

Where are the girls?

Gender equality in gifted education: why girls are still underrepresented in gifted education.

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Although in recent decades progress has been made in gender equality, inequality persists and affects the success, achievements, and development of girls and women (Kerr & McKay, 2014; Reis & Hérbert, 2008). Women still earn less than men and face greater challenges when family planning and both academic and career choices are concerned (Reis & Hérbert, 2008). Also, there is still a considerable discrepancy between the opportunities for men and women in education and in their careers (Kerr & McKay, 2014). Although currently gender bias appears less pronounced, its influence on the education and lives of gifted girls is still significant (Bianco et al., 2011). This inequality is made more poignant by the fact that girls are still notably underrepresented in gifted education (Benölken, 2015; Petersen, 2013).

Gifted girls face various potential obstacles that may cause their giftedness to go unidentified and hinder their participation in gifted education (Preckel & Brüll, 2008). One such obstacle is to be identified by teachers as gifted, as teachers play a key role in identifying and nominating students for further selection and participation in gifted education (Hernández-Torrano & Tursunbayeva, 2016; Kornmann et al., 2015). Even when teacher nomination is not the only means of identification, teachers are usually the first step in the identification process, or its gatekeepers.

Giftedness in the eyes of the teacher

Research indicates that it is easier for teachers to imagine a boy being gifted than a girl. When asked which gifted students they have ever taught, teachers can recall significantly more boys than girls (Endepohls-Ulpe & Ruf, 2006). Fox et al. (1999) state that teachers tend to ask boys more questions and give them more attention in class. Bianco et al., (2011) confirmed this finding and concluded that teachers also spend more instructional time with boys, giving them more attention and positive feedback. Moreover, teachers appear to believe

that boys and girls excel in different areas (Hernández-Torrano and Tursunbayeva, 2016). In addition, teachers expect boys to have better results in science, technology, engineering and mathematics (STEM) (Lavrijsen & Verscheuren, 2020; Machts et al., 2016) whereas girls are supposed to be more talented in art and language subjects (Gagné, 1994). Apparently, it is difficult for teachers to assess the intelligence of students. Teachers base their judgments on their students' academic achievements rather than on their cognitive potential (Machts et al., 2016), although no more than just a moderate correlation is established between academic achievement and intelligence (Roth et al., 2015). Even when their academic achievements and cognitive abilities match, girls tend to be perceived as less gifted than boys (Lavrijsen & Verschuere, 2020). As a result of the difficulty for teachers to make a distinction between academic achievements and cognitive talent, the probability of underachievers being identified is severely reduced (Lavrijsen & Verschuere, 2020). These perceptions contribute to inequality and gender bias in the classroom.

In addition, teachers' subjective views of giftedness vary widely (Peckel et al., 2015; Petersen, 2013). On the one hand, some views consider giftedness a vulnerability with a risk of imbalance between cognitive ability and social-emotional aspects (Bianco et al., 2011; Preckel et al., 2015). On the other hand, some research shows that teachers view giftedness as something positive: gifted students not only possess high intelligence, they are also more socially adept, motivated, and creative (Baudson & Peckel, 2016; Endepohls-Ulpe & Ruf, 2006). The majority of research on the differences between gifted students and average students, supports the positive view of giftedness (Baudson & Peckel, 2016). According to Neihart et al. (2015) gifted students' social and emotional development is similar to that of average students, and sometimes even a bit more advanced - if underachievers are not taken into consideration.

Yet the stereotypical image of the socially maladjusted gifted student remains prevalent amongst teachers (Baudson & Peckel, 2016; Peckel et al., 2015). According to Vaivre-Douret (2011), it is the mismatch between the developmental needs of gifted students and the inability of their environment to support them which is problematic, not giftedness itself. Because of this discrepancy, gifted students can come across as maladjusted and socially incompetent, which reinforces the image of the socially maladapted gifted student (Baudson & Peckel, 2016). When gifted students appear in the media, they are often portrayed as nerdy, with poor social and motoric skills, and having only few friends (Bergold et al., 2020; Peckel et al., 2015). Although clearly a stereotype, it nevertheless influences the general image of giftedness. Peckel et al. (2015) examined whether this stereotypical image affected teachers' attitudes toward gifted students. They concluded it did, but only when boys were concerned. Apparently, maladaptive and defiant behaviour in boys is linked to their giftedness. Because the image of the socially maladjusted gifted student is so strongly linked to boys, girls are not associated with maladaptive behavior. The suppression of one stereotype evokes the activation of the opposite stereotype (Galinsky & Moskowitz, 2007). If teachers associate maladaptive and defiant behavior primarily with gifted boys, both boys not exhibiting this behaviour and girls who do exhibit maladaptive behaviour are less likely to be identified as gifted since they do not fit the stereotypical image (Carman, 2011; Peckel et al., 2015).

