
This is the **accepted version** of the journal article:

Oh, Hyerim; Sutherland, Margaret; Stack, Niamh; [et al.]. «Adolescents' social perceptions of academically high-performing students : a country and gender comparative study». Compare, Vol. 50 Núm. 6 (2019), p. 809-826. 18 pàg. DOI 10.1080/03057925.2018.1561246

This version is available at <https://ddd.uab.cat/record/287692>

under the terms of the  **CC BY** COPYRIGHT license

Adolescents' social perceptions of academically high-performing students: a country and gender comparative study

Hyerim Oh^a, Margaret Sutherland^b, Niamh Stack^c, Maria del Mar Badia Martín^d, Sheyla Blumen^e, Quoc Anh-Thu Nguyen^f, Catherine Wormald^g, Julie Maakrun^h and Albert Ziegler^a

^aDepartment of Educational Psychology and Research on Excellence, University of Erlangen-Nuremberg, Nuremberg, Germany; ^bSchool of Education, University of Glasgow, Glasgow, UK; ^cSchool of Psychology, University of Glasgow, Glasgow, UK; ^dDepartment of Basic, Development and Educational Psychology, University Autonomous of Barcelona, Barcelona, Spain; ^eDepartment of Psychology, Pontificia Universidad Católica del Perú, Lima, Peru; ^fPrimary School Hildegard-von-Bingen-Anger, Munich, Germany; ^gSchool of Education, University of Wollongong, Wollongong, Australia; ^hSchool of Education, University of Notre Dame, Broadway, Australia

ABSTRACT

One cohort that has not been given extended attention in the period during which transition takes place is academically high-performing students. This research study uniquely synthesises some of these key factors by investigating how students in mixed-ability, seventh-grade classrooms across Australia, Peru, Scotland, South Korea, Spain and Vietnam regard a hypothetical, academically able peer. The fictitious student's intellectual ability, positive social traits and popularity varied across the six countries involved in this study, and were observed according to the gender of the perceiver. More specifically, the perceived popularity of a high-performing boy or girl was reported differently among the country groups. In Scotland, for example, the authors uncovered a potential risk to female social status arising from peer reactions to her academic achievement. Yet in Vietnam, female study participants maintained a positive perception of both hypothetical students, regardless of gender. The results of this study are discussed herein.

KEYWORDS

High performer; peer perception; intellectual ability; positive social qualities; popularity

Introduction

Adolescents recognise the transition to secondary school as an important time of change in their lives (Tobbell 2003; West, Sweeting, and Young 2009). During this period, adolescent emotional and psychological development coincides with the social challenge of a new learning environment. Adolescents are often highly anxious about this transition; specific issues of concern can include bullying, establishing friendships, learning new procedures, and managing the amount of work that might be required in a new educational context (Zeedyk et al. 2003). Pratt and George (2005) suggest that the

necessity of adaption to a different school culture in the first year of secondary school resulted in a fear of forming relationships for both male and female students. The intermittent change in learning environment between schools can disrupt students' perceived autonomy, as well as opportunities for participation in classroom decision making (Eccles et al. 1993). Additionally, the move to secondary school can result in lower levels of engagement in learning (Watt 2004), and in increased anxiety (Cotterell 1992). In fact, the link between a dip in academic achievement and transition at this stage has been well established in literature, with a number of international studies supporting this claim (e.g. Alspaugh [1998]; Galton, Gray, and Ruddock [1999]; McGee [2004]). For example, Ashton's (2008) qualitative study that had sought to gain a better understanding of student views on transition concluded that social trepidation appeared to be of greater concern to young people than academic attainment. Interestingly, this dip in achievement is also reported across countries and age groups.

This study's primary concern is the exploration of student perceptions of high-performing students during the adjustment period beginning in elementary and ending in secondary school. Research studies have found evidence that high-performing and gifted students are at a higher risk of encountering various social problems like social isolation, social rejection, stereotyping or negative labelling – i.e. being called a nerd or a geek (e.g. Fiedler, Lange, and Winebrenner [1993]; Händel et al. [2014]; Peterson [2009]; Piechowski [1997]). Persson (2010) presented quantitative and qualitative data that implied that, for many high-ability students, schools are 'hostile environments'. Although there have been no studies to date that have examined the perception of high achievement as a risk factor in the transitional period, it is plausible that high performers may be confronted with additional demands. High-performing adolescent students may face various social predicaments, especially due to the potential negative connotations arising from the label 'gifted' (Coleman and Cross 2014; Cross, Coleman, and Terhaar-Yonkers 2014; Manaster et al. 1994). Rinn, Reynolds, and McQueen (2011) found that, relative to perceived social support from parents and friends outside of school, gifted adolescent students believe they receive less social support from teachers and classmates. Jung et al. (2011) surveyed the experiences of academically gifted students in grades 7–12. They found that academically gifted adolescents believe they must choose between academic excellence and peer acceptance. The younger the students were in this study, the more they reported experiencing this *forced-choice dilemma*. While not all gifted students are vulnerable in this way, it seems reasonable to assume that, as with typically developing students, some gifted students may be at particular risk, given the complex picture that emerges around relationships, social development and status, as well as high ability (Coleman and Cross 2014).

Previous studies related to the social perception of gifted students oftentimes identified them by combining standardised intelligence-test results, teacher nomination, school achievement and so forth (see Coleman and Cross [2014]; Cross, Coleman, and Terhaar-Yonkers [2014]; Manaster et al. [1994]; Jung et al. [2011]; Rinn, Reynolds, and McQueen [2011]). Unfortunately, at this time, it is not possible to check for equivalency or compatibility between constructs of giftedness and criterion for gifted identification across already existing studies. For example, gifted underachievers, marred by low school performance in the classroom, could have been absorbed into the sample group of this research (see Reis and McCoach [2016]). In fact, the only common feature in the aforementioned studies is

the definition of already-identified gifted students as 'potential high-performers'. Consequently, in order to avoid such ambiguities, academically high-performing students in this paper are students who perform at the top of their class in a range of academic subjects. Nonetheless, this does not necessarily imply that the hypothetical student is gifted; rather, it allows one to adopt the view that giftedness can be equated with high performance levels (for different views of the concept of giftedness see Davidson and Sternberg [2005]).

Are academically high-performing, female students particularly vulnerable?

The lack of female participation in science, technology, engineering and mathematics (STEM) subjects would appear to be related to the detrimental effects of gender stereotypes, which favour males over females in these subjects (e.g. Kao [2015]), and to the fear of being negatively labelled (e.g. Aronson [2002]). The pressure becomes even more constricting for gifted girls in pre-adolescence between grades 5 and 8 (Klein and Zehms 1996). The Programme for International Student Assessment (PISA) conducted in 2012 reported the underperformance of girls in mathematics and science (OECD 2015); the trend continued in 2015 (OECD 2016). This is of concern internationally, as participation in STEM subjects is considered an indicator of a country's ability to generate new ideas and remain competitive in the global economy.

