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A Cross-National Comparison of School Students' Perceptions Regarding High Performing Peers

Öğrencilerin Üst Düzey Performans Sergileyen Akranlarına Yönelik Algılarının Ülkeler Arası Karşılaştırması

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Abstract

This cross-national scenario based study examined fourth-grade students' perceptions of high-performing classmates in terms of their expected intellectual abilities, positive social qualities and popularity among their peers across seven countries. The overall results show that high academic achievements predominantly lead to positive expectations within the peer group. However, pronounced differences were found between the countries. The results indicated that students from Spanish-speaking countries viewed their potential high-performing peers most favorably, followed by students from Australia, the United Kingdom and Germany. The least favorable expectations, but by no means negative attitude, were exhibited by students from the two East-Asian countries Korea and Vietnam. In contrast, the respondents' gender and the gender of the hypothetical successful classmates had less influence on student perceptions of high-performers. These findings have implications for the educational provision of high performing students in different cross-national contexts.

Keywords: High achieving students, peer perceptions and expectations, cross-national comparisons

Öz

Çok uluslu ve durum temelli bu çalışmada yedi farklı ülkeden dördüncü sınıf öğrencilerinin üstün performans sergileyen akranlarının beklenen zihinsel yeteneklerine, olumlu sosyal özelliklerine ve popülaritelerine yönelik algıları araştırılmıştır. Sonuçlar genel olarak yüksek akademik başarının baskın bir şekilde akran grubu çerisinde olumlu beklentilere yol açtığını göstermektedir. Bununla birlikte ülkeler arasında belirgin farklılıklar da bulunmuştur. Sonuçlara göre yüksek performans potansiyeli olan öğrencilere karşı en olumlu algıya İspanyolca konuşan ülkelerin öğrencilerinin sahip oldukları görülmüş, sıralamanın ise Avustralya, İngiltere ve Almanya şeklinde devam ettiği bulunmuştur. Hiçbir şekilde olumsuz tutum olmamakla birlikte, en az olumlu tutumun doğu Asya ülkeleri olan Kore ve Vietnam öğrencileri tarafından sergilendiği görülmüştür. Buna karşılık, katılımcı öğrencinin cinsiyetinin ve hipotetik olarak oluşturulan başarılı sınıf arkadaşının cinsiyetinin, öğrencilerin üstün akademik başarı gösteren öğrencilere yönelik algıları üzerinde çok az etkisi olmuştur. Bulguların, üstün performans sergileyen öğrenciler için farklı ülkelerdeki eğitsel uygulamalara yönelik doğurguları bulunmaktadır.

Anahtar Sözcükler: Üstün başarılı öğrenciler, arkadaş beklentileri, uluslararası karşılaştırma

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Introduction

A wealth of literature exists demonstrating the influence of both students' own self-perceptions and peer perceptions on their academic achievement. This includes studies like Chevalier, Gibbons, Thorpe, Snell & Hoskins (2009), they found that high school pupils who held a more positive view of their academic abilities were more likely to expect to continue to higher education even after controlling for measures of ability and personal characteristics. So we know that students' self-perceptions regarding their academic ability can influence their educational choices. However we also know that the cross-cultural picture is more complex than this. Shen & Tam (2008) in their cross national study examined the relationship between 8th-graders' mathematics and science achievement and their self-perceptions and found that when the measures were aggregated at the country level, there was a negative relationship between self-perceptions and achievement. They argued that one possible explanation for this pattern might be that the findings reflect the high academic standards in high-performing countries and the low academic standards in low-performing countries. So the importance of acknowledging contextual influences is evident. This may be true not only across countries but also within the social contexts and relationships within classrooms. In their longitudinal study, Hughes, Dyer, Luo, & Kwok et al. (2009) found that for children with relatively low literacy skills, peer academic reputation made a unique contribution to a child's risk for lower academic competence, less effortful engagement, and lower achievement, above the effects of both peer liking and teacher perceptions of ability. It is therefore also clear from the educational literature that students' perceptions of their peers' academic abilities may influence their interactions with classmates in ways that impact upon their achievement.

