

Factors that Influence Teacher Nominations of Students for Gifted and Talented Programs

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Why should
teachers
be asked
to
nominate
students
for gifted
programs?

The purposes of this study were to identify student characteristics that might influence teachers in referring students for gifted and talented programs and to compare whether preservice and inservice teachers valued these characteristics differently.

rational

Classroom teachers observe students in a variety of situations and under a variety of conditions.

Their unique perspective is valuable when considering students for gifted and talented programs.

Teacher ratings are often used to form a pool of students to be tested for these programs and increasingly, the ratings are included as part of a total identification system.

Because teachers' ratings of students play an important role in identifying gifted students, it is important to investigate whether teachers' beliefs, stereotypes, biases, and expectations influence their selection of students for gifted and talented programs.

A 1959 study by Pagnato and Birch reported that teachers were poor at identifying students who had IQ scores over 130. This work has been frequently cited to support the opinion that **classroom teachers are not reliable in identifying gifted and talented students** in their classrooms.

Gagné (1994) criticized the methods employed by Pagnato and Birch (1959). He reanalyzed their data and found that **teachers were as effective as most other sources of information** for the identification of gifted and talented students

Dusek and Joseph (1983) also found that "teachers were more likely to expect high achieving students, regardless of gender, to be **masculine or androgynous**, and low achieving students, regardless of gender, to be feminine or undifferentiated" (p. 338). Cramond and Martin (1987) used Tannenbaum's 1962 attitude questionnaire and found that **athleticism was a critical determinant of how positively teachers perceived students**. Siegle and Powell (2004) found that teachers were likely to identify students when they **did not fit gender stereotypes**.

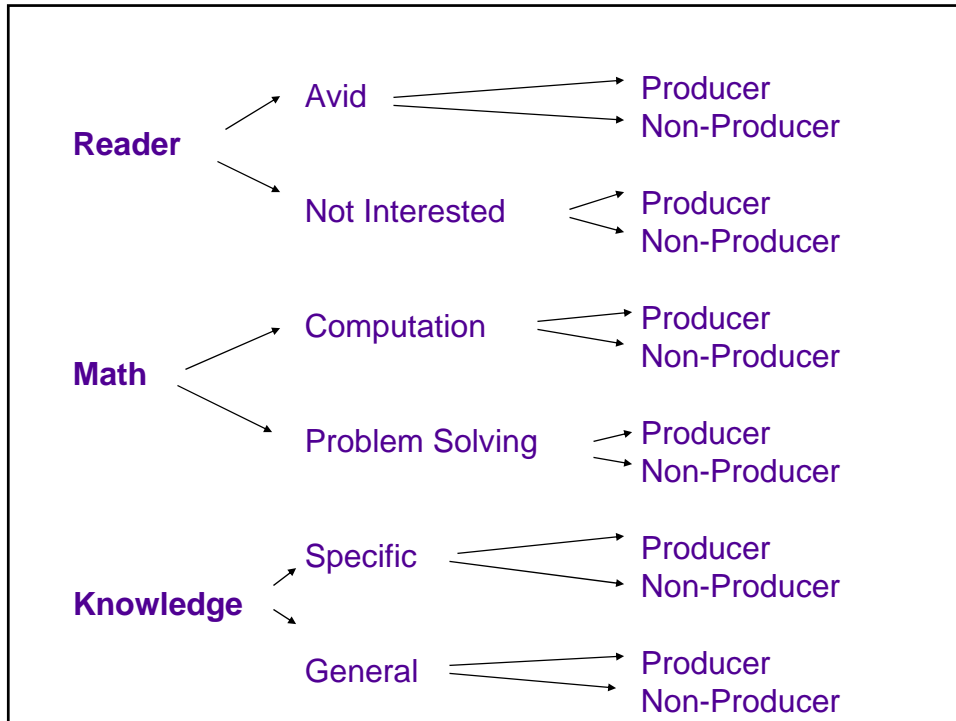
When left to their own devices, teachers tend to **focus on skills associated with academic performance and less on creativity, leadership, and motor skills** when nominating students to gifted programs (Guskin, Peng, & Simon, 1992; Hunsaker et al., 1997).

Borland (1978) showed that nomination accuracy improved by asking teachers for nominations based on **singular criteria related to their gifted program rather than global judgments.**

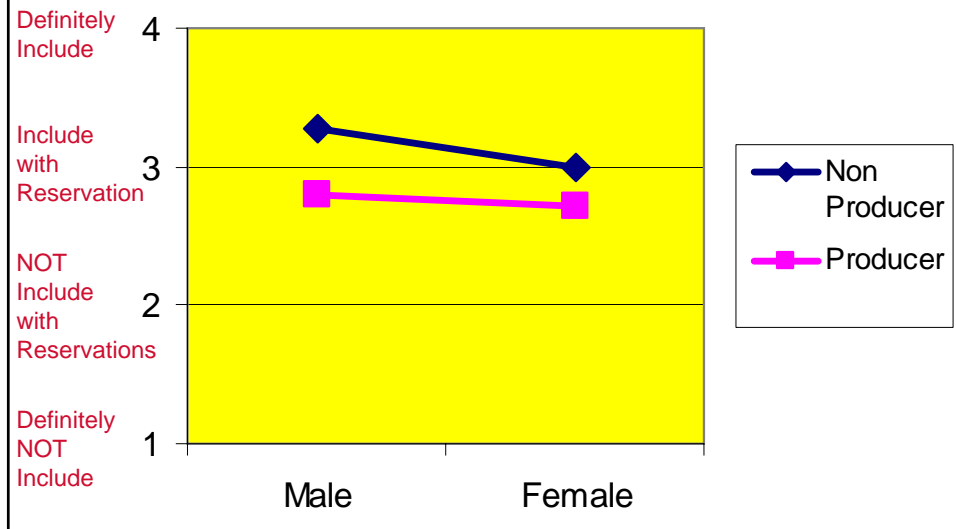
Siegle and Powell (2004) found that teachers were more likely to nominate students for gifted programs if the students demonstrated **esoteric rather than common interests.**

Kolo (1999) found that instruments which “**explicitly and very clearly spell out the traits** or characteristics to be used by nominators...were more effective than those ones in which the traits to be rated or checked are not so obvious” (p. 181).

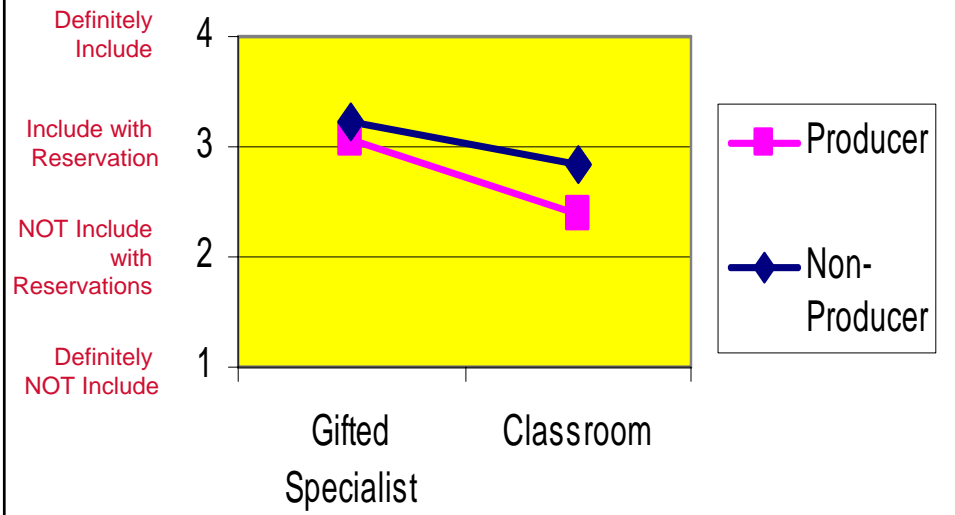
Weber (1999) reported that teachers are often **concerned about misidentifying students**. Generally, the concern relates to over identifying rather than under identifying. He warned that teachers should understand that sending students to gifted programs does not imply teaching inadequacy on the teachers’ part.



The esoteric nature of specific student knowledge matters...