There is some evidence that boys score higher on high-level examinations in male-dominated fields, while girls perform better in female-dominated fields (Benbow and Lubinski 1993; Ellison and Swanson 2010; Strand, Deary, and Smith 2006; Young and Fraser 1993). Results from recent PISA reports (OECD 2016) showed consistent out-performances by high-performing 15-year-old male students in the subjects of science and mathematics, even among the highest-performing students across countries and economies. However, the Organization for Economic Co-operation and Development (OECD) report (OECD 2015) on gender and education contended that 'gender gaps in school performance are not determined by innate differences in ability but are aligned to issues of self-confidence, permission to fail and to participate in experimental processes that encourage the acquisition of knowledge' (OECD 2015, 15).

Drawing on feminist post-structuralist theories, successful girls have a need to be perceived as feminine in order to sit within the accepted classroom norms of femininity (Kao 2015; Renold and Allan 2006; Ringrose 2007). This required gender role gives rise to tensions between academic and social success amongst girls identified as being gifted in academic areas and their peers (Benbow and Lubinski 1993; Francis, Skelton, and Read 2012; Galton, Gray, and Rudduck 1999; Jung, McCormick, and Gross 2012). Within a feminist post-structuralist framework, high academic achievement might contribute to girls being construed as a 'boffin', 'geek' or 'nerd'; and, thus, high performance and achievement is in conflict with the image of the prototypical female. However, these stereotypical labels are problematic for both boys and girls alike (Manaster et al. 1994). If this is indeed the case, then studying student perceptions of high-achieving peers across countries and between gender groups might help to tease out the salient issues and apparent tensions between gender, high academic achievement, popularity and subject choice in order to better support young people as they cultivate their identity, form relationships and sustain high academic achievement.

Toward a new comparative approach to gifted students

Until recently, country comparative research on peer perceptions of academically high performers has explored cultural boundaries, splitting countries by the relatively broad interpretations of collectivist and individualist (see Harrington and Liu [2016]; Händel, Vialle, and Ziegler [2013]; Jung, McCormick, and Gross [2012]). However, the cultural variables were inconsistent in reporting country differences in perceived high-achieving students. Increasing globalisation, rapidly changing technological advances and generational changes mean that ideas of country and culture are increasingly confounded and the boundaries are less black and white. For that reason, we were keen to avoid these stereotypes, instead drawing on Ziegler and Stoeger's (2017) holistic approach to *educational and learning capital* as a framework for understanding the possible differences in social perceptions of gifted students between the countries featured in the current study. Ziegler and Baker (2013) described an individual learner as the whole of his or her actions and interactions within a given environment. Capitals, i.e. learning resources are produced and used to maintain and evolve that *wholeness*. Educational capital denotes all exogenous learning resources that can be used to achieve learning goals, while learning capital denotes all endogenous learning resources that *enable* individual learners to achieve learning goals. The resource oriented approach to gifted children distinguishes between 10 types of interconnected educational and learning capital (see Phillipson, Stoeger, and Ziegler [2013]; Vialle [2017]; Vladut et al. [2013]; Ziegler and Baker [2013]; Ziegler, Balestrini, and Stoeger [2018]). In a recent paper, Ziegler, Balestrini, and Stoeger (2018) extended this model in a way that also includes the macro perspective, making cross-national comparison studies possible and ultimately, expanding beyond traditional giftedness concepts that prominently reflect Anglo-American contexts. A preliminary analysis of cross-national differences showed a differentiation point between East-West views regarding scholastic achievement and its relevant values, thinking patterns and the commensurate effort – cognitive or otherwise – required to achieve (Phillipson, Stoeger, and Ziegler 2013). As a result, this work helps raise awareness of academically high-performing students, and is a step forward in understanding country-specific reactions to high performance beyond Western conceptions of (potentially) high-performing individuals.

Present study

This study is based on the premise that perceptions of high performers are socially constructed and developed rather than formed from, and by, the high achiever's personal characteristics. In effect, these perceptions influence a range of behaviours, potentially impacting subject choice, achievement (Eccles 2011), and in some cases, predicting underachievement (Cross, Coleman, and Terhaar-Yonkers 2014). The study's principal concern is student perception of a high-performing classmate. We further examine three interrelated aspects: (1) the different perceptions of male and female participants (gender of perceiver) regarding high-performing students; (2) differing perceptions of high-performing males and high-performing females (target gender); and (3) the macro-systemic effects of these attitudes on a national level.

Our study is the first to explore peer-held image of high performers by way of the concept of cultural educational capital. According to Ziegler and Stoeger (2017), however, economic educational capital is regarded as a kind of proto-capital. In other words, although it is not directly useful for learning, economic educational capital can transform into cultural educational capital, forcing us to broaden our focus to include the former. Economic educational capital is defined by every kind of asset that can be spent for facilitating and continuing educational and learning processes i.e. invested money for school achievement (Ziegler and Baker 2013). The gathering of international comparative data through, for example, PISA (OECD 2013, 2016) has given rise to cross-country comparisons. The triannual studies shed light on the question of what determines and influences higher levels of academic performance within a country. As early as 2001, results from these studies demonstrated that nations with higher economic educational capital had indeed higher achievement levels. However, a recent PISA report (OECD 2015) noted a more nuanced distribution than previously reported: 'Data also show that the world is no longer divided between rich and well-educated national and poor and badly educated ones: the 10% most disadvantaged students in Viet Nam compare favourably to the average student in the OECD area' (OECD 2015, 4). In other words, higher economic educational capital in many East Asian countries does not sufficiently explain higher-level performances (OECD 2013, 2015) in East Asia. This was of interest to the present study, and ultimately influenced the choice of participants.

Cultural educational capital refers to the values, attitudes and beliefs of various stakeholders in the education process (Ziegler, Balestrini, and Stoeger 2018). Cultural educational capital also describes a condition in which individuals want to adapt to their environment or avoid conflict situations whenever possible. Interestingly, countries with comparatively high cultural educational capital are concentrated in East Asia. Their level of episodic educational capital (appropriate action patterns to achieve learning goals in given contexts) is also comparatively high, placing significant value on achievement which, in turn, enables East Asians to reach academic success (e.g. Balestrini and Stoeger [2018]; Kim and Park [2006]; Mizokawa and Ryckman [1990]; Hsin and Xie [2014]). Hence, we chose two countries as examples of nations with high positive cultural educational capital that also varied in terms of economic educational capital: (1) South Korea (OECD member country); and (2) Vietnam (non-OECD country). Both countries spend much less economic educational capital on learning compared to other participating OECD countries like Australia, Scotland, and Spain. Due to a recent corpus-linguistic study of cultural educational capital in Eastern and Western countries (Ziegler, Balestrini, and Stoeger 2018), our study now considers that these three countries have less cultural educational capital than South Korea and Vietnam. Australia and Scotland in particular exhibit a reverse pattern in economic educational capital and in cultural educational capital (see Carrington [2016]; Feather [2008]; Sutherland and Stack [2014]; Vialle [2017]). Furthermore, the two types of capital associated with Spain and Peru (non-OECD country) fell in the median range for both economic educational capital (OECD 2016) and cultural educational capital. These countries were included in the study as a useful comparison. Given that economic educational capital is not sufficiently dispersed in South Korea or in Vietnam, and although educational aspiration and the value of academic success is considerably high at a social level, we expect that positive perceptions of high-performing students will be demonstrated by a sample of

Table 1. Country groupings by economical educational capital and cultural educational capital.