In contrast to the above findings relating to students with low literacy skills, the research points to the potential positive effects of being a high-achiever. Some researchers have found a significantly positive correlation between the scholastic performance of high-performing students and their social well-being (Cauce, 1987; Pyryt, & Mendaglio, 1994). Both, gifted and high performing students, have been found to benefit from their academic success in relation to positive self-perception, emotional competence and more positive peer relations compared to their lower performing class mates (Bain & Bell, 2004; Nail & Evans, 1997; Lee, Olszewski-Kubilius, & Thomson, 2012; Berlin, 2009; Kerr, Colangelo, & Gaeth, 1988). In some specific school subjects like languages high performers enjoyed a reputation of having positive characters with high intellectuality and a sociable and good personality (Händel et al, 2013; Hannover & Kessels, 2002). In some countries high achievements appear to be especially valued, in particular in East Asian countries (cf. Phillipson, Stoeger, & Ziegler, 2013). Korean and Vietnamese school children in America, for example, always score high in academic rankings. Both cultures share a common cultural denominator: successful academic education is considered a necessity for one's career and social status in the society

However the picture for high achieving students is complex and contradictory. In fact, a large body of empirical research suggests that students may have a negative image of high-performers. Students with high achievements in North America, as well as in Western Europe, are in danger of being subject to perceived negative social labels such as "nerd" (Händel, Duan, Sutherland, & Ziegler, 2013; Landsheer, Maassen, Bisschop, & Adema, 1998; O'Connor, 2012; Pelkner & Boehnke, 2003). This negative labeling can lead to unpopularity and cause high performing students to suffer social isolation and hold low self-perceptions. Research has shown that the fear alone of being labeled a 'nerd' can have a detrimental influence on school achievement (Pelkner, & Boehnke, 2003). However, the negative image of high-performers seems to be restricted to the core academic subjects at school. For example, high-performers in sports are much more popular among peers than high-performers in math, sciences, and foreign languages (Händel, Vialle, & Ziegler, 2013; Ziegler, Fidelman, Reutlinger, Neubauer, & Heilemann, 2011).

The importance of context and cultural differences also emerges in the gifted literature and indicates that in some settings high achievements can act as a risk factor. For example, some minority ethnic groups in the U.S. like African American and Puerto Rican students actively disparage academic achievement because they view high academic achievement as a commodity of the upper class that only benefits White Americans (Fordham, & Ogbu, 1986; Flores-Gonzalez, 1999). This belief may be one of the reasons why some immigrant groups in the U.S. are constantly behind every other cultural subgroup when it comes to graduation (Fordham & Ogbu, 1986; Sankofa, Hurey, & Allen, 2005). The few students from minority ethnic groups who did perform well, on the other hand, experienced identity problems in trying to resolve their academic identity with their cultural identity (Cauce, 1987; Fordham & Ogbu, 1986; Sankofa, Hurey, & Allen, 2005; Steel & Aronson, 1995).

Aim of the Study

The above review of the literature demonstrates that the evidence regarding students' perceptions of high-performing students and the potential influence of these perceptions is ambiguous. In order to disentangle the evidence a promising first step seems to be to study the stereotype of high-performing students among their peers. To isolate the examination of this stereotype from the interference of other potential confounding variables (such as physical appearance and socio-economic status) this study employed a scenario-based design focusing on the attributes of a fictitious high-performing student rather than a real high-performing student.

This study compared the expectations of fourth-grade students. This focus was chosen because this is an age period in which children develop an elaborated concept of their own, as well as their classmates', abilities (Stipek, 1981; Stipek & Daniels, 1988). Thus, this is just the age at which to expect the possible formation of any potential stereotypes.

Having clearly established within the literature review the potentially significant influence of culture (e.g., Händel et al., 2013), this study also incorporates a cross-national design. The

study includes student cohorts from seven different countries: two East-Asian countries with a collectivistic cultural background (Vietnam, Korea), three Western countries with an individualistic cultural background (Australia, Germany, United Kingdom), two Spanish-speaking countries one with a collectivistic cultural background (Peru) and one with a mixed individualistic-collectivistic cultural background (Spain).

Method

Participants

School students across nine countries are participating in an ongoing international study on this topic. The interim results reported here are a random sample from seven of the nine participating countries which have been balanced for gender within each country cohort Vietnam (N = 100), Korea (N = 106), Peru (N = 100), Spain (N = 100), Australia (N = 100), United Kingdom (N = 100), and Germany (N = 100), respectively.