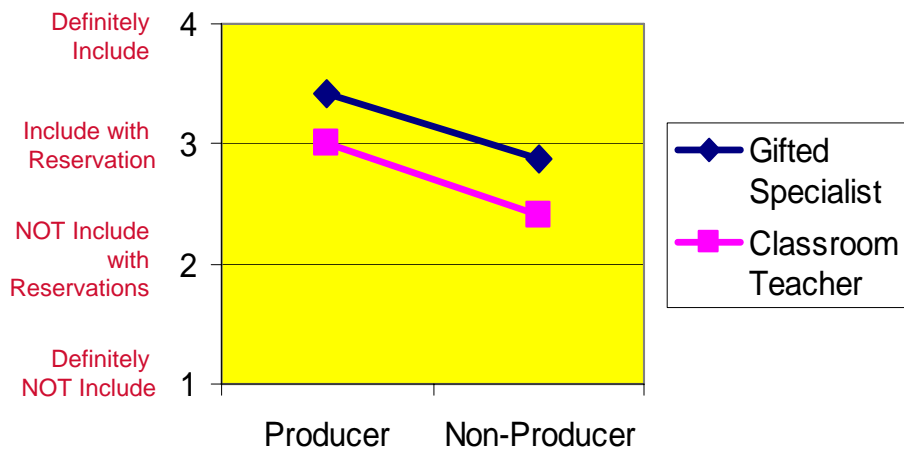


...and it matters more with
classroom teachers.

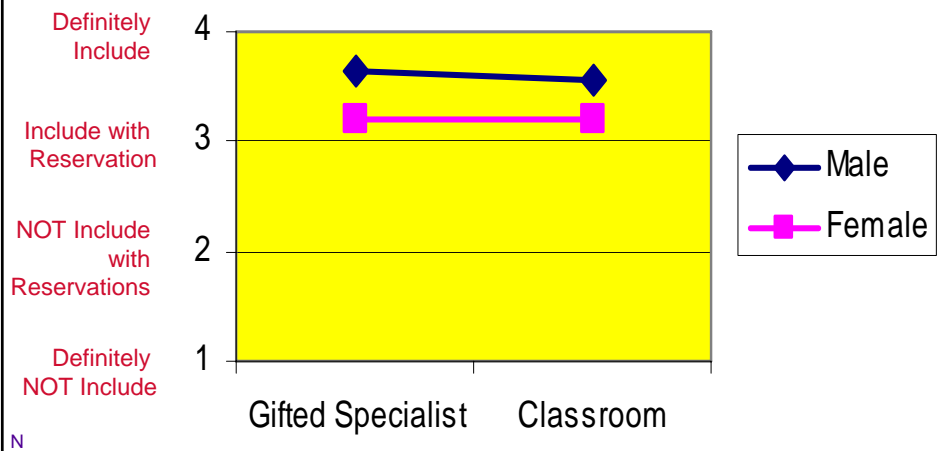


Tannenbaum's scarcity of
resources coupled with the supply
and demand theory of economics
indicates
that classroom teachers may
espouse an
Economic Theory of
Talent Recognition.

Problem solving producers are more likely to be nominated and G/T specialist rate them higher than classroom teachers do.

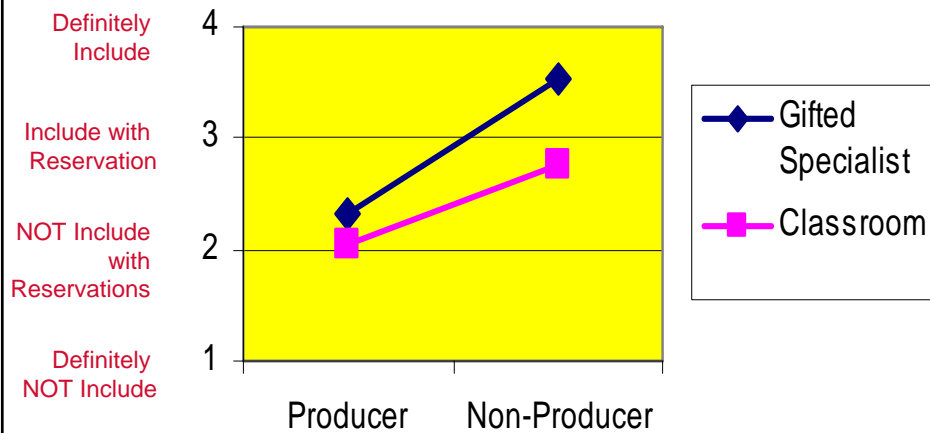


Introverted, absented-minded females are nominated with less confidence.

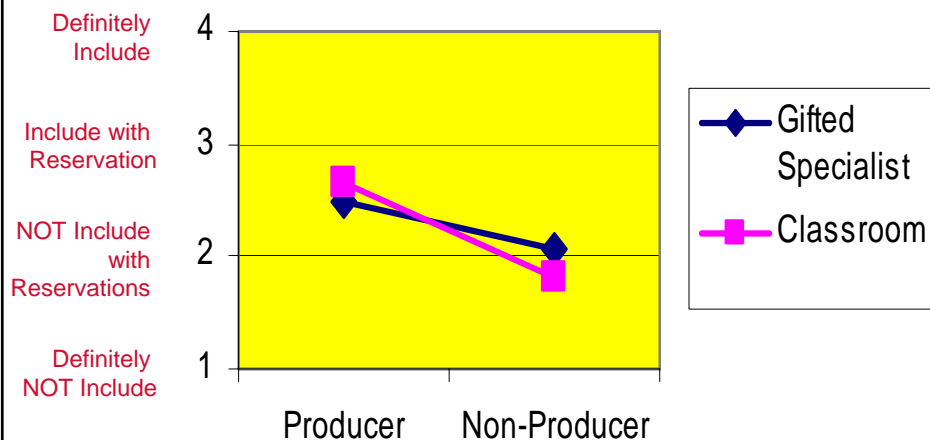


N

Mental computation was valued and G/T specialists valued it more than classroom teachers.



Classroom teachers and G/T specialist were similar in rating producing readers higher...



...while nonproducing male nonreaders were rated higher than similar females by classroom teachers.



Conclusions

- ***Some gender stereotypes still exist when identifying students for gifted programs.***
- ***The propensity towards checklists may inherently bias teachers against some students.***
- ***Thinking of giftedness as a scarce resource influences student selection.***
- ***Underachievers end up being underidentified as well.***
- ***Gifted and talented specialist tend to rate students higher than classroom teachers.***

Created 8 versions of 11 student profiles

Participants were asked to list how likely they would recommend the student in each of their 11 profiles for a gifted and talented program. They used a 4-point Likert scale with

1= "Definitely NOT include,"

2 = "NOT include with reservations,"

3= "Include with reservations," and

4= "Definitely include" to rate each student profile

290 Preservice Teachers

- Undergraduate education majors attending a public university in New England
- 79% female
- 50% elementary – 37% secondary – 13% specialists
- Mean age 21

95 Inservice Teachers

- Attending a summer gifted and talented conference at the same university
- 88% female
- 52% elementary – 29% secondary – 19% specialists
- Mean age 41

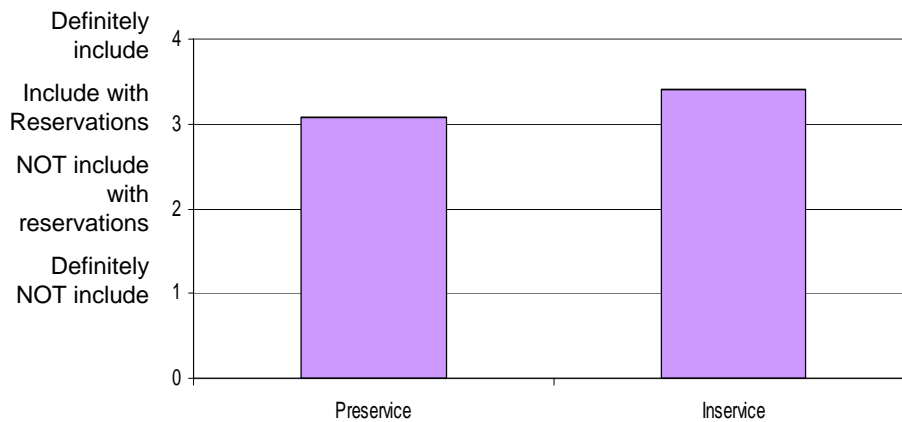
participants

2 x 2 x 2 (Gender x Organization x Personality)

Sam (**Sally**) is a bright fifth grader who loves to learn and has many friends. S/he is organized (*S/he has difficulty keeping her desk organized and often misplaces assignments. His/her papers are not very neat*). S/he is a quiet introspective (*S/he is outgoing and gregarious*). S/he excels at problem solving and reads voraciously. Sam (**Sally**) is passionate about lighthouses. He knows the locations and construction dates of all the lighthouses along the Atlantic Coast, but s/he has trouble remembering dates and places for his/her history class.