Macro-level	Economical educational capital	Cultural educational capital
High	Australia and Scotland	South Korea and Vietnam*
Middle	Spain and Peru*	Spain and Peru*
Low	South Korea and Vietnam*	Australia and Scotland

Note: *non-OECD country

South Korean and Vietnamese students. We predict that South Korean and Vietnamese students will rate higher on the perceived traits of the high-performing classmate scales than will Spanish, Peruvian, Australian and Scottish students. Although the analysis in this study does not preclude the possibility that there can exist considerable differences within a nation with reference to cultural educational capital, we did initially attempt to use the national averages to indicate the strength of the assumed differences in the two types of capital (Table 1).

Research methods

Participants

The participants of this study consisted of 1066 seventh graders from six countries: Australia, Scotland, Spain, Peru, South Korea, and Vietnam. The mean age of all participants was 12.96 years ($SD = .27$), ranging from 12 to 14 years of age. Gender balance was ensured across the samples in each country group. The mean age of girls ($M = 12.93$, $SD = .29$) and boys ($M = 13.01$, $SD = .20$) was significantly different only in the Scottish participants, $p < .05$, but the difference was judged as having only an infinitesimal influence on this study. All participants were drawn from urban schools. Primary and (lower) secondary education in each of the countries is compulsory and there is no selection process for entering secondary education. However, differences between systems exist and are detailed below.

Australia: Primary school generally consists of 'years' ranging from Kindergarten to Year 6, whilst secondary school generally consists of years ranging from Year 7 to 12, depending on the state or territory. Thus, seventh grade is referred to as Year 7 in Australia, and is equivalent to the eighth year of schooling. Eighty Australian students (56.3% female; mean age = 12.68, $SD = .52$) from three coeducational schools and one independent boys' school in Sydney participated in this study.

Scotland: Children in Scotland complete seven years of primary school from Primary 1 (age 5) to Primary 7 (age 12). After this, they may complete up to six years of secondary school from S1 to S6 divided into lower (S1 to S4) and upper secondary education (S5 and S6). Seventh grade is referred to as S2. In this study, participants included 182 S2 students enrolled in a public, co-educational secondary school in a suburb of Glasgow (57.1% female; mean age = 12.97, $SD = .26$).

Spain: Compulsory secondary education lasts for four years after finishing six academic school years in primary school. It is divided into two cycles, the first one for students aged 12 to 14 and the second one for students aged 14 to 16. One hundred and eighty-four students attending first year in a private secondary school and a public secondary school in Barcelona participated in this study (46.7% female; mean age = 13.03, $SD = .16$).

Peru: Primary and secondary education lasts a nominal 11 years, with six years of primary education and five years of secondary education. Thus, seventh grade corresponds to Year 1 within a secondary school setting of students aged 12 or 13. This study's participants included 197 Spanish-speaking students enrolled in a public secondary coeducational school in Lima City (52.3% female; mean age = 12.94, $SD = .27$).

South Korea: Seventh grade is the equivalent to first grade in Middle School. The Middle School marks a shift from primary school (grades 1–6) and covers three years from the ages 12/13 to 14/15. Participants included 180 first graders in two Middle Schools in Incheon (51.7% female; mean age = 12.93, $SD = .25$).

Vietnam: Vietnam has compulsory education until the end of lower secondary education. Every student who completes primary school is allowed to enter Grade 6. Seventh grade corresponds approximately to the second year of schooling in lower secondary education, which lasts for four years (grades 6–9). Two hundred and forty three seventh grade students in three lower secondary schools in Ho-Chi-Minh-City (57.2% female; mean age = 13.01, $SD = .11$) participated in this study.

Materials

The questionnaire was adapted from the study of Oh et al. (2014) which measured student perceptions of a high-performing peer. Certain variables related to the traits of high-performing students have already been administered in Händel, Vialle, and Ziegler (2013). The questionnaire was first created in the English language. Experts with a high professional proficiency level in the languages associated with each participating country then translated the questionnaire into Spanish, Korean and Vietnamese. Finally, the questionnaires were translated back into English for accuracy. Participants read the following description within the illustrated vignette:

What do you expect from a new female (male) classmate? For the following statements, we want to know what expectations you have, when a new girl 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.

The vignette's description is limited to information revealing only the hypothetical figure's sex and level of academic ability. Participants then read a statement describing the hypothetical figure of a specified gender. They then assessed the hypothetical high achiever on three characteristics on a six-point scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The statements contain 14 items in three components, namely intellectual ability (e.g. '... can remember things well'), positive social qualities (e.g. '... is nice'), and popularity (e.g. '... will be popular in the class'). The internal reliability of the resulting scales varied: 'Intellectual ability' of a new high-performing male student (4 items, $\alpha = .77$); 'Popularity' of a new high-performing male student (6 items, $\alpha = .54$); 'Positive social qualities' of a new high-performing male student (4 items, $\alpha = .80$); 'Intellectual ability' of a new high-performing female student (4 items, $\alpha = .76$); 'Popularity' of a new high-performing female student (6 items, $\alpha = .54$); 'Positive social qualities' of a new high-performing female student (items, $\alpha = .81$).

Procedure

Research was conducted in accordance with the ethical requirements governing each of the participating countries and schools. Participants were asked to complete the questionnaires after permission was obtained from the principals of each school. Student participation was voluntary. Researchers in each country administered the questionnaire in the classroom and participants were asked to answer the questionnaire anonymously. In order to demonstrate that the sequence in which questions were asked did not influence the responses (p 's > .59), two versions of the questionnaire were used. One composed of questions about the hypothetical female vignette followed by the male vignette, whereas the other version was comprised of questions concerning the male vignette, followed by the female version. The two versions were distributed to participants randomly, and approximately half of the participants completed one version and half completed the other. There was no time limitation to complete the questionnaire. On average, the questionnaire was completed within 10 minutes.