All students who participated in the study are in grade 4 in elementary school with the exception of the UK sample where the equivalent school stage is Primary 6 but all students are within a comparable age range. The mean age of all the students included in this sample was M = 10.94 (SD = .42) and ranged across the countries sampled from M = 10.81 years in Australia to M = 11.13 years in Germany.

Materials

All participants received an identical questionnaire. The cross-national design of the research means that participants had multiple different first languages consequently all instruments were translated into the first language of each country cohort and re-translated to ensure accuracy in translation.

In the questionnaire students were asked to imagine two fictitious new classmates were joining their class. The order of the questionnaire was gender balanced so that half of the students started with a fictitious male classmate, the other half with a fictitious female classmate. The following instructions were provided to participants:

For the following statements, we want to know what expectations you have, when a new girl (boy) comes into your class. The only thing you know about her (him) is that she (he) was the best student in her (his) previous school. Read each statement and colour the circle that best describes your feelings about the statement.

This design was employed as similar formats have been widely used in studies of impression formation (Heise, 2010; Rossi & Nock, 1982). Previous research has demonstrated that this format successfully enables controlled studies of judgments that would be difficult to study through observation.

Students were asked to indicate their expectations of the new classmate in relation to a list of fourteen pre-defined characteristics. The items were to be answered on a 6-point Likert scale (from 1 – "totally disagree" to 6 – "totally agree") for each hypothetical new female and male student. Similarly to Händel et al. (2012, 2013) the items were categorized into three areas: intellectual abilities (e.g. "…is very intelligent", "… has many good ideas"), positive social qualities (e.g. "… has a sense of humor", "…communicates well") and popularity (e.g. "…will be popular in the class", "… is carefree and cool"). Cronbach's α show satisfactory values (>.68) for all scales across the gender of the high-achieving person.

Results

Three Multivariate Analysis of Variance (MANOVA) were conducted with country and sex of the participants as independent variables. In the first MANOVA the expected intellectual abilities of a new high-performing girl in class and a new high-performing boy in class were the dependent variables. Significant country differences were detected [Wilks $\lambda = .741$, multivariate $F(12,1370) = 18.5$, $p < 0.001$, partial $\eta^2 = .14$]. In accordance with Cohen (1988) this can be interpreted as a large effect. Two univariate Analyses of Variance (ANOVA) show that the effect holds for both sexes of new students [female new student: $F(6,686) = 27.83$, $p < 0.001$, partial $\eta^2 = .20$, male new student: $F(6,686) = 30.68$, $p < 0.001$, partial $\eta^2 = .21$]. Neither the sex differences [Wilks $\lambda = 1.00$, multivariate $F(2,685) = 0.17$, $p < 1.0$, partial $\eta^2 = .00$] nor the country *X* sex interaction [Wilks $\lambda = .977$, multivariate $F(12,1368) = 1.31$, $p < 1.0$, partial $\eta^2 = .11$] reached statistical significance levels.

All country means were in the upper half of the scale indicating that high intellectual abilities are considered an attribute of a high-performing student (see Figures 1a and 1b).