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$F(1,368)=10.15, p=.002, d=.38.$

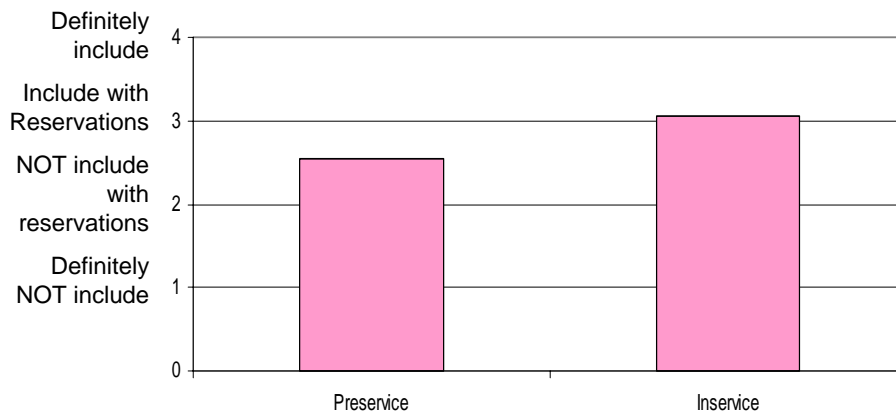
2 x 4 (Gender x Subject)

Kathy (Karl) is a quiet, introspective student. S/he is often lost in thought and frequently has no idea what was just said although s/he does generally know the topic under discussion. When s/he does make comments, they seem to be unrelated to the topic. S/he likes to read all sorts of books. S/he is especially interested in (**spelling, history, math, or science**). S/he is not well organized and seldom hands in homework but does well on tests. Kathy (**Karl**) is uncomfortable around her/his peers and prefers to walk around and talk with teachers at recess time or spend time alone.

1 of 2

2 x 4 (Gender x Subject)

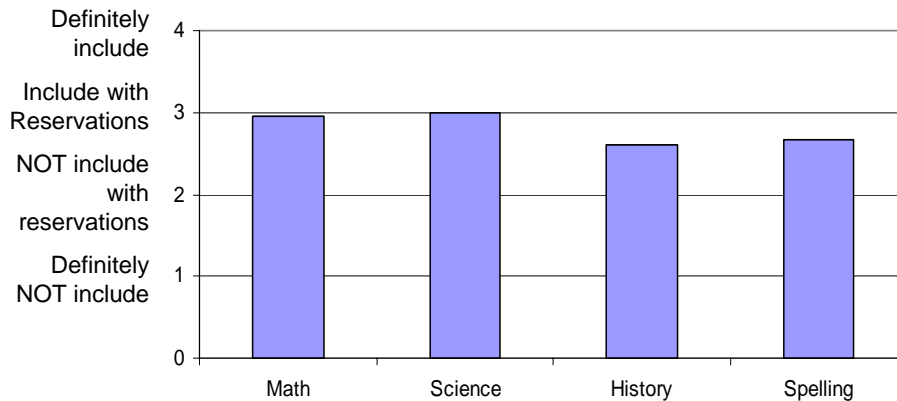
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$F(1,367)=19.11, p<.001, d=.52.$

2 x 4 (Gender x Subject)

Kathy (Karf) is a quiet, introspective student. S/he is often lost in thought and frequently has no idea what was just said although s/he does generally know the topic under discussion. When s/he does make comments, they seem to be unrelated to the topic. S/he likes to read all sorts of books. S/he is especially interested in (**spelling, history, math, or science**). S/he is not well organized and seldom hands in homework but does well on tests. Kathy (**Karf**) is uncomfortable around her/his peers and prefers to walk around and talk with teachers at recess time or spend time alone.



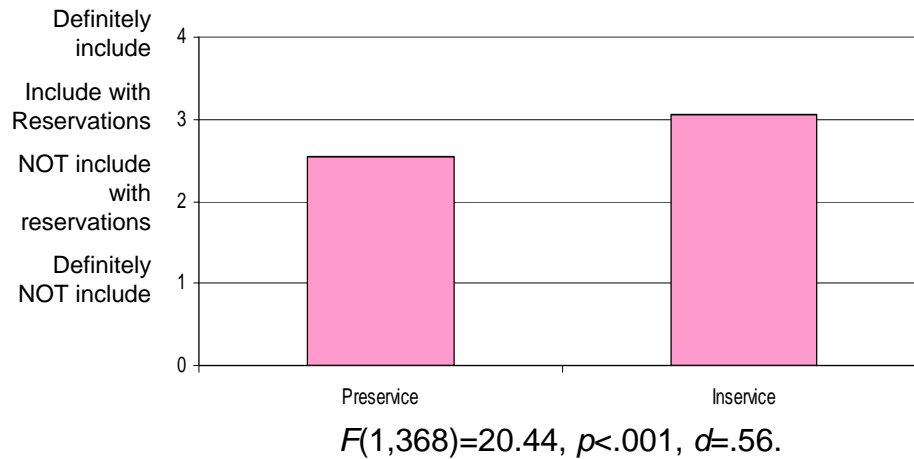
$F(3,367)=2.83, p=.038, d=.37.$

2 x 2 x 2 (Gender x Passion Area x Length of Passion)

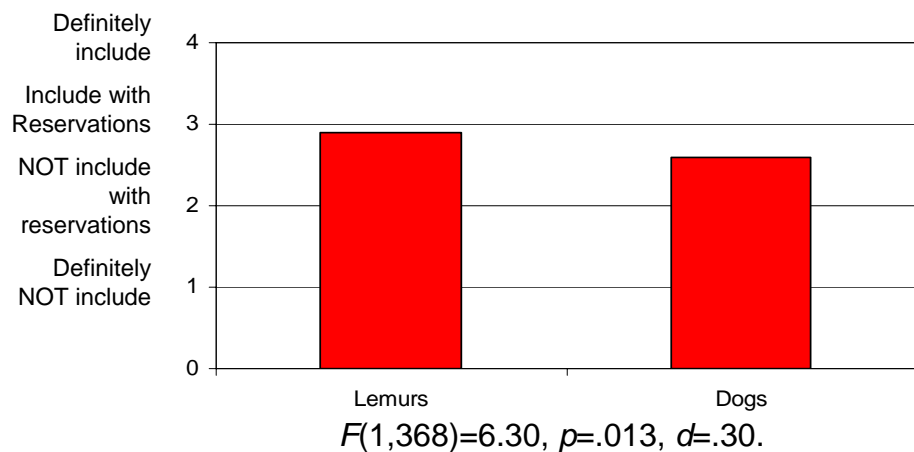
Diane (Dave) is a fifth grader who has been passionate about **lemurs (dogs)** since s/he was in **kindergarten (fourth grade)**. Her/His room is covered with posters on lemurs (**dogs**). S/he has read all of the books s/he can find on lemurs (**dogs**) in her school and public libraries and has starting getting books from other libraries. S/he has a tendency to bring lemurs (**dogs**) into any conversation or assignment in which s/he participates. Spelling sentences are about lemurs (**dogs**) and book reports are about lemurs (**dogs**). Diane (**Dave**) manages to bring lemurs (**dogs**) into math and especially science. Classmates are tired of the lemur (**dog**) discussions and encourage her/him to go on to something new, but Diane (**Dave**) is as enthusiastic as ever.