Results

Statistical analysis

We compared the response patterns of male and female participants. We also examined the mean levels associated with student expectations of a hypothetical male or female student, and the interactive effects of that scale between countries. The gender of the perceiver and the gender of the high performer were taken into account. The data was analysed using Repeated Measurement Analysis of Variance, in which the repeated factor was the rating of the gender expectation differences of high performers (for example, the popularity of a new high-performing male student vs. the popularity of a new high-performing female student), and the perceivers nationality (Australia, Scotland, Spain, Peru, South Korea and Vietnam) and gender (male participants vs. female participants) constituted the *between*-subject factors. We performed three repeated measures with ANOVAs with respect to intellectual ability, positive social qualities and popularity. All participants were included in the repeated measures analyses. The alpha was set at .05. Post hoc analyses were conducted using Hochberg's GT2 for multiple comparisons to mitigate the unequal sample sizes.

Descriptive analysis

The mean scores and the standard deviations of male and female seventh-grade student expectations of a high-achieving hypothetical female and male classmate are captured in Table 2. The expectations are grouped by intellectual ability, positive social qualities and popularity for each of the six cross-cultural male and female vignettes. Male and female participants within each of the six countries expected that the hypothesised high-performing male or female student was intellectually and socially competent. The hypothesised high-performing male or female student was not expected to be overtly popular.

Table 2. Mean and standard deviations for perception of hypothetical target person by country and gender group.

	Country	Intellectual ability		Positive social qualities		Popularity	
		High-performing boy	High-performing girl	High-performing boy	High-performing girl	High-performing boy	High-performing girl
Gender		<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
Boys	Total	4.67 (.92)	4.74 (.89)	4.33 (.89)	4.37 (.91)	3.88 (.58)	3.83 (.59)
	Vietnam	4.60 (1.01)	4.70 (.99)	3.85 (.65)	3.92 (.75)	3.92 (.59)	3.91 (.60)
	Korea	4.23 (1.02)	4.25 (.94)	3.56 (.72)	3.58 (.73)	3.64 (.56)	3.50 (.50)
	Scotland	4.89 (.80)	5.06 (.78)	4.54 (.72)	4.61 (.82)	4.05 (.56)	3.94 (.63)
	Australia	4.58 (.90)	4.84 (.84)	4.43 (.77)	4.53 (.73)	3.98 (.61)	3.96 (.49)
	Peru	4.51 (.73)	4.48 (.68)	4.52 (.62)	4.61 (.60)	3.84 (.44)	3.85 (.51)
Girls	Total	5.15 (.75)	5.19 (.71)	5.13 (.82)	5.07 (.82)	3.95 (.65)	3.89 (.65)
	Vietnam	4.77 (.83)	4.78 (.82)	4.32 (.83)	4.35 (.80)	3.90 (.56)	3.86 (.59)
	Korea	4.84 (.99)	4.94 (.88)	4.05 (.58)	4.09 (.58)	4.07 (.52)	4.12 (.61)
	Korea	4.63 (.76)	4.55 (.74)	3.53 (.71)	3.61 (.65)	3.67 (.62)	3.47 (.60)
	Scotland	4.75 (.77)	4.64 (.89)	4.59 (.66)	4.60 (.64)	4.00 (.50)	3.92 (.50)
	Australia	4.59 (.91)	4.69 (.85)	4.33 (.92)	4.59 (.82)	3.96 (.59)	3.95 (.63)
Total	Peru	4.57 (.68)	4.58 (.63)	4.36 (.58)	4.31 (.61)	3.78 (.47)	3.72 (.45)
	Spain	5.18 (.68)	5.20 (.70)	5.22 (.68)	5.19 (.66)	3.85 (.57)	3.89 (.54)
	Vietnam	4.74 (1.00)	4.84 (.93)	3.97 (.62)	4.02 (.66)	4.01 (.56)	4.03 (.61)
	Korea	4.44 (.92)	4.41 (.85)	3.54 (.72)	3.60 (.69)	3.65 (.59)	3.48 (.55)
	Scotland	4.81 (.78)	4.82 (.87)	4.57 (.69)	4.60 (.72)	4.02 (.52)	3.93 (.56)
	Australia	4.58 (.90)	4.76 (.84)	4.38 (.85)	4.56 (.78)	3.97 (.60)	3.95 (.57)
	Peru	4.54 (.70)	4.54 (.65)	4.43 (.60)	4.45 (.62)	3.80 (.45)	3.78 (.48)
	Spain	5.16 (.72)	5.19 (.70)	5.17 (.76)	5.12 (.75)	3.90 (.61)	3.89 (.60)

Country and gender expectation differences about high performers

Table 3 summarises the results of the repeated measurements of ANOVA analyses. The ANOVAs revealed that, overall, and irrespective of country group and gender, seventh graders in the six countries expressed significantly higher expectations of intellectual ability ($M = 4.76$, $SE = .03$) and positive social qualities ($M = 4.39$, $SE = .02$) regarding a new high-performing female in comparison to those of a new high-performing male (intellectual ability, $M = 4.71$, $SE = .03$; positive social qualities, $M = 4.34$, $SD = .02$). However, the

Table 3. Results of the analyses of variance with repeated measures testing the effects of country and gender on perceptions of high performers.

Variable	Intellectual ability		Positive social qualities		Popularity	
	<i>F</i> (1,1054)	Partial η^2	<i>F</i> (1,1054)	Partial η^2	<i>F</i> (1,1054)	Partial η^2
Gender of high performer	4.69*	.004	4.79*	.005	6.23*	.006
Gender of perceiver	1.39	.001	.06	.000	.00	.000
Gender of perceiver × Gender of high performer	3.77	.004	.01	.000	.08	.000
	<i>F</i> (5,1054)	Partial η^2	<i>F</i> (5,1054)	Partial η^2	<i>F</i> (5,1054)	Partial η^2
Country	23.34***	.100	152.89***	.420	21.71***	.093
Country × Gender of perceiver	4.04**	.019	2.85*	.013	2.32*	.011
Country × Gender of high performer	1.43	.007	1.26	.006	2.66*	.012
Country × Gender of perceiver × Gender of high performer	1.23	.006	.69	.003	.61	.003

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

expected popularity of a new high-performing male ($M = 3.89, SE = .02$) was significantly higher than that of a new high-performing female ($M = 3.84, SE = .02$). The results consistently showed significant effects for nationality, and for the interaction between nationality and gender on the three dimensions outlined above. Significant interaction effects between country and target gender (the comparison of the expectations between a male vignette and female vignette) were only attained for the expected popularity of high performers. Significant effects for the interactions of gender, target gender and country were not explicitly apparent across all subscales.