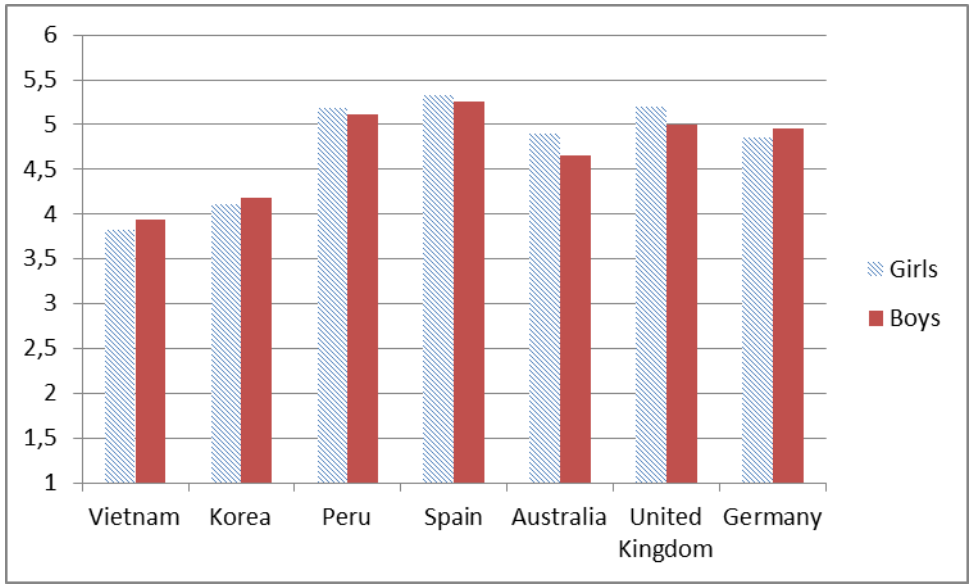

Figure 1a: Expected intellectual abilities of a high-performing new female student

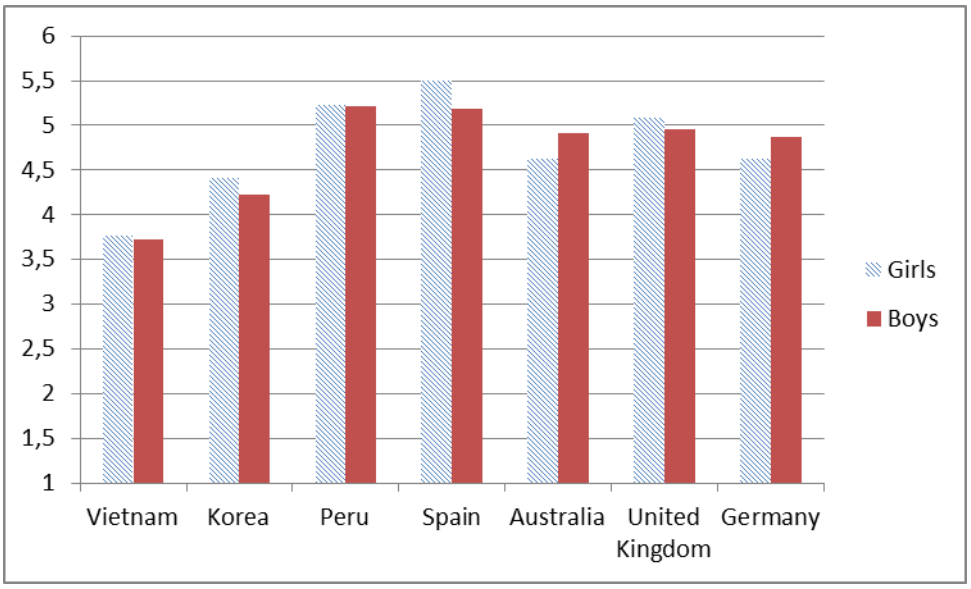

Figure 1b: Expected intellectual abilities of a high-performing new male student

However, post-hoc conducted namely Fisher's Least Significant Difference Tests (LSD) reveal a number of significant country differences. Interestingly, three clusters of nations seem to emerge. Students from the two East-Asian countries, Vietnam and South Korea, have the lowest expectations concerning intellectual abilities of new high-performing classmates. All differences between these two countries and other participating countries were significant ($p < 0.05$). This finding is in line with previous research indicating that students from East-Asian countries attribute achievements less to gifts and talents, but rather to diligence and learning (Cheng, & Si. Phillipson, 2013). The highest expectations concerning intellectual abilities of new high-performing classmates were reported by students from the two Spanish speaking countries Peru and Spain. The post-hoc test between these two countries was not statistically significant. However all the other comparisons between the two Spanish speaking countries and the other countries are statistically significant with the exception of the comparison with the United Kingdom students´ concerning expectations towards a new high-performing girl. In contrast, no post-hoc comparisons between Australia, United Kingdom and Germany reached statistical significance.