2 x 2 x 2 (Gender x Passion Area x Length of Passion)

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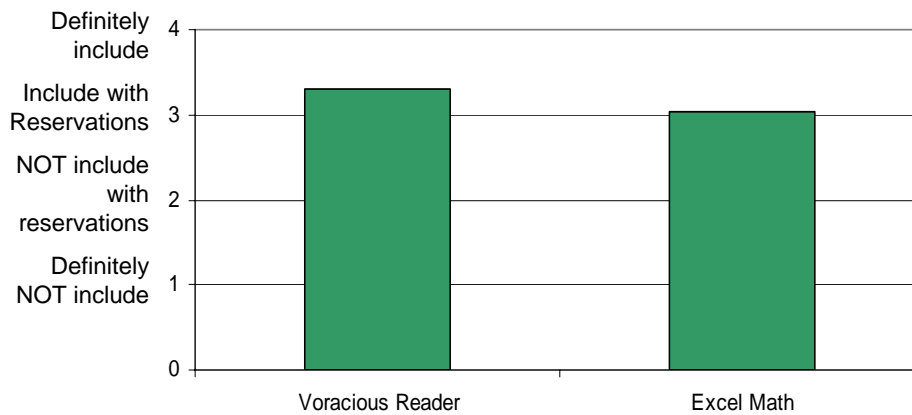


2 x 2 x 2 (Gender x Subject x Assertiveness)

Nate (*Nancy*) has excellent skills in mathematics (*is a voracious reader*) in the fifth grade. S/he does well on his/her schoolwork and turns his/her assignments in regularly. S/he is afraid to express his/her opinions and is easily dominated by his/her peers (*S/he is not afraid to express him/her opinion and occasionally him/her assertiveness creates a tension between him/her and him/her peers*). S/he loves reptiles and spends every spare minute reading about them. S/he convinced his/her parents to build a frog pond in their backyard.

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$F(1, 367)=5.92, p=.015, d=.29.$

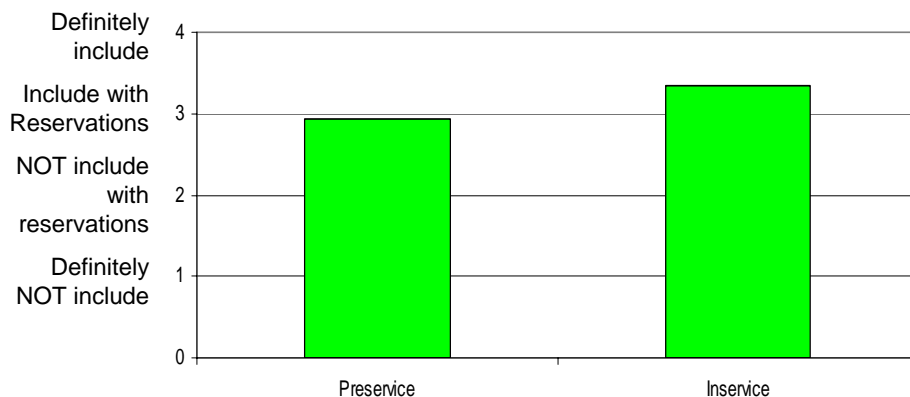
2 x 2 x 2 (Gender x Reading x Math)

Mary (*Michael*) is a very verbal student. S/he has a large vocabulary and enjoys playing with words. Her/his attempts at humor are often not appreciated by those around him/her. S/he has a tendency to dominate class discussions and lose other students. S/he is an (*avid reader or no mention of avid reading*) but the books s/he reads don't always seem appropriate for his/her age. S/he (*understands math concepts quickly but does not do well on timed math fact pages or no mention of math*). Assignments are handed in on time and of varying quality.

1 of 2

2 x 2 x 2 (Gender x Reading x Math)

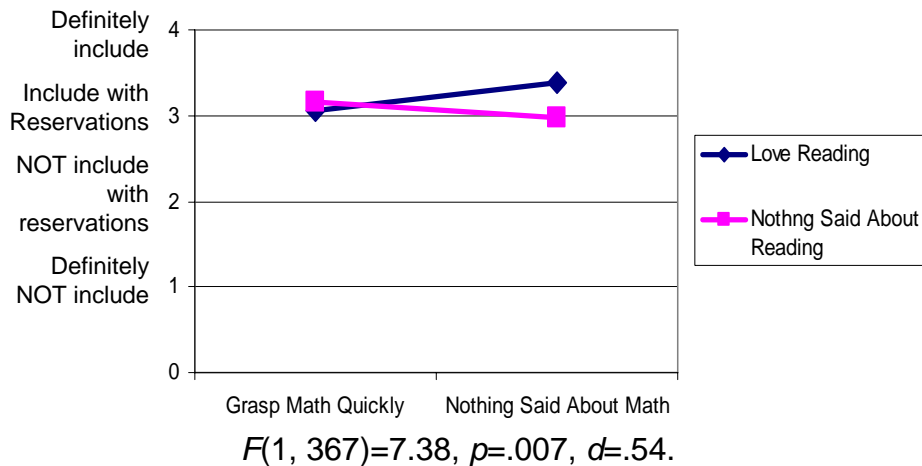
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$F(1, 367)=18.46, p<.001, d=.52.$

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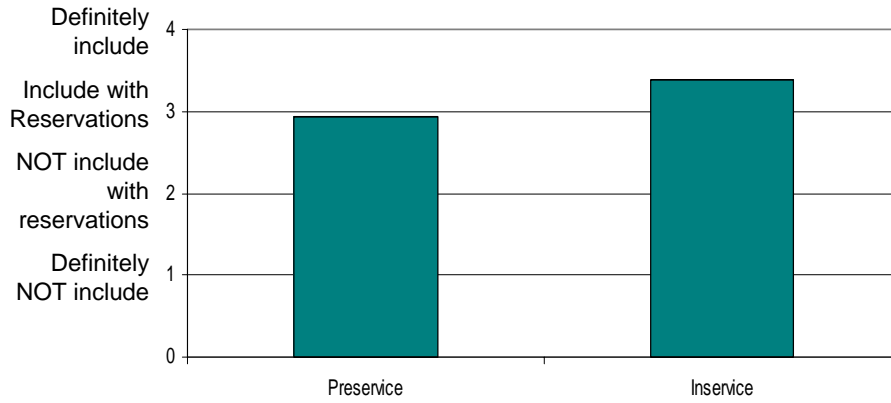
2 x 2 x 2 (Gender x Grade x Attention)

Gwen (Gary) is a lively **fourth (eighth)** grade student with many interests. Her/His most recent passion is whales and dolphins. Daily s/he searches the newspaper for any reports of whales beaching themselves. At lunch, Gwen (**Gary**) is working to interest other fourth (**eighth**) graders in a “Save the Whales” campaign. In the classroom, Gwen’s (**Gary’s**) broad range of interests frequently causes her/him to move on to a new topic or activity prior to completing the previous assignment. S/he is often **preoccupied (In the classroom, Gwen/Gary fails to finish tasks; s/he frequently shifts activities without apparent awareness that s/he has not completed the previous assignment. He is often unfocused)**. The work that Gwen (**Gary**) does shows that s/he is a capable mathematical problem solver. Her/his ideas for creative story writing are elaborate but s/he seldom gets the words on paper.

2 x 2 x 2 (Gender x Grade x Attention)

1 of 4i

Gwen (**Gary**) is a lively fourth (**eighth**) grade student with many interests. Her/His most recent passion is whales and dolphins. Daily s/he searches the newspaper for any reports of whales beaching themselves. At lunch, Gwen (**Gary**) is working to interest other fourth (**eighth**) graders in a "Save the Whales" campaign. In the classroom, Gwen's (**Gary's**) broad range of interests frequently causes her/him to move on to a new topic or activity prior to completing the previous assignment. S/he is often **preoccupied** (*In the classroom, Gwen/Gary fails to finish tasks; s/he frequently shifts activities without apparent awareness that s/he has not completed the previous assignment. He is often unfocused*). The work that Gwen (**Gary**) does shows that s/he is a capable mathematical problem solver. Her/his ideas for creative story writing are elaborate but s/he seldom gets the words on paper.