Intellectual ability

Results from the ANOVAs revealed a significant difference in countries from the average score of the subscale 'intellectual ability of a new high performing male student' and the subscale 'intellectual ability of a new high performing female student' $F(5, 1054) = 23.34, p < .001, \text{partial } \eta^2 = .100$. The results of post hoc analyses indicated that the Spanish students held the most favourable outcome for high ability from their high-achieving classmates. The score was significantly higher than that of the students of the other five countries. The effect for the interaction between nationality and the perceiver's gender was also significant, $F(5, 1054) = 4.04, p < .01, \text{partial } \eta^2 = .019$. An analysis of simple effects showed that the intellectual ability of a new high-performing student was significantly higher for Vietnamese girls ($M = 4.89, SE = .06$) vs. South Korea ($M = 4.59, SE = .08$) than for Vietnamese boys (Vietnam, $M = 4.65, SE = .07$; South Korea, $M = 4.24, SE = .08$). The reverse – a significantly higher expectation of boys ($M = 4.98, SE = .08$) than girls ($M = 4.70, SE = .07$) – was found only in the scores of the Scottish subjects. There were no significant differences in gender perceptions of the Australian, Spanish, and Peruvian subjects. This is illustrated in Figure 1.

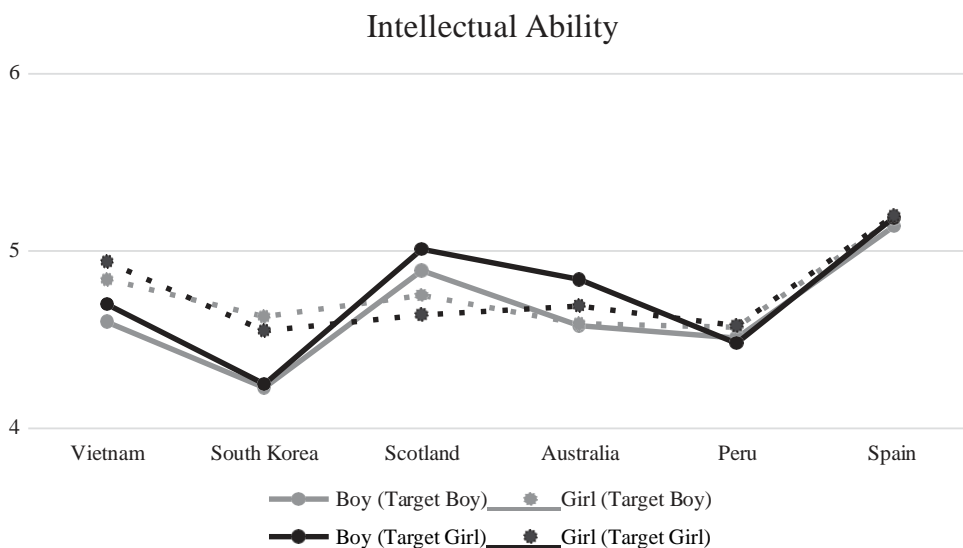


Figure 1. Gender expectation differences of intellectual ability of a new high-performing student assessed by country group.

Positive social qualities

Among the six countries, there was a significant difference – $F(5,1054) = 152.89, p < .001$, partial $\eta^2 = .420$ – for expected positive social qualities of academically successful students. Post hoc tests consisted of four country groups, including the highest positive expectations of the Spanish and the lowest expectations of the South Koreans. The mean scores among Australia, Scotland and Spain were not significantly different ($p > .05$), indicating positive agreement with the social ability of the high-performing classmate. Figure 2 illustrates a national comparison of expected positive social qualities of high-performing students by the gender of the perceiver. The interaction effect between country and gender of perceiver was significant: $F(5,1054) = 2.85, p < .05$, partial $\eta^2 = .013$. The results of a simple effects analysis indicated that girls in Vietnam ($M = 4.07, SE = .05$) rated significantly higher than their male counterparts: ($M = 3.89, SE = .06$), $p < .05$, whereas the Peruvian girls' score ($M = 4.33, SE = .06$) was significantly lower than the Peruvian boys' score ($M = 4.56, SE = .06$), $p < .01$. Significant gender-specific expectations of positive social qualities were not found in the scores of the Australian, Scottish, Spanish and South Korean subjects ($p > .05$).

Popularity

The average score of the subscale 'popularity of a new high performing male student' and the subscale 'popularity of a new high-performing female student' show a significant country-specific, main effect: $F(5,1054) = 21.71, p < .001$, partial $\eta^2 = .093$. Post hoc tests showed that the South Korean students in this study ($M = 3.57, SE = .23$) had significantly lower expectations of the hypothetical high performer's popularity than the students from other country groups, indicating a neutral attitude. There was an interaction effect for country and gender of perceiver, $F(5,1054) = 2.32, p < .05$, partial $\eta^2 = .011$. Again, only the Vietnamese girls' scores ($M = 4.10, SE = .50$) were significantly higher than the Vietnamese boys' scores ($M = 3.91, SE = .51, p < .01$). Gender expectation differences of the perceiver were not revealed on the scales for Australia, Scotland, Spain, Peru and South Korea. Figure 3 presents the different popularity scores indicating how the hypothetical high-performing boys and girls are



Figure 2. Gender expectation differences of positive social qualities of a new high-performing student assessed by country group.

Popularity

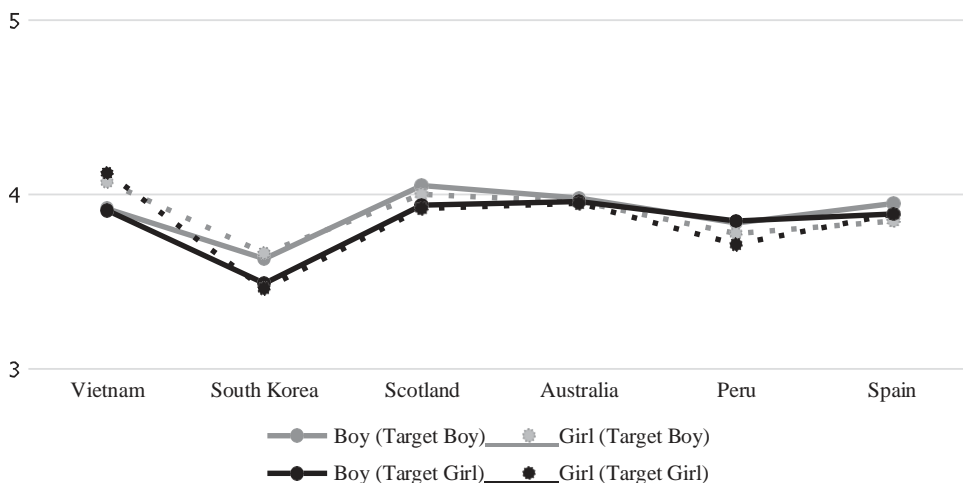


Figure 3. Gender expectation differences of popularity of a new high-performing student assessed by country group.

perceived. Significantly different, gender-specific perceptions of high performers in each country were found only for the trait of popularity: $F(5,1054) = 2.66, p < .05$, partial $\eta^2 = .012$. According to the results of a simple effects test, the Scottish and South Korean students rated high-performing males significantly higher on the popularity scale than they did for the high-performing female: $p < .05$.