With the exception of the Korean students' expectations towards a new female high-performing student the expectations concerning positive social qualities of a new high-performing classmate were also in the upper half of the scale. A second MANOVA was conducted this time with the expected positive social qualities of a new high-performing girl in class and a new high-performing boy in class as dependent variables (See Figures 2a and 2b). This analysis identified significant country differences [Wilks $\lambda = .614$; multivariate $F(12,1370) = 31.51$, $p < 0.001$, partial $\eta^2 = .22$]. Again according to Cohen (1988) this can be considered a large effect. Two univariate Analyses of Variance (ANOVA) show that the effect holds for both sexes of new students [female new student: $F(6,686) = 16.50$, $p < 0.001$, partial $\eta^2 = .13$; male new student: $F(6,686) = 61,80$, $p < 0.001$, partial $\eta^2 = .35$]. This main effect was qualified by a significant

interaction of country and sex of a small effect size [Wilks λ = .967; multivariate F(12,1370) = 1.95, p < 0.05, partial η^2=.02]. Two ANOVAs show that the effect only holds when the sex of the new fictitious classmate is male [female new student: F(6,686) = .65, p < 1.0, partial η^2 = .01; male new student: F(6,686) = 2.52, p < 0.05, partial η^2 = .02]. The main effect for sex did not reach statistical significance levels [Wilks λ = 1.0, multivariate F(2,685) =.17, p < 1.0, partial η^2 = .00].

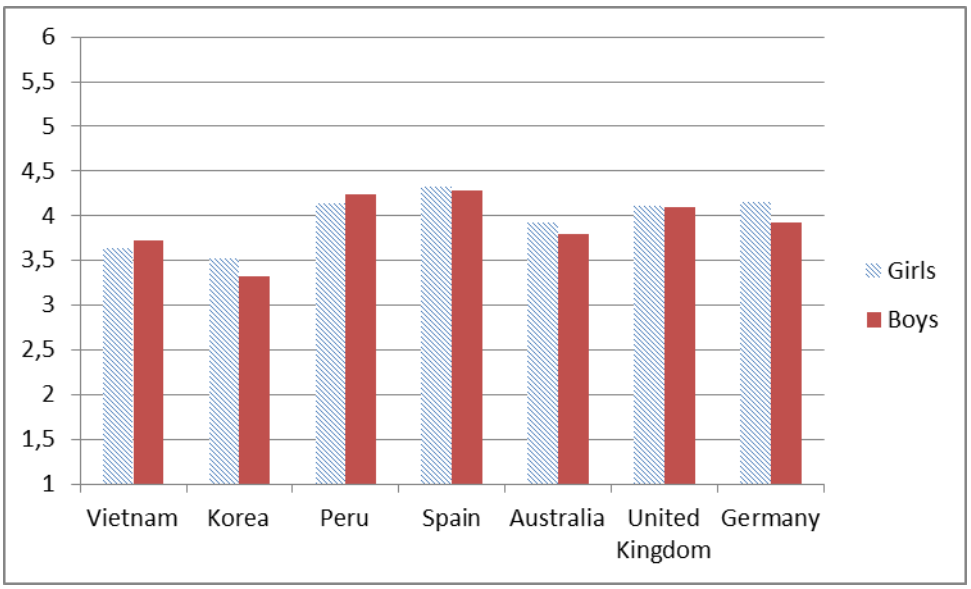

Figure 2a: Expected positive social qualities of a high-performing new female student

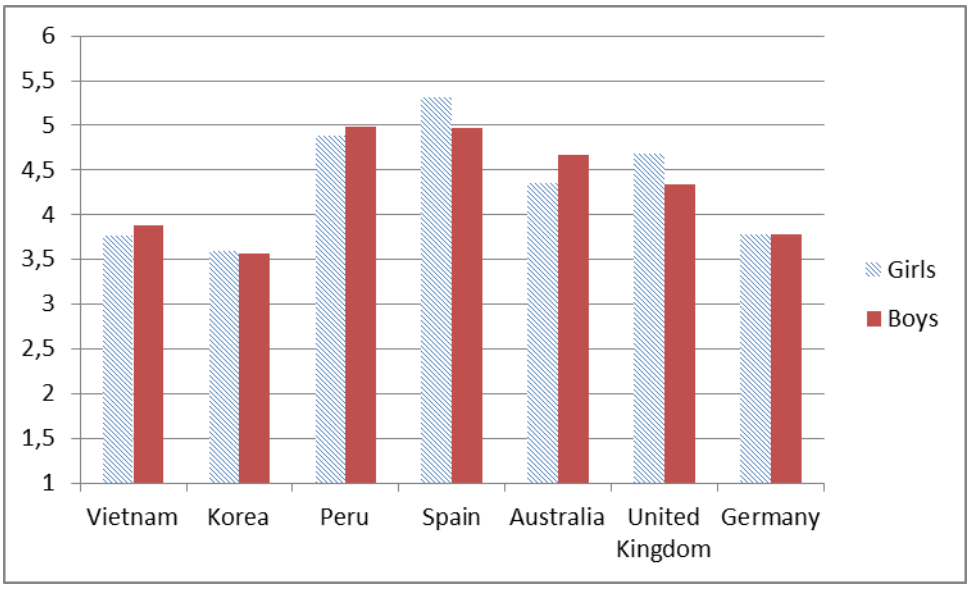

Figure 2b: Expected positive social qualities of a high-performing new male student