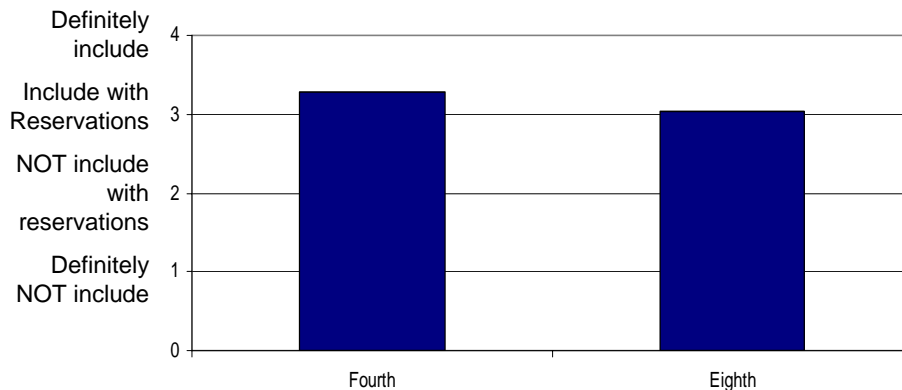


$F(1, 369)=18.61, p<.001, d=.53.$

2 x 2 x 2 (Gender x Grade x Attention)

2 of 4i

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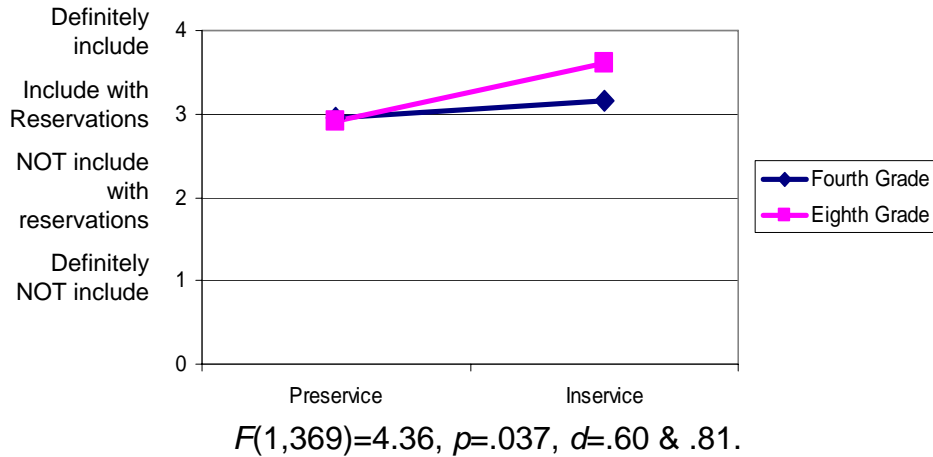


$F(1,369)=5.56, p=.019, d=.27.$

2 x 2 x 2 (Gender x Grade x Attention)

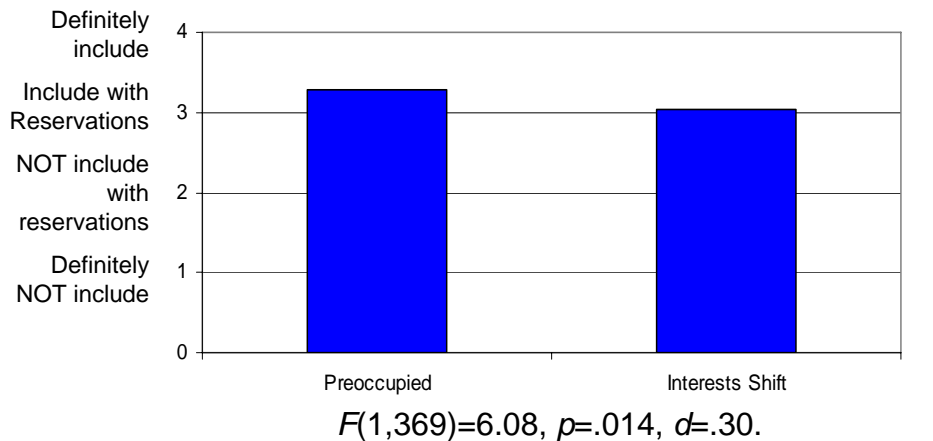
3 of 4

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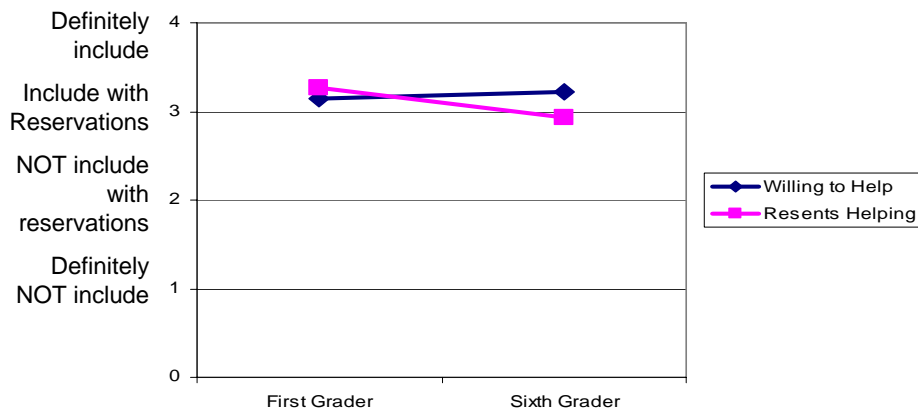


2 x 2 x 2 (Gender x Grade x Relationship with classmates)

Joe (*Jenny*) is a happy and bright sixth (*first*) grade student. S/he does not get along well with other classmates and often resents being asked to help students who are having trouble understanding their assignments (*S/he gets along well with his/her classmates and is always willing to help students who are having trouble understanding their assignments*). Joe (*Jenny*) enjoys reading nonfiction science books and wants to share his/her knowledge with the class. At many times, throughout the day, Joe (*Jenny*) interrupts the teacher during a lesson to tell her and the class what s/he has learned through his/her reading. Although the teacher appreciates Joe's (*Jenny's*) enthusiasm for learning, she feels his/her disruptiveness is a problem for the other students in the classroom.

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$F(1, 368)=4.33, p = .038, d=.39 \text{ \& } .33.$

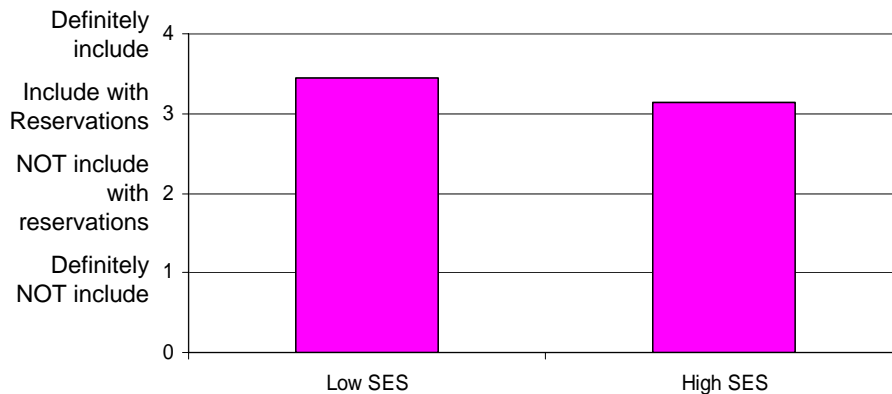
2 x 2 x 2 (Family status x Economic status x Family history in gifted programs)

Amy is a neat and bright fifth grade student who lives with her mother (**both parents**) and tenth grade brother. The family has a high (**low**) economic status. Amy is sensitive and empathetic and she is well accepted by her peers. She is curious and demonstrates high performance in schoolwork. She has a tremendous interest in turtles and she spends a lot of time watching the science channel. She gets along very well with her brother, who was placed in a program for mathematically gifted students (**If she is placed, she will be the first member of her family to be in a program for gifted students**).