Discussion

The present study attempted to determine what secondary school students think of high-performing students. In addition, we were interested in gender and in *target* gender-related differences among peer perceptions of high-performing classmates. This study produced encouraging results for the field of gifted education; namely, that academically high-performing students' intellectual abilities were positively viewed across all six countries. In this sample, seventh graders seemed to acknowledge the intellectual competence of their high-achieving classmates. The fact that students across the six countries did not view high-achieving students negatively with respect to the three personal qualities explored here, offers a good basis for further development both in terms of research and practice.

According to the level of economic educational capital and cultural educational capital invested in education (Ziegler, Balestrini, and Stoeger 2018), we anticipated that high performers would be perceived on a higher and more positive level from a national standpoint, particularly in Vietnam and South Korea, when compared to Australia, Scotland, Spain and Peru. Contrary to our expectations, Spanish students generated the highest positive views of high-performing students, with the lowest positive ratings produced by the South Korean students. Moreover, there are three points worthy of note in our study that allude to new information regarding international gender differences. First, when compared to their female counterparts, Vietnamese and South Korean male students consistently presented different

perceptions of high-achieving peers. Vietnamese girls in particular reported more positively than the Vietnamese boys with respect to their expectations of a high-achieving classmate; this was true across all dimensions. While the Vietnamese girls viewed the high achiever's social ability and popularity positively, Vietnamese boys revealed a slight agreement with the traits consistent of the high achievers. The findings may link to a higher achievement value associated with Vietnamese girls than with boys. Duong, Schwartz, and McCarty (2014) reported Vietnamese-American secondary students with high academic achievements were popular amongst their peers and were more likely to be friends with high-achieving students. The Vietnamese-American girls were more likely to have high-achieving friends than the boys. The results were distinct from those generated by South Korean male and female students who maintained a neutral disposition towards both a high performer's social qualities and level of popularity. These surprising results raise the question: why do only male and female South Korean students per our initial assessment, have a neutral estimation of high-performing students regarding social preference and social status? One plausible explanation relates to the ambivalent motivational component in peer perceptions; after all, Vietnamese and South Korean students find themselves both in a high level of cultural educational capital *and* in a low level of economic educational capital. A high-achieving student can be viewed as socially more desirable when he or she is surrounded by a majority of students that express their aspiration through surveillance of outstanding competitors. South Korean students, rather than Vietnamese students, may be more likely to *check* these elements of competition that dictate that it is beneficial to be viewed as 'the best'. Oh et al. (2014) showed that high-achieving secondary students in South Korea considered their top performing classmate's intellectual ability and popularity more positively when they were more likely to adopt a performance approach goal (focusing on demonstrating their school tasks relative to others). For high-achieving secondary students in Vietnam, their estimation of the hypothetical student's two personal qualities were consistently predicted by both the participants' learning goal orientation (focusing on master school tasks beyond an end state) and performance goal orientation (either performance approach goal or performance avoidance goal). Within a South Korean context, and given the effect of achievement motivation when forming an opinion about a high performer, static perceptions of the hypothetical student may constitute inappropriate episodic learning capital. This demands further exploration: could there be a motivational component in competence-relevant situations that is less likely to lead South Korean students to judge their academically high-performing peer's social preferences and social status favourably? In Vietnam, a high performer would be a role model so long as his or her academic peers intend to improve their academic performance. Furthermore, OECD (2016) technically defines academic resilient students as those in the top quarter in academic performance, but in the bottom quarter on a national economic, social and cultural index. Of the participating *resilient* students, 75.5% were Vietnamese, reflecting a remarkable ability for successful adjustment despite disparity (cf. Peru: 3.2%; Australia: 32.9%; United Kingdom: 35.4%; Spain: 39.2%; South Korea: 40.4%) (OECD 2016). Further studies should explore the relationship between Vietnamese students' academic resilience, achievement goal approach and the relevance of the nation's positive attitudes towards higher performing students.

Secondly, it was hypothesised that few differences would exist between the perceptions of academically high-performing male and female students. For Australian, Peruvian, Vietnamese and Spanish students, expectations surrounding high-performing male students did not differ significantly from those surrounding high-performing female students.

Differing, country and gender-specific perceptions regarding high performers were found only for the popularity metric. Scottish students agreed that high-performing male classmates were slightly more popular than high-performing female classmates. As highlighted in both the literature about transition (Zeedyk et al. 2003) and gender (Renold and Allan 2006; Ringrose 2007), social status and 'fitting in' are key issues for young people. Of the six participating countries, Scotland's responses relating to gender difference and high achievers are worthy of further discussion. Unlike the other five countries, they seem to indicate that the number of high-achieving males who were considered popular by their classmates was greater than the number of females. The previous study of Francis, Skelton, and Read (2012) would support this finding; however, it should be noted that the study consisted of eighth graders from England and may not be representative of Scottish students as the education system, surrounding legislation and curriculum differ (Bryce 2013). Applied more broadly across the countries that participate in the PISA study, these findings potentially explain why boys still tended to perform poorly when compared to girls in reading, mathematics and science, while high-achieving boys outperformed high-achieving girls in mathematics, science and problem solving (OECD 2016). An examination of the Scottish Qualification Authority results (Scottish Qualification Authority 2016) show a higher proportion of girls being recommended for the top national assessment award (45% male, 55% female), the Advanced Higher. A higher percentage of girls (85% vs. 78% boys) also gained grade band A–C in 2016. A closer inspection paints an even more nuanced picture: girls nominated for Advanced Highers were less likely to select mathematics (36% girls, 64% boys) as a subject for assessment; yet girls were more likely than boys to select chemistry (52% vs. 48%, respectively). Results for physics and biology show clear preferences, with 79% of boys undertaking physics compared to 21% of girls. A similar picture emerges for biology with 66% of girls and 34% of boys studying the subject. The Scottish results demonstrating that high-achieving boys were considered more popular gives rise to questions about the gender policy context in Scottish schools. Forbes and Weiner (2014, 173) contend that 'silences on gender in Scottish social and educational policy and political discourses produce specific effects on the discourses and understandings of gender that prevail in schools.' The policy context is further complicated by the conservative approach to equality – which includes gender – in the Westminster government affecting education policy in the Scottish government. Forbes, Öhrn, and Weiner (2011) argued that this gives rise to the gender-sensitive educational policy disappearing between the two administrations. A discourse analysis of the gender policy context could contribute to a fuller picture of why the results from Scotland appear to be at odds with the other five countries. Indeed, a discourse analysis of the gender policy from each of the participating countries might enrich our understanding of the current study.

