of a single criterion or reliance on IQ tests for admittance to gifted programming (Callahan, 2005). Based on the results of this study and from previous research, teachers and other school personnel would benefit greatly from professional development related to a broader, multidimensional view of giftedness.

### Limitations

Several limitations need to be taken into consideration when interpreting the results of this study. First, the data collection via the Internet probably decreased our sample size because it was not easy for respondents to not participate in the study. Second, our sample was not a random sample. Third, the vignette, although a powerful tool for eliciting responses from participants, is not the same as interacting with a student and having to make educational decisions for the student. In sum, teachers were asked to make referral decisions under contrived conditions with limited information. If the vignette had included more descriptive information regarding the student, the respondents may have answered differently.



## Implications for Practice

The findings from the current study present essential implications for practice, specifically for preservice teacher preparation at the college and university level as well as in-service professional development. Based on the results, information concerning gifted learners and gender equity should be part of every teacher's training. Currently, preservice teacher preparation does not adequately prepare teachers to identify or serve gifted students (Davis & Rimm, 2004; Starko, 2008) or provide information regarding gender equity (Campbell & Sanders, 1997; Wellesley College Center for Research on Women, 1992). Based on the results of this study, both of these areas require urgent attention.

Currently, most gifted students (whether they have been identified as gifted or not) spend a majority of their time in a general-education classroom (Starko, 2008); however, general-education teachers do not have the skills or knowledge base to recognize or serve gifted students (Croft, 2003; Starko). In a recent report by the National Association of Gifted Children (2007), only four states (Kansas, Montana, Oregon, and Virginia) currently require gifted and talented training as part of their initial teacher preparatory programs. Furthermore, undergraduate-education majors generally are required to take only one special education course (e.g., Exceptional Learner), which may include discussion from one chapter devoted to the gifted learner (Clinkenbeard & Kolloff, 2001; Davison, 1996). If this chapter is covered in the course, these classroom teachers would receive approximately 2–3 hours of discussion specifically addressing gifted learners (Chamberlin & Moore, 2006). This lack of attention to the nature and needs of gifted learners seemingly translates into teachers' misconceptions regarding the globally gifted learner with an IQ of 130 or above. The belief that gifted students must have intelligence quotients above 130 and excel in all areas creates barriers for the identification of students who, despite demonstrating gifted abilities in some areas, do not meet teachers' expectations and therefore go unrecognized and unidentified as gifted (Baldwin, 1999; Silverman, 2003; Swesson, 1994). Unfortunately, too few classroom teachers understand how to recognize the characteristics of gifted learners (Croft). This seems evident in the current study, particularly as it relates to gender biases and gifted girls.

Gender stereotypes and biases create inequities in the classroom, which in turn restrict students from reaching their full potential. In order to maximize the achievement of gifted girls, teachers and other school professionals need to be aware of their own biases that inhibit students from accessing the services they need. In other words, teachers need to be aware of their own gender biases as they consider which students they choose to nominate for gifted services. Teacher educators spend little time teaching about gender equity or sharing strategies on how to counteract gender bias (Campbell & Sanders, 1997). According to

D. Sadker (2000), we “do little to prepare teachers to ‘see’ the subtle, unintentional, but damaging gender bias that characterizes classrooms” (p. 80). Sadker further reminded us that although gender bias is less prevalent today and we have made tremendous gains with regard to girls' access to courses and careers, the effect of gender bias is “no less virulent” (p. 80). Fortunately, however, recent research illustrates that once teachers have even minimal training in gender equity, gender bias in classrooms can be significantly reduced. According to Kloosterman and Suranna (2003), there is evidence that once individuals are given the opportunity to examine and “become aware and question stereotypical socio-cultural gender differences, positive results can certainly be observed” (p. 99).

Teachers would benefit from training that includes a multidimensional view of giftedness, including characteristics and needs of gifted students, with intentional focus on the needs of gifted girls. Despite a longstanding call for all educators to have specific training in gifted education (Johnsen, VanTassel-Baska, & Robinson, 2008), the reality of including additional coursework to already crowded licensure requirements seems challenging. If an additional course cannot be added to already overburdened requirements, then teacher educators in all disciplines (special education, general education, English as a second language, etc.) should consider infusing gifted education and gender equity topics in their courses through readings, assignments, field experiences, and discussions (see Clinkenbeard & Kolloff, 2001, for examples of infusing gifted education). Fortunately, with the recent update to the federal Higher Education Act (formally H.R. 4137: College Opportunity and Affordability Act of 2008), institutions receiving Title II Teacher Quality Partnership Grants for prebaccalaureate teacher preparation must ensure that the new teachers are able to meet the learning needs of gifted and talented students.

State departments of education and local school districts are encouraged to offer professional development opportunities and develop practitioner-friendly guidebooks focusing on gifted education and gender equity. Such materials and training can help teachers understand how their biases inhibit students (boys and girls) from reaching their maximum potential. Hopefully this type of training will result in equitable opportunities for students to participate in gifted programs.

The results of this study provide some key insights into the potential biases that teachers may have when referring girls for gifted programming. Although teacher participants were given the same hypothetical vignette where gender was the only differing variable, teachers were more likely to refer boys for gifted programming than girls. This indicates that additional training at the preservice and in-service level are warranted regarding promoting awareness of potential biases and increasing equity in referral and assessment practices. Furthermore, teacher training programs need to infuse course content related to gifted students and programming as well as promote the reduction of disproportional representation

not only across gender but for all underrepresented groups in gifted education.

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## APPENDIX

Vignette stem used in the study.

A.K., a fourth-grade student, is currently attending your school.

A.K. has been described as intense, inquisitive, energetic, and imaginative.

A.K. is committed to completing tasks that are self-selected and self-directed.

This student is an independent learner often preferring unstructured, independent tasks to teacher-directed or cooperative group activities. A.K. prefers finding solutions to problems independently and in sometimes unconventional ways.

A.K. is extremely sensitive to criticism (self-imposed and by others). This student is very self-critical and becomes easily frustrated and angry when mistakes are made or there is pressure for completing work within a deadline.

This student has many interests, particularly around themes of investigating UFOs and life on other planets. Given the opportunity, A.K. could spend hours investigating this line of interest.

Teachers have noted that A.K. dislikes and resists most routine practice tasks such as math drills, spelling tests, handwriting practices, and any copy tasks.

Overall, A.K.'s language arts scores reflect above-grade-level achievement in reading and writing. A.K.'s reading skills are well above grade level. This student enjoys reading most anything on topics of interest including science and science fiction but dislikes and resists suggestions to expand reading to other areas.

Though A.K. enjoys math and has a very good grasp of mathematical concepts, many careless computation errors are made, especially when attempts are made at working too quickly. Recent scores on achievement tests reflect grade-level achievement in mathematics; however, classroom performance is lower than one would expect.

Socially, A.K. has a few close friends and is generally accepted by peers. A.K.'s friends enjoy hearing about the most recent UFO findings and are intrigued by this child's vivid imagination. Problems surface when A.K. dominates activities or becomes argumentative and spirited when challenged by peers or adults. Though this problem has surfaced in the classroom and on the playground, it is most frequently observed during competitive activities (e.g., spelling bees, sports). This can sometimes be a problem for A.K., friends, and teachers.

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