1 of 2

2 x 2 x 2 (Family status x Economic status x Family history in gifted programs)

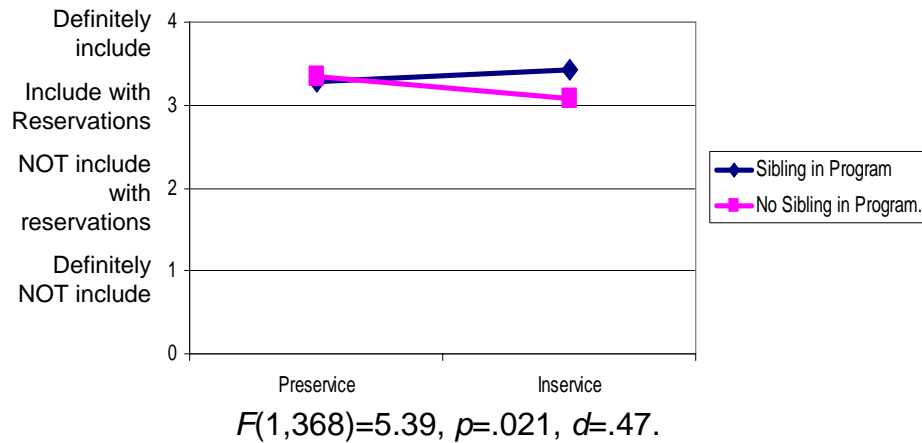
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$F(1, 368)=9.04, p=.003, d=.36.$

2 x 2 x 2 (Family status x Economic status x Family history in gifted programs)

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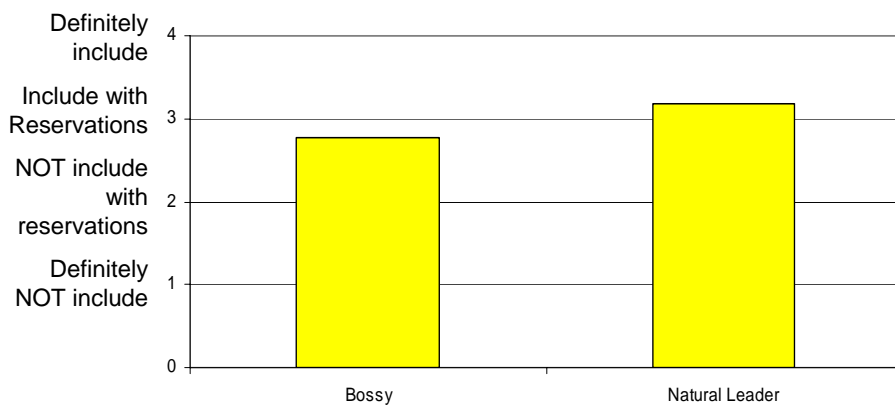


2 x 2 x 2 (Gender x Grade x Control over other students)

Linda (**Larry**) is an eighth (**fifth**) grade student with a strong interest in history. S/he has memorized the names of every U.S. president along with the dates they served in office. Linda (**Larry**) is very bossy (**is a natural born leader**) and is able to convince his/her classmates to follow in his/her steps. Linda (**Larry**) excels in writing and recall of factual information.

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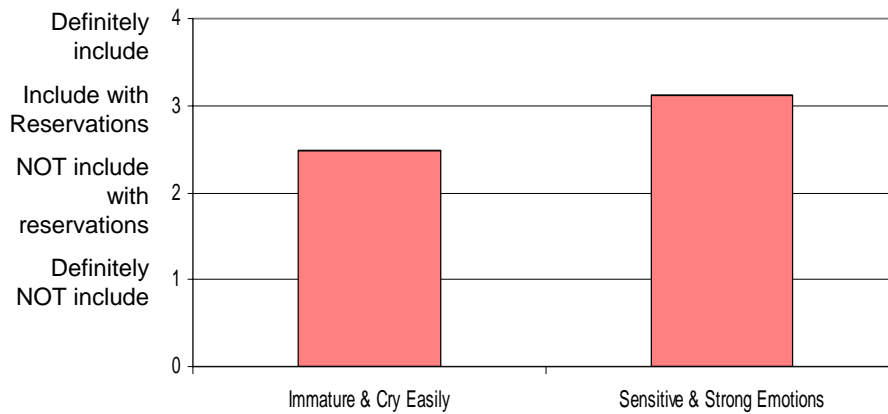
$F(1, 368)=14.49, p<.001, d=.46.$

2 x 2 x 2 (Gender x Grade x Emotion)

Ethan (*Ellen*) is an eighth (*fifth*) grade student who is an excellent reader. He/she devours all genres and particularly enjoys historical fiction. Ethan (*Ellen*) is a highly sensitive young man/woman who reacts with strong emotions to adverse situations (*Ethan/Ellen is immature for his/her age and cries easily when s/he doesn't get his/her own way*). Ethan's (*Ellen's*) schoolwork is neat and turned in on time.

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$F(1, 368)=31.71, p<.05, d=.69.$

Inservice teachers rate students higher

The school subject in which one is interested or in which one excels influences perceptions

Giftedness is often equated with non-stereotypical behavior (SES – Interests)

Older sibling performances influence inservice teachers' perceptions

As students grow older, they are expected to assist struggling learners

Concomitant characteristics do not produce equal results

**limitations
limitations**

No generalizability

**Confounding factors
within the profiles**

**Within effects on between
effects not considered**

**limitations
limitations**

Factors That Influence Teacher Nominations of Students for Gifted and Talented Programs

Del Siegle
University of Connecticut

Michelle Moore
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Abstract

A classroom teacher's unique perspective is valuable when considering students for gifted and talented programs. We developed a series of 11 student profiles to measure 290 pre-service and 95 inservice teachers' attitudes and asked them to indicate how strongly they believed the students in the profiles should or should not be recommended for their districts' gifted program. We found students' interests, SES, and areas of academic strength influenced teachers' perceptions of students as gifted. Inservice teachers also were influenced by whether previous children in the family had been identified as gifted and talented.

Factors That Influence Inservice and Preservice Teachers' Nominations of Students for Gifted and Talented Programs

Classroom teachers observe students in a variety of situations and under a variety of conditions. Their unique perspective is valuable when considering students for gifted and talented programs. Although standardized achievement tests and intelligence tests play a key role in the identification of gifted and talented students, many school districts include teachers' ratings of students as part of their selection criteria. Often these ratings are used to form a pool of students to be tested for these programs and increasingly, the ratings are included as part of a total identification system. Because teachers' ratings of students play an important role in identifying gifted students, it is important to investigate whether teachers' beliefs, stereotypes, biases, and expectations influence their selection of students for gifted and talented programs. The purposes of this study were to identify student characteristics that might influence teachers in referring students for gifted and talented programs and to compare whether preservice and inservice teachers valued these characteristics differently.

Background of the Study

Whether or not teachers are qualified to identify gifted students has been the topic of much debate during the last half-century (Gagné, 1994; Hoge & Cudmore, 1986; Pagnato & Birch, 1959; Rohrer, 1995; Renzulli & Delcourt, 1986; Siegle & Powell, 2004). For the past 5 decades, there has been a general perception that teachers are ineffective at identifying gifted and talented students. This perception stemmed from a 1959 study by Pagnato and Birch that reported that teachers were poor at identifying students who had IQ scores over 130. This work has been frequently cited to support the opinion that classroom teachers are not reliable in identifying gifted and talented students in their classrooms.

Gagné (1994) criticized the methods employed by Pagnato and Birch (1959). He reanalyzed their data and found that teachers were as effective as most other sources of information for the identification of gifted and talented students. Other research also indicated that teachers are not the unskilled identifiers of gifted students that Pagnato and Birch reported (Hoge & Cudmore, 1986; Rohrer, 1995). Several studies supported the practice of teachers completing rating scales of student behaviors (Hunsaker, Finley, and Frank, 1997; Renzulli et al., 1976; 1997). While research appears to support the use of teachers' ratings of student behaviors, there is limited research on teacher biases when rating students. For example, do teachers use similar criteria when nominating males and females? What role does student interest play? Does student SES matter?

Gender

One area of concern in identifying students for gifted programs is gender bias. Teachers spend more time interacting with male students in verbal and nonverbal ways (Mann, 1994; Oliveres & Rosenthal, 1992; Sadker & Sadker, 1993). Teachers face male students more when talking (Sadker & Sadker, 1995) and give them more detailed instructions (Oliveres & Rosenthal, 1992) than they do female students. Overall, boys and girls exhibit different interests and talents (Benbow, 1988; Gagné, 1993). Teachers may develop stereotypes based on these expected differences.

Gagné (1993) reported that males were considered to be more able in areas requiring physical or technical skills and females were perceived as performing better in the areas of artistic talent and socioaffective domains. Bernard (1979) found that "irrespective of the sex of teacher or student, or course of study, students who are perceived as masculine in role orientation are likely to be evaluated more highly than students who are not" (p. 562). Dusek and Joseph (1983) also found that "teachers were more likely to expect high achieving students, regardless of gender, to be masculine or androgynous, and low achieving students, regardless of gender, to be feminine or undifferentiated" (p. 338). Cramond and Martin (1987) used Tannenbaum's 1962 attitude questionnaire and found that athleticism was a critical determinant of how positively teachers perceived students. Siegle and Powell (2004) found that teachers were likely to identify students when they did not fit gender stereotypes.