Finally, this study did not indicate interaction effects for gender-specific perceptions generated by the students in our study or relating to the gender of the hypothetical high achiever, and this was consistent across the country group. Male student perceptions of male high achievers were not significantly different when compared to male student perceptions of female high achievers. In the same vein, female student perceptions of male high performers, and female student perceptions of female high performers were not significantly different. The research findings contribute to the ongoing *inclusivity* debate by demonstrating that high-achieving girls are not necessarily 'at risk' of negative social perception when they demonstrate academic abilities in secondary school.

Limitations and directions for future research

Although this research does add to the existing literature on cultural and gender differences relating to perceptions of high achievers, there are several limitations that need to be taken into consideration. The data in each country did not cover a given nation in its entirety; rather it reflected convenience samples in each country. Thus regional differences cannot be factored into the analysis. The socio-economic status of the students remains unknown, and so we did not consider any biases related to educational capital that could have influenced student attitudes around high ability, gender, popularity and subject choice (Francis 2009). In addition, student age and school grade or level reflect the different structures of each country's education systems, as well as age-related barriers of entry. The number of Australian participants is less than the sample size for the other five countries, but Australian students still contribute to the emerging global picture of how high achievers are perceived among their peers.

The internal consistency of the variables in terms of expected popularity of high achievers was acceptable, but low, illustrating another limitation to our study. Students have a distinct concept of popularity that emphasises social preference and distinguishes itself from social status (Babad 2001). -achieving students could be both highly liked and dominant in a country, but the same students could be perceived as attractive, but not dominant within peer groups and vice versa. The lower reliability of this variable could be ascribed to a mixed pattern of attributes. Future research should build on the reliability of the construct among the items based on ecological validity and in consideration of cultural contexts.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

- Alspaugh, J. W. 1998. "The Relationship of School-To-School Transitions and School Size to High School Dropout Rates." *The High School Journal* 81 (3): 154–160.
- Aronson, J. 2002. "Stereotype Threat: Contending and Coping with Unnerving Expectations." In *Improving Academic Achievement*, 279–301. San Diego, CA: Academic Press.
- Ashton, R. 2008. "Improving the Transfer to Secondary School: How Every Child's Voice Can Matter." *Support for Learning* 23 (4): 176–182. doi:10.1111/j.1467-9604.2008.00391.x.
- Babad, E. 2001. "On the Conception and Measurement of Popularity: More Facts and Some Straight Conclusions." *Social Psychology of Education* 5 (1): 3–29. doi:10.1023/A:1012780232587.
- Balestrini, D. P., and H. Stoeger. 2018. "Substantiating a Special Cultural Emphasis on Learning and Education in East Asia." *High Ability Studies* 5 (2): 1–28. doi:10.1080/13598139.2017.1423281.
- Benbow, C. P., and D. Lubinski. 1993. Psychological Profiles of the Mathematically Talented: Some Sex Differences and Evidence Supporting Their Biological Basis. In *The Origins and Development of High Ability*, 44–66. Ciba Foundation Symposium, 178. Oxford: John Wiley & Sons.
- Bryce, T. G. K., ed. 2013. *Scottish Education: Referendum*. 4th ed. Edinburgh: Edinburgh Univ. Press.
- Carrington, N. 2016. "I'm Gifted, Is that OK? The Social Rules of Being Gifted in Australia." *Gifted and Talented International* 11 (1): 12–16. doi:10.1080/15332276.1996.11672835.
- Coleman, L. J., and T. L. Cross. 2014. "Is Being Gifted a Social Handicap?" *Journal for the Education of the Gifted* 37 (1): 5–17. doi:10.1177/0162353214521486.

- Cotterell, J. L. 1992. "School Size as a Factor in Adolescents' Adjustment to the Transition to Secondary School." *The Journal of Early Adolescence* 12 (1): 28–45. doi:10.1177/0272431692012001002.
- Cross, T. L., L. J. Coleman, and M. Terhaar-Yonkers. 2014. "The Social Cognition of Gifted Adolescents in Schools." *Journal for the Education of the Gifted* 37 (1): 30–39. doi:10.1177/0162353214521492.
- Davidson, J. E., and R. J. Sternberg, eds. 2005. *Conceptions of Giftedness*. Cambridge: Cambridge University Press.
- Duong, M. T., D. Schwartz, and C. A. McCarty. 2014. "Do Peers Contribute to the Achievement Gap between Vietnamese-American and Mexican-American Adolescents?" *Social Development* 23 (1): 196–214. doi:10.1111/sode.12033.
- Eccles, J. S. 2011. "Understanding Educational and Occupational Choices." *Journal of Social Issues* 67 (3): 644–648. doi:10.1111/j.1540-4560.2011.01718.x.
- Eccles, J. S., A. Wigfield, C. Midgley, D. Reuman, D. M. Iver, and H. Feldlaufer. 1993. "Negative Effects of Traditional Middle Schools on Students' Motivation." *The Elementary School Journal* 93 (5): 553–574. doi:10.1086/461740.
- Ellison, G., and A. Swanson. 2010. "The Gender Gap in Secondary School Mathematics at High Achievement Levels: Evidence from the American Mathematics Competitions." *Journal of Economic Perspectives* 24 (2): 109–128. doi:10.1257/jep.24.2.109.
- Feather, N. T. 2008. "Effects of Observer's Own Status on Reactions to a High Achiever's Failure: Deservingness, Resentment, Schadenfreude, and Sympathy." *Australian Journal of Psychology* 60 (1): 31–43. doi:10.1080/00049530701458068.
- Fiedler, E. D., R. E. Lange, and S. Winebrenner. 1993. "In Search of Reality: Unraveling the Myths about Tracking, Ability Grouping, and the Gifted." *Roeper Review* 24 (3): 108–111. doi:10.1080/02783190209554142.
- Forbes, J., E. Öhrn, and G. Weiner. 2011. "Slippage And/Or Symbolism: Gender, Policy and Educational Governance in Scotland and Sweden." *Gender and Education* 23 (6): 761–776. doi:10.1080/09540253.2010.527830.
- Forbes, J., and G. Weiner. 2014. "Gender Power in Elite Schools: Methodological Insights from Researcher Reflexive Accounts." *Research Papers in Education* 29 (2): 172–192. doi:10.1080/02671522.2013.767369.
- Francis, B. 2009. "The Role of the Boffin as Abject Other in Gendered Performances of School Achievement." *The Sociological Review* 57 (4): 645–669. doi:10.1111/j.1467-954X.2009.01866.x.
- Francis, B., C. Skelton, and B. Read. 2012. *The Identities and Practices of High-Achieving Pupils: Negotiating Achievement and Peer Cultures*. New York: Continuum.
- Galton, M., J. Gray, and J. Rudduck. 1999. *The Impact of School Transitions and Transfers on Pupil Progress and Attainment*. Research report no RR 131. <https://www.cumbria.gov.uk/elibrary/Content/Internet/537/40696142117.pdf>
- Händel, M., X. Duan, M. Sutherland, and A. Ziegler. 2014. "Successful in Science Education and Still Popular: A Pattern that Is Possible in China Rather than in Germany or Russia." *International Journal of Science Education* 36 (6): 887–907. doi:10.1080/09500693.2013.830232.
- Händel, M., W. Vialle, and A. Ziegler. 2013. "Student Perceptions of High-Achieving Classmates." *High Ability Studies* 24 (2): 99–114. doi:10.1080/13598139.2013.843139.
- Harrington, L., and J. H. Liu. 2016. "Self-Enhancement and Attitudes toward High Achievers." *Journal of Cross-Cultural Psychology* 33 (1): 37–55. doi:10.1177/0022022102033001003.
- Hsin, A., and Y. Xie. 2014. "Explaining Asian Americans' Academic Advantage over Whites." *Proceedings of the National Academy of Sciences of the United States of America* 111 (23): 8416–8421. doi:10.1073/pnas.1406402111.
- Jung, J. Y., K. Barnett, M. U. M. Gross, and J. McCormick. 2011. "Levels of Intellectual Giftedness, Culture, and the Forced-Choice Dilemma." *Roeper Review* 33 (3): 182–197. doi:10.1080/02783193.2011.580501.
- Jung, J. Y., J. McCormick, and M. U. M. Gross. 2012. "The Forced Choice Dilemma." *Gifted Child Quarterly* 56 (1): 15–24. doi:10.1177/0016986211429169.
- Kao, C.-Y. 2015. "Mathematically Gifted Adolescent Females' Mixed Sentiment toward Gender Stereotypes." *Social Psychology of Education* 18 (1): 17–35. doi:10.1007/s11218-014-9278-2.