Post-hoc tests of mean differences among the students from the seven countries revealed a similar pattern of results as in the previous analysis on participants' expectations of intellectual abilities. Students from the two Spanish Speaking countries, Spain and Peru, have the highest expectations of positive social qualities in relation to the high achieving student and students from the two East-Asian countries, Vietnam and Korea, have the lowest expectations of new

high achieving classmate having positive social qualities. However, although the country differences between the two East-Asian countries and the other participating countries were significant, not all of the country differences between the two Spanish speaking countries and the remaining three countries reached statistical significance. No discernible pattern emerges in the analysis of the 2-way-interaction of country and sex regarding expectations of the new male high-performing classmate. Within the three clusters of countries all kind of possibilities could be observed: Lower expectations of girls in Vietnam were reported, but higher expectations of girls in Korea. Similarly, there were lower reported expectations of girls in Peru, but higher expectations of girls in Spain. Within the remaining three countries, there were lower expectations of girls than boys in Australia, and higher expectations of girls in the United Kingdom, but identical expectations of both male and female high achieving students in Germany.

The third MANOVA which examined the expected popularity of a new female and a new male high-performing classmate revealed a medium significant main effect for country [Wilks λ = .79, multivariate $F(12,1370) = 14.68$, $p < 0.001$, partial $\eta^2 = .11$], but an insignificant main effect for sex [Wilks λ = .996, multivariate $F(2,685) = 1.25$, $p < 1.0$, partial $\eta^2 = .00$] and an insignificant interaction of country and sex [Wilks λ = .997 multivariate $F(12,1370) = .72$, $p < 1.0$, partial η^2 = .01]. The main effect for country holds irrespective of the hypothesized sex of a new student female new student: [$F(6,686) = 12.31$, $p < 0.001$, partial $\eta^2 = .13$, male new student: $F(6,686)$ = 7.50, $p < 0.001$, partial $\eta^2 = .10$].