Specificity of Selection Criteria

When left to their own devices, teachers tend to focus on skills associated with academic performance and less on creativity, leadership, and motor skills when nominating students to gifted programs (Guskin, Peng, & Simon, 1992; Hunsaker et al., 1997). Borland (1978) showed that nomination accuracy improved by asking teachers for nominations based on singular criteria related to their gifted program rather than global judgments. Siegle and Powell (2004) found that teachers were more likely to nominate students for gifted programs if the students demonstrated esoteric rather than common interests. Kolo (1999) found that instruments which "explicitly and

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very clearly spell out the traits or characteristics to be used by nominators...were more effective than those ones in which the traits to be rated or checked are not so obvious" (p. 181).

Weber (1999) reported that teachers are often concerned about misidentifying students. Generally, the concern relates to over identifying rather than under identifying. He warned that teachers should understand that sending students to gifted programs does not imply teaching inadequacy on the teachers' part.

In summary, athleticism and masculine behavior appears to be more accepted by nominators. Additionally, students who do not "fit the mold" are more likely to be nominated. Nominations improve when teachers are provided with specific criteria.

Methodology

We developed a series of 11 student profiles to measure 290 preservice and 95 inservice teachers' attitudes. We asked them to indicate how strongly they believed the students in the profiles should or should not be recommended for their districts' gifted program. The preservice teachers were undergraduate junior, senior, and fifth year education majors attending a public university in New England. While they had not completed any courses in gifted and talented education, they had been exposed to the topic of gifted education in their educational psychology course, which was taught by a nationally recognized expert in the field of gifted education. The inservice teachers were attending a summer training institute on gifted and talented education at the same university. Therefore, both groups had received some exposure to the field of gifted education.

The majority of the participants were female. Within the preservice group, 79% were female. The majority of the preservice teachers anticipated having elementary certification (50%) followed by secondary certification (37%) and specialist certification (13%). The average age of the preservice teachers was 21. Inservice teachers were primarily females (88%). They were also dominated by elementary teachers (52%), followed by secondary teachers (29%) and specialists (19%). Their average age was 41.

Each participant completed one set of 11 profiles. We created eight sets of each of the 11 profiles. We varied levels of the characteristics within each set and varied the characteristics from profile to profile. The only exception was gender, which we included as a variable in 9 of the 11 profiles. For example, within one set we varied gender (some had a boy named Karl while others described a girl named Karen) and school subject at which the student excelled (spelling, history, math, or science). The participants were systematically assigned one of eight sets of 11 profiles. They were asked to list how likely they would recommend the student in each of their 11 profiles for a gifted and talented program. They used a 4-point Likert scale with 1= "Definitely NOT include," 2 = "NOT include with reservations," 3="Include with reservations," and 4= "Definitely include" to rate each student profile.

We purposefully did not provide selection criteria. We believe this forced the educators to base their selections on personal experience and the beliefs they held about gifted students. We used Anglo names for all of the students because we were not measuring the influence of culture and ethnicity in this study.

Results

We analyzed the data for each profile with either a three- (2 x 2 x 4) or four- (2 x 2 x 2 x 2) way ANOVA. Teaching status (preservice or inservice) was a factor common to all the analyses. The characteristic variations were the other factors. In this section we describe the significant main and interaction effects.

The academic subjects that interested students who were described as disengaged influenced teachers' perceptions of them as gifted, $F(3,367)=2.83, p=.038$, partial eta squared=.023. Student who were interested in mathematics ($M=2.95$) and science ($M=2.99$) were more valued than students who were interested in history ($M=2.60$) and spelling ($M=2.67$). Students' interests outside school also influenced their ratings, $F(1,368)=6.30, p=.013$, partial eta squared=.017. Students who were solely interested in the unusual topic of lemurs ($M=2.89$) received higher ratings than students who were solely interested in the common topic of dogs ($M=2.59$).

There were also differences based on the subjects in which students excel, $F(1, 367)=5.92, p=.015$, partial eta squared=.016. Students who were voracious readers ($M=3.31$) were more highly rated than students who did well in mathematics ($M=3.04$). Interestingly, students who were described with a single outstanding strength in either mathematics or reading (without mention of the other) were rated higher than students with strengths in both, $F(1, 367)=7.38, p=.007$, partial eta squared=.02. For example, students who loved reading ($M=3.39$) were rated highest, followed by students who grasp math concepts quickly ($M=3.15$). They were followed by student who grasp math concepts quickly and loved reading ($M=3.05$). The lowest rated students demonstrated neither trait ($M=2.97$).

Educators expected more from older students and thus rated older students with characteristics similar to younger students more modestly, $F(1,369)=5.56, p=.019$, partial eta squared=.015. Overall, fourth graders ($M=3.28$) who were pursuing a passionate interest received higher ratings than similar eighth graders ($M=3.04$), however preservice and inservice teachers view them differently, $F(1,369)=4.36, p=.037$, partial eta squared=.012. While preservice teachers rated them similarly (fourth $M=2.95$ and eighth $M=2.92$), inservice teachers appeared to expect more from eighth graders ($M=3.15$) than fourth graders ($M=3.61$). Student engagement had an impact, $F(1,369)=6.08, p=.014$, partial eta squared=.016. Students who were described as preoccupied ($M=3.29$) were rated higher than students whose interests shifted ($M=3.03$).

How teachers viewed students who often interrupted the class to share what they knew varied according to students' ages and willingness to help other students who did not understand material, $F(1, 368)=4.33, p = .038$, partial eta squared=.012. Sixth graders who resented helping other students who were having trouble understanding school material ($M=2.93$) received lower ratings than sixth graders who were willing to help others with their assignments ($M=3.22$). This was not true for first graders since those who were willing to help others ($M=3.14$) received similar ratings as those who resented helping other students ($M=3.27$).

Curious and empathetic students with demonstrated talents from low SES homes ($M=3.44$) received higher rating than similar students from high SES homes ($M=3.14$), $F(1, 368)=9.04, p=.003$, partial eta squared=.024. Whether those students had a sibling already

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identified as gifted also made a difference. Inservice teachers were more likely to be influenced by having siblings identified as gifted and talented, $F(1,368)=5.39, p=.021$, partial eta squared=.014 than preservice teachers. Preservice teachers rated a student with a brother in the program ($M=3.29$) similarly to a student who did not have anyone from his or her family identified as gifted ($M=3.35$). Inservice teachers rated the student with a brother in the program ($M=3.43$) much more positively than the student without someone in the family identified as gifted ($M=3.07$).

Words really do matter. How a given student characteristic was described did influence the rating the student received, $F(1, 368)=14.49, p<.001$, partial eta squared=.038. Students who were described as bossy ($M=2.77$) received lower ratings than students who were described as natural leaders ($M=3.19$). Students who were described as immature for their age and crying easily ($M=2.48$) were rated lower than those who were described as highly sensitive and reacting with strong emotions ($M=3.11$), $F(1, 368)=31.71, p<.05$, partial eta squared=.079.

Conclusions

Generally, the mean scores were high for the students featured in our profiles. This finding indicates that the educators recognized the characteristics of giftedness we embedded in the profiles. Inservice teachers often gave higher ratings than preservice teachers.

The federal government's emphasis on the importance of students being able to read well and excel at mathematics and science is reflected in our findings. Our participants were more impressed with students when they excelled or were interested in these subjects. Voracious readers receive the highest ratings. This may be problematic for twice-exceptional students who often have difficulty with reading.

Siegle and Powell's (2004) previously reported finding that teachers tend to equate giftedness with non-stereotypical (unexpected) behaviors was affirmed in this study as well. Students from lower SES backgrounds who exhibited similar characteristics to students from higher SES backgrounds also received higher ratings. The participants were more impressed with high achievement from low SES students than from high SES students.

Inservice teachers were also more influenced than preservice teachers by students having an older sibling already in a gifted program. Inservice teachers rated students with an older sibling in a gifted program higher than students without an older sibling in a gifted program. Preservice teachers rated them similarly. Apparently preservice teachers do not expect students from the same family to perform similarly.

The participants rated older students who were willing to help less academically proficient peers higher than older students who resented helping their less academically proficient peers. This finding may be problematic, since being willing to tutor others should not be related to whether one is nominated for a gifted program. This expectation did not carry over to younger students.