- Kim, U., and Y. Park. 2006. "Indigenous Psychological Analysis of Academic Achievement in Korea: The Influence of Self-Efficacy, Parents, and Culture." *International Journal of Psychology* 41 (4): 287–291. doi:10.1080/00207590544000068.
- Klein, A. G., and D. Zehms. 1996. "Self-Concept and Gifted Girls: A Cross Sectional Study of Intellectually Gifted Females in Grades 3, 5, 8." *Roeper Review* 19 (1): 30–34. doi:10.1080/02783199609553780.
- Manaster, G. J., J. C. Chan, C. Watt, and J. Wiehe. 1994. "Gifted Adolescents' Attitudes toward Their Giftedness: A Partial Replication." *Gifted Child Quarterly* 38 (4): 176–178. doi:10.1177/001698629403800404.
- McGee, C. 2004. *Transition to Secondary School: A Literature Review*. Hamilton, NZ: University of Waikato.
- Mizokawa, D. T., and D. B. Ryckman. 1990. "Attributions of Academic Success and Failure." *Journal of Cross-Cultural Psychology* 21 (4): 434–451. doi:10.1177/0022022190214003.
- OECD. 2013. *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*. Paris: OECD Publishing. doi:10.1787/9789264201156-en.
- OECD. 2015. *The ABC of Gender Equality in Education. Aptitude, Behaviour, Confidence*. Paris: OECD Publishing. doi:10.1787/9789264229945-en.
- OECD. 2016. *PISA 2015 Results (Volume I): Excellence and Equity in Education*. Paris: PISA, OECD Publishing. doi:10.1787/9789264266490-en.
- Oh, H., M. Sutherland, N. Stack, M. D. M. Badia, S. Blumen, A.-T. Quoc, and A. Ziegler. 2014. "A Cross-National Comparison of School Students' Perceptions regarding High Performing Peers." *Turkish Journal of Giftedness and Education* 4 (1): 1–13.
- Persson, R. S. 2010. "Experiences of Intellectually Gifted Students in an Egalitarian and Inclusive Educational System: A Survey Study." *Journal for the Education of the Gifted* 33 (4): 536–569. doi:10.1177/016235321003300405.
- Peterson, J. S. 2009. "Myth 17: Gifted and Talented Individuals Do Not Have Unique Social and Emotional Needs." *Gifted Child Quarterly* 53 (4): 280–282. doi:10.1177/0016986209346946.
- Phillipson, S. N., H. Stoeger, and A. Ziegler, eds. 2013. *Exceptionality in East Asia: Explorations in the Actiotope Model of Giftedness*. London: Routledge.
- Piechowski, M. M. 1997. "Emotional Giftedness: The Measure of Intrapersonal Intelligence." In *Handbook of Gifted Education*, edited by N. Colangelo and G. A. Davis, 366–381. Needham Heights: Allyn and Bacon.
- Pratt, S., and R. George. 2005. "Transferring Friendship: Girls' and Boys' Friendships in the Transition from Primary to Secondary School." *Children & Society* 19 (1): 16–26. doi:10.1002/chi.830.
- Reis, S. M., and D. B. McCoach. 2016. "The Underachievement of Gifted Students: What Do We Know and Where Do We Go?" *Gifted Child Quarterly* 44 (3): 152–170. doi:10.1177/001698620004400302.
- Renold, E., and A. Allan. 2006. "Bright and Beautiful: High Achieving Girls, Ambivalent Femininities, and the Feminization of Success in the Primary School." *Discourse: Studies in the Cultural Politics of Education* 27 (4): 457–473. doi:10.1080/01596300600988606.
- Ringrose, J. 2007. "Successful Girls? Complicating Post-Feminist, Neoliberal Discourses of Educational Achievement and Gender Equality." *Gender and Education* 19 (4): 471–489. doi:10.1080/09540250701442666.
- Rinn, A. N., M. J. Reynolds, and K. S. McQueen. 2011. "Perceived Social Support and the Self-Concepts of Gifted Adolescents." *Journal for the Education of the Gifted* 34 (3): 367–396. doi:10.1177/016235321103400302.
- Scottish Qualification Authority. 2016. "Annual Statistical Report: National Qualifications Advanced Higher." Accessed 26 June 2018. <http://www.sqa.org.uk/sqa/64717.html>
- Strand, S., I. J. Deary, and P. Smith. 2006. "Sex Differences in Cognitive Abilities Test Scores: A UK National Picture." *The British Journal of Educational Psychology* 76 (3): 463–480. doi:10.1348/000709905X50906.
- Sutherland, M., and N. Stack. 2014. "Ability as an Additional Support Need: Scotland's Inclusive Approach to Gifted Education." *Center for Educational Policy Studies Journal* 4 (3): 73–87.
- Tobbell, J. 2003. "Students' Experiences of the Transition from Primary to Secondary School." *Educational and Child Psychology* 20 (4): 4–14.

- Vialle, W. 2017. "Supporting Giftedness in Families: A Resources Perspective." *Journal for the Education of the Gifted* 40 (4): 372–393. doi:10.1177/0162353217734375.
- Vladut, A., Q. Liu, M. Z. Leana-Taşçılar, W. Vialle, and A. Ziegler. 2013. "A Cross-Cultural Validation Study