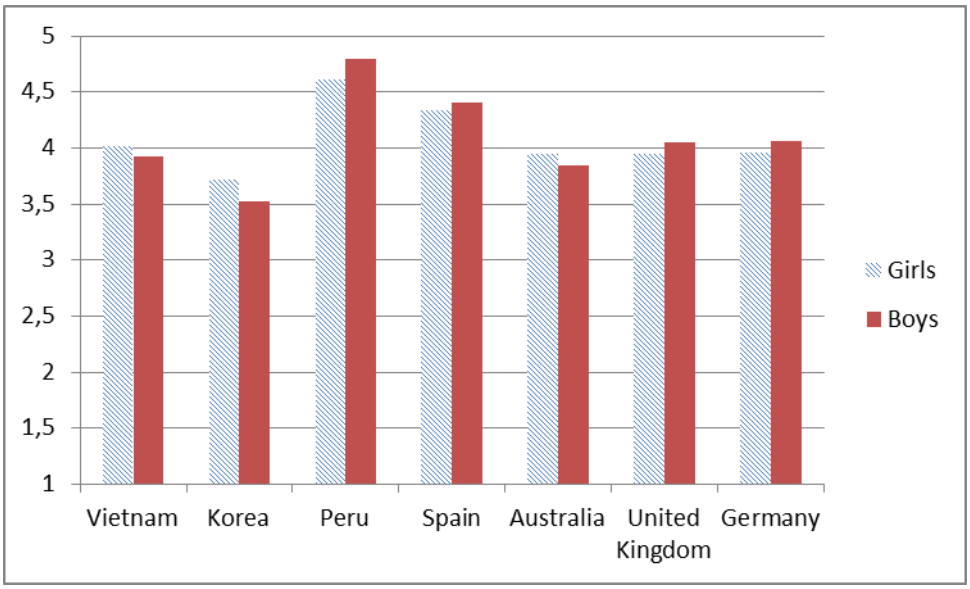

Figure 3a: Expected popularity of a high-performing new female student

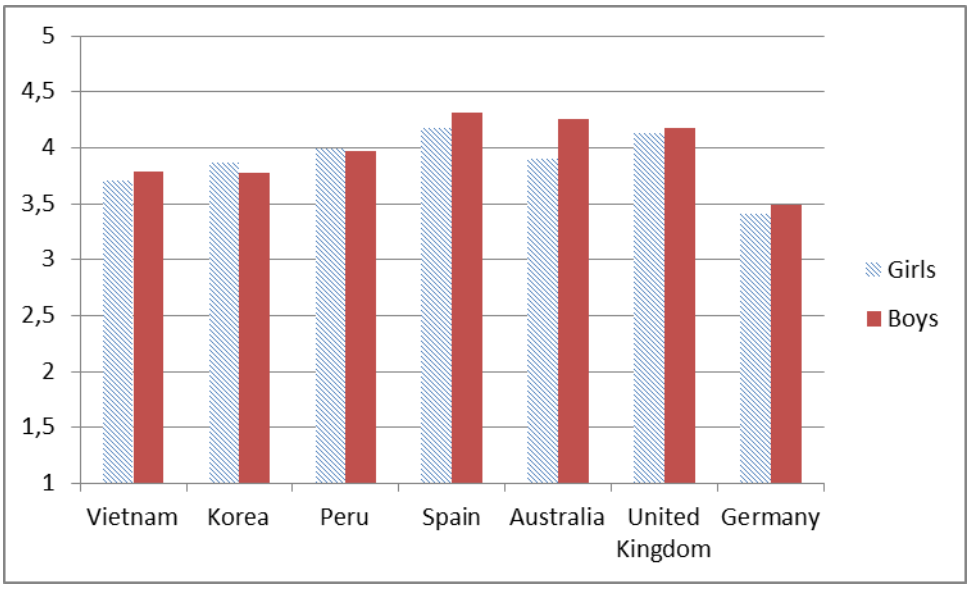

Figure 3b: Expected popularity of a high-performing new male student

Post-hoc analyses of the mean differences of the expectations concerning the popularity of a new high-performing girl demonstrated similar patterns as were found in the previous country comparisons. The two East Asian countries hold the least positive expectations, whereas the two Spanish-speaking countries hold the highest expectations. The findings from Australia, the United Kingdom and Germany fall in between. However, the situation was very different for the expected popularity of a high-performing new male classmate. This time, students in Germany have the lowest expectations with all other country comparisons with Germany being statistically significant. Next follow the two East-Asian countries. Their means differ significantly from the means of Spain, Australia and the United Kingdom.

Discussion

As discussed within the introduction there is a concern in the research literature that high academic achievement may lead to peer rejection and social isolation (Feldhusen, & Dai, 1997; Moulton, Moulton, Housewright, & Bailey, 1998). This fear may lead to gifted pupils purposively underachieving or parental concerns about identifying their children's abilities for fear of the negative social and emotional implications. This fear is substantiated to a degree by the literature evidencing that not all gifted students grow up to be high achieving adults (e.g. Freeman, 2006a, 2006b, 2010). However, the research findings are inconsistent and there is also substantial body of research that argues the opposite position: High-performing students may be especially respected by their peers (e.g., Bain & Bell, 2004; Berlin, 2009; Lee, Olszewski-Kubilius, & Thomson, 2012; Pyryt & Mendaglio, 1994). Research has demonstrated that in some specific academic subjects, like languages, high performers enjoyed a reputation of having a positive character with high intellectuality and a sociable and good personality (Händel et al. 2013).

Faced with these contradictory findings this study aimed to add to the research literature in three respects. Firstly, by focusing on pure stereotypes through the use of the fictitious new

classmate and hopefully isolating this from other potentially confounding variables evident in previous literature. Secondly, by assessing the use of stereotypes by elementary school children in a developmental phase when these stereotypes might just arise. Thirdly, in light of previously reported cross-cultural differences in the existing literature, the cross-national design of the current study allowed comparisons between several countries with diverse cultural backgrounds.