The fact that gifted girls are less likely to be associated with social-emotional problems does not mean that they will be recognized in the more positive view (Peckel et al., 2015). Girls who do not have or show problems, do not stand out at all and neither does their giftedness (Peckel et al., 2015; Silverman, 2013).

Despite the aforementioned gender bias and stereotypical views, a positive role of teachers in identifying and supporting gifted students has also been shown. Foreman and Gubbins (2014), for instance, conclude that teacher nomination added value in the selection for gifted education, because teachers are good at assessors of certain aspects of giftedness such as creativity, task motivation, and leadership whereas standardized tests are not. Teachers are in a unique position of spending a great deal of time with students which enables them to observe and compare the potential of these students with that of their peers (Hernández-Torrano & Tursunbayeva, 2016). In addition, Petersen's meta-analysis (2013) did not indicate any significant difference between the number of boys or girls nominated by teachers for gifted education. Actually, when teachers display positive attitudes towards giftedness it helps girls to feel less stigmatized and different, and it stimulates supportive relationships (Peterson, 2011).

Socialization

"Gifted girls are chameleons" (Silverman 2013, p.9); from the moment most gifted girls enter school they learn how to be like other girls and how to behave in order to be accepted. They use their talents to blend in with the group and become unobtrusive (Kerr & McKay, 2014). To avoid being noticed, gifted girls only tend to show their high potential when there are other girls with these high abilities (Silverman, 2013). Moreover, these girls often don't even suspect they are gifted (Tan & Chun, 2014; Tweedale & Kronborg, 2015) and they only feel different (Coleman & Cross, 2014). Additionally, gifted girls tend to demand much less attention from teachers than gifted boys, which obviously, as a result, makes them less noticeable (Kerr & Gahm, 2018). Gifted boys are also more likely to show externalizing behavior in class and are more likely to reject less gifted peers, whereas gifted girls are more likely to adapt their behavior or to efface (Swaitek, 2012; Tan & Chun, 2014).

During their adolescence, the influence of peers and gender roles on gifted girls' self-esteem and academic achievement increases (Guthrie, 2020b; Silverman, 2013) and consequently they may start to suffer from the prejudices associated with the label "gifted" (Coleman & Cross, 2014; Guthrie, 2020b), thereby putting them

in an uncomfortable social position and inciting them to hide their giftedness and focus heavily on their outer appearance and social status (Guthrie, 2020b; Kerr & McKay, 2014). Making friends and entering into relationships is more difficult when peers react negatively to their giftedness. As a result, gifted girls tend to perceive their giftedness as a disadvantage when friendships and relationships are concerned but as a positive and stimulating factor in self-development (Guthrie, 2020b).

In this regard the experiences of gifted girls differ from those of gifted boys. For example, being highly intelligent and achievement-oriented is seen as a positive trait for boys but girls are valued primarily for their outer appearance and social functioning (Rimm et al., 2018). Gifted girls face a so called forced-choice dilemma between academic achievement and peer acceptance (Preckel et al., 2015). Choosing academic achievement over peer acceptance provides less immediate benefit, so girls must be determined to do so (Silverman, 2013). However, the question remains whether the tendency of gifted girls to adapt is a gender-specific character trait or a result from social pressure.

Gender roles

Even though gifted girls might prefer to be like other girls, when it comes to intelligence, interests and aspirations they equal more gifted boys than girls of average intelligence (Gross, 1989; Kerr & McKay, 2014). Although they may resemble gifted boys, gifted girls will face the same societal expectations and opinions on femininity as every other girl (Kerr & Multon, 2015; Miller et al., 2009). Despite increasing openness and tolerance with diversity and gender identity, stereotypical gender roles continue to strongly influence children from a very young age (Kerr & Grahm, 2018). When gifted girls are interested in activities that are considered typically boyish, their fear of not being feminine enough will be incited. The desire to be "a proper girl" proves to be difficult to combine with having boyish interests (Archer et al., 2013). In order to prevent young gifted girls from adapting and abandoning their identities, interests, and aspirations, opportunities to break free from these rigid gender categories must be provided (Kerr & Grahm, 2018).

Academic self-concept

According to Callahan and Hébert (2014), boys and girls attribute academic achievement to different factors. Gifted boys are more likely to think they owe excellent academic achievement to their cognitive ability and that failure is a result of a lack of effort (Callahan & Hébert, 2014; Tirri & Nokelainen, 2011), whereas gifted girls attribute academic achievement to hard work, and failure – identical to boys – to lack of effort (Freeman & Garcés-Bascal, 2015; Tirri & Nokelainen, 2011). Compared to gifted boys, gifted girls tend to have less confidence in their own academic achievement (Kerr & Gahm, 2018). When receiving negative feedback on their schoolwork they are more likely to conclude that they are not that talented (Archer et al., 2013). Additionally, how gifted girls value their talent does often not match their actual talent or giftedness (Kerr & Gahm, 2018). From as early as the age of 6 to 7, girls tend to associate being gifted significantly more with boys than with themselves (Bain et al, 2017). Around the same age they start to believe they are more talented in language and music than in sports and mathematics (Rimm et al. 2018), regardless of their actual abilities and performance in these areas (Tirri & Nokelainen 2011).