Finally, how a given characteristic is presented mattered. Being described as a "leader" is better than being described as "bossy." Being described as "sensitive" is better than being described as "emotional." This finding has implications for creators of student behavior checklists. Creators of checklists should list concomitant characteristics on their checklists.

The first step in identification should be to clearly define what is meant by gifted. In our study we left the definition to the rater's discretion. Without a clear definition, those who are asked to nominate students must rely on previous training and/or stereotypes they have developed. The latter could result in inherent biases. Internal program consistency mandates the alignment of identification criteria and program services. Gifts and talents manifest themselves in various ways. Educators should be trained to recognize specific criteria that match the area of talent that a program is designed to service. These criteria should include concomitant characteristics. Such training will go a long way toward improving referrals for gifted and talented programs.

Limitations

Because we used a convenience sample to collect our data, these results cannot be generalized beyond the sample from which we collected data. The inservice teachers were attending a conference on gifted and talented education. First, we can assume that they had some interest in the field of gifted and talented education by their attendance at the conference. This study should be replicated with other populations. Inservice educators who have not received training will probably rate students differently than our sample rated them. The over representation of females in the inservice group may also have influenced our findings. While our preservice teachers received some exposure to the field of gifted and talented education, this exposure was limited. Future researchers may wish to explore the attitudes of preservice teachers who have had more exposure to the field with those who have not.

The profiles used for this study are also a limitation. While we believe that the profiles represented the characteristics we indicated and a panel of content area experts concurred, we did not specifically ask the raters what about a profile troubled or pleased them. Future researchers who use this process may wish to collect qualitative data from the respondents regarding the reasons for the ratings. The process of creating interesting profiles while restricting the characteristics of the profile's subject was difficult. For this reason, we incorporated multiple characteristics in each profile (see Appendix A). The differences we found might not exist if the characteristics were embedded in a slightly different profile. Future researchers may wish to explore the interactions of various characteristic combinations as well as the characteristics in isolation.

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Appendix A

2 x 4 (Gender x Subject)

Kathy (**Karl**) is a quiet, introspective student. S/he is often lost in thought and frequently has no idea what was just said although s/he does generally know the topic under discussion. When s/he does make comments, they seem to be unrelated to the topic. S/he likes to read all sorts of books. S/he is especially interested in (**spelling, history, math, or science**). S/he is not well organized and seldom hands in homework but does well on tests. Kathy (**Karl**) is uncomfortable around her/his peers and prefers to walk around and talk with teachers at recess time or spend time alone.

2 x 4 (Gender x Grade)

Beth (**Bobby**) is a (**kindergartener, second grade student, fourth grade student, eighth grade student**) and an active class participant. S/he asks thoughtful questions on most topics of discussion. S/he maintains interest in the topic long after his/her classmates have gone on to something else. This is frequently frustrating for her/him because s/he feels s/he isn't given enough time to find out what s/he needs to know. Beth (**Bobby**) sees relationships between various ideas and events. S/he has a dry, quick sense of humor that is not always understood or appreciated by those around him/her.

2 x 2 x 2 (Gender x Reading x Math)

Mary (**Michael**) is a very verbal student. S/he has a large vocabulary and enjoys playing with words. Her/his attempts at humor are often not appreciated by those around him/her. S/he has a tendency to dominate class discussions and lose other students. S/he is an (**avid reader or no mention of avid reading**) but the books s/he reads don't always seem appropriate for his/her age. S/he (**understands math concepts quickly but does not do well on timed math fact pages or no mention of math**). Assignments are handed in on time and of varying quality.

2 x 2 x 2 (Gender x Passion Area x Length of Passion)

Diane (**Dave**) is a fifth grader who has been passionate about lemurs (**dogs**) since s/he was in kindergarten (**fourth grade**). Her/His room is covered with posters on lemurs (**dogs**). S/he has read all of the books s/he can find on lemurs (**dogs**) in her school and public libraries and has starting getting books from other libraries. S/he has a tendency to bring lemurs (**dogs**) into any conversation or assignment in which s/he participates. Spelling sentences are about lemurs (**dogs**) and book reports are about lemurs (**dogs**). Diane (**Dave**) manages to bring lemurs (**dogs**) into math and especially science. Classmates are tired of the lemur (**dog**) discussions and encourage her/him to go on to something new, but Diane (**Dave**) is as enthusiastic as ever.

2 x 2 x 2 (Gender x Organization x Personality)

Sam (**Sally**) is a bright fifth grader who loves to learn and has many friends. S/he is organized (**S/he has difficulty keeping her desk organized and often misplaces assignments. His/her papers are not very neat**). S/he is a quiet introspective (**S/he is outgoing and gregarious**). S/he excels at problem solving and reads voraciously. Sam (**Sally**) is passionate about lighthouses. He knows the locations and construction dates of all the lighthouses along the Atlantic Coast, but s/he has trouble remembering dates and places for his/her history class.

2 x 2 x 2 (Gender x Subject x Assertiveness)

Nate (**Nancy**) has excellent skills in mathematics (**is a voracious reader**) in the fifth grade. S/he does well on his/her schoolwork and turns his/her assignments in regularly. S/he is afraid to express his/her opinions and is easily dominated by his/her peers (**S/he is not afraid to express him/her opinion and occasionally him/her assertiveness creates a tension between him/her and him/her peers**). S/he loves reptiles and spends every spare minute reading about them. S/he convinced his/her parents to build a frog pond in their backyard.

2 x 2 x 2 (Gender x Grade x Attention)

Gwen (**Gary**) is a lively fourth (**eighth**) grade student with many interests. Her/His most recent passion is whales and dolphins. Daily s/he searches the newspaper for any reports of whales beaching themselves. At lunch, Gwen (**Gary**) is working to interest other fourth (**eighth**) graders in a "Save the Whales" campaign. In the classroom, Gwen's (**Gary's**) broad range of interests frequently causes her/him to move on to a new topic or activity prior to completing the previous assignment. S/he is often preoccupied (**In the classroom, Gwen/Gary fails to finish tasks; s/he frequently shifts activities without apparent awareness that s/he has not completed the previous assignment. He is often unfocused**). The work that Gwen (**Gary**) does shows that s/he is a capable mathematical problem solver. Her/his ideas for creative story writing are elaborate but s/he seldom gets the words on paper.

2 x 2 x 2 (Gender x Grade x Control over students)

Linda (**Larry**) is an eighth (**fifth**) grade student with a strong interest in history. S/he has memorized the names of every U.S. president along with the dates they served in office. Linda (**Larry**) is very bossy (**is a natural born leader**) and is able to convince his/her classmates to follow in his/her steps. Linda (**Larry**) excels in writing and recall of factual information.

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2 x 2 x 2 (Gender x Grade x Emotion)

Ethan (*Ellen*) is an eighth (*fifth*) grade student who is an excellent reader. He/she devours all genres and particularly enjoys historical fiction. Ethan (*Ellen*) is a highly sensitive young man/woman who reacts with strong emotions to adverse situations (*Ethan/Ellen is immature for his/her age and cries easily when s/he doesn't get his/her own way*). Ethan's (*Ellen's*) schoolwork is neat and turned in on time.

2 x 2 x 2 (Gender x Grade x Relationship with classmates)

Joe (*Jenny*) is a happy and bright sixth (*first*) grade student. S/he does not get along well with other classmates and often resents being asked to help students who are having trouble understanding their assignments (*S/he gets along well with his/her classmates and is always willing to help students who are having trouble understanding their assignments*). Joe (*Jenny*) enjoys reading nonfiction science books and wants to share his/her knowledge with the class. At many times, throughout the day, Joe (*Jenny*) interrupts the teacher during a lesson to tell her and the class what s/he has learned through his/her reading. Although the teacher appreciates Joe's (*Jenny's*) enthusiasm for learning, she feels his/her disruptiveness is a problem for the other students in the classroom.

2 x 2 x 2 (Family status x Economic status x Family history in gifted programs)

Amy is a neat and bright fifth grade student who lives with her mother (*both parents*) and tenth grade brother. The family has a high (*low*) economic status. Amy is sensitive and empathetic and she is well accepted by her peers. She is curious and demonstrates high performance in schoolwork. She has a tremendous interest in turtles and she spends a lot of time watching the science channel. She gets along very well with her brother, who was placed in a program for mathematically gifted students (*If she is placed, she will be the first member of her family to be in a program for gifted students*).

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