A key positive outcome of the current research was the absence of any evidence of a negative stereotype towards high-performing classmates among fourth-graders in any of the countries. Quite the contrary, high-performing students in all countries were predominantly positively perceived with the results scoring in the upper halves of the three scales measuring expected intellectual abilities, social qualities and popularity. Thus, in elementary school at least expectations turned out to be very positive. However, some country and some gender influences were found and merit discussion and further consideration.

Students from Vietnam and South Korea reported the lowest expectations concerning the intellectual abilities of a new high-performing classmate. This finding is consistent with the fact that in East-Asian cultures achievements are predominantly attributed to diligence and learning (Phillipson et al., 2013). The expectations of students in Australia, the United Kingdom and Germany sit in the middle of the range of expectations and the highest expectations regarding intellectual abilities of a new high-performing classmate were reported by the students from the two Spanish speaking countries Peru and Spain. This pattern of results reflects nicely the differential degree of importance for the development of extraordinary achievements attributed to gifts in these countries (Blumen, 2013; Kaufman & Sternberg, 2007).

The expectations reported regarding high achieving students' positive social qualities followed a similar pattern. Students from the two East-Asian countries Vietnam and Korea had the lowest expectation and the two Spanish speaking countries Spain and Peru had the highest expectations towards positive social qualities of a new high achieving classmate. The three other countries fell between. However, it is noteworthy that students from Korea held slightly lower expectations towards a new female high-performing student concerning her positive social qualities, but not significantly below the scale mean.

An interesting pattern of results was found for the expectations concerning the high achieving students' popularity. Expectations towards a new high-performing girl follow the typical pattern of the previous country comparisons, i.e. the two East Asian countries hold the least positive expectations, whereas the two Spanish speaking countries hold the highest expectations. Australia, United Kingdom and Germany fall in between. However, an unexpected pattern emerges with respect to the expected popularity of a high-performing new male classmate. Surprisingly students in Germany hold the lowest expectations and then the two East-Asian countries follow this with expectations slightly above the scale mean. The highest expectations were found among the students from the Spanish-speaking countries who usually hold the

highest positive expectations. Unfortunately, it seems impossible to discern these findings on the basis of the available literature (e.g., Chandler, 2013; VanTassel-Baska, 2013; Phillipson, & McCann, 2007; Ziegler, Stoeger, Harder, & Balestrini, 2013).

In conclusion, the most important finding from this research is the students' favorable expectations regarding the intellectual abilities, positive social qualities and popularity of high-performing classmates across the seven participating countries. It is encouraging that students from these countries do not appear to have negative associations with high achievement. By implication this may mean that they would not fear demonstrating their own abilities. Overall, the students in the Spanish-speaking countries held the most desirable expectations for high-performing classmates, followed by the students from Australia, the United Kingdom and Germany. The least positive expectations were exhibited by the students of the East-Asian countries these scores were predominantly located slightly above the scale means. However, it is difficult to decide if this really indicates a relative indifference towards high-performing students. An alternative explanation might be that these results might simply indicate that the students had not yet developed a full concept of ability (see Stipek, 1981; Phillipson, 2013). In order to decide this issue further research that covers a wider age range is needed.

Limitations of the Study

As with all research, the current research has a number of limitations. Firstly, the use of a fictitious scenario to investigate the expectations of students towards high-performing students while a strength, in that the student characteristics are not confounded with other variables and this therefore allowed for an error-free investigation of expectations towards high-performing peers, it is also a limitation. Reality is more complex and different variables may work in interaction to influence peer academic reputations e.g. a student's physical appearance may mediate peer's perceptions of their ability (Ziegler et al., 2011). Also because of the scenario based design we cannot see how students' perceptions turn into actions. We are unable to determine from our data if the expectations students hold about their peers actually influences either their own behaviour or the behaviour of their high-performing peers. A second limitation is that we did not compare interpersonal and intrapersonal expectations with actual achievement data (Beghetto & Baxter, 2012). That is, we do not investigate how high or low-performing students describe themselves in contrast to a high-performing student. This is important as a student's own abilities may influence their perceptions and expectations of high achieving peers. Finally, the results of our study do not allow for causal interpretations. As the results are based on scale means of expectations towards high-performing peers assessed via a questionnaire, further qualitative research is needed to investigate their meaning. Such research could also provide further enlightenment on the reasons for the pattern of results found in the current study and help explain what caused the gender by country interactions.

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