The academic self-concept that girls have developed notoriously agrees with the previously mentioned stereotypical idea that teachers have of gifted boys and girls (Hernández-Torrano et al., 2013). Also, parents regularly have lower expectations of their daughters in STEM, even when they outperform their brothers (Archer et al., 2013; Lazarides & Watt, 2017). As a result, talent in STEM is more likely to go unnoticed among girls because neither their environment nor they themselves expect excellence (Archer et al., 2013; Kohan-Mass & Tal, 2018). In addition, girls tend to think that being good at STEM does not suit "proper" girls (Boston & Cimpian, 2018). Despite extensive scientific research that there is no difference in ability in STEM between boys and girls, the predominant bias persists (Else-Quest et al., 2010). Because gifted girls are constantly confronted with these stereotypical assumptions, they internalize them which ultimately affects their development and career choice (Silverman, 2013). Girls who do not believe they can be successful in

STEM are unlikely to participate in these excellence classes let alone choose a career in STEM (Kohan-Mass & Tal, 2018).

Underachievement

Underachievement in gifted students is a complex phenomenon. According to American research, the number of gifted boys who underperform is two to three times higher than the number of underperforming gifted girls (Desmet et al., 2020). As a result, underachievement is often seen as a typical "boys problem" and a considerably smaller amount of research is conducted on what contributes to underachievement in girls (Desmet et al., 2020; Siegle & McCoach, 2018). Underachievement is also more likely to be identified in boys as they are more prone to extreme underachievement; girls on the contrary usually manage to hide it better (Siegle & McCoach, 2018). Underachievement and giftedness of average to high-performing girls who are capable of much more will be easily overlooked (Siegle & McCoach, 2018). Underachieving gifted girls are prone to a more negative self-image and are more likely to develop maladaptive perfectionism (Desmet et al., 2020; Siegle & McCoach, 2018). Other factors contributing to underachievement include a lack of learning skills, negative self-perceptions, and negative relationships with teachers (Desmet et al., 2020). Furthermore, gifted girls tend to think that being gifted includes excellent academic achievement with very little effort (Dweck, 2018). To identify hidden underachievers Siegle and McCoach (2018) strongly endorses that teachers pay close attention to girls with average, but "perfect" performance so that they too will receive the education that matches their educational needs.

Conclusion and recommendations

Notwithstanding the consensus that both genders are equally gifted, girls are evidently underrepresented in gifted education. Literature shows that boys are more likely to be identified as gifted than girls, which eventually results in fewer girls participating in gifted education. Gifted girls' ability to blend in combined with internalizing behavior contributes to their giftedness being regularly overlooked. Furthermore, teachers' stereotypical ideas about giftedness and gender appear to hinder the identification and admission of girls to special programs. However, when teachers do have more knowledge about giftedness, they contribute positively to the identification and selection process, especially when various methods of identification and selection are being used.

Additionally, socialization and stereotyped gender expectations are a major influence on the self-concept and functioning of gifted girls, eventually preventing them from participating in gifted programmes. To enable gifted girls to reach their full potential it is essential to realize this and support them in various ways:

Although societal pressure may be very subtle, its impact on the development of gifted girls is immense (Silverman, 2013). Both teachers and parents must avoid to unintentionally confirm the stereotypical gender biases that hinder girls to show what they are capable of.

Early identification and participation in gifted education should prevent gifted girls from going unnoticed and hiding their talents. Meeting and being involved with their peers will empower them to deal with

the stigmatization and societal pressure of being gifted.

Because teachers with knowledge about giftedness are better able to identify (hidden) gifted students and are less influenced by stereo-atypical prejudices about giftedness (Baudson & Preckel, 2016; Biber et al., 2021) it is quintessential to provide teachers with the opportunity to professionalize in the subject of gifted education.

The involvement of the parents in the process of identification is required as it will provide a broader view of gifted girls' cognitive abilities and well-being.

Furthermore, engaging in dialogue with gifted girls about their identity, ability, interests and aspirations will encourage them to fulfill their potential (Kerr & Graham, 2018). In conclusion: I outline various barriers to equal access for boys and girls to gifted education, the suggested mitigating strategies and further research can promote greater equity in gifted education.

References

The list of references can be obtained from the author (see email address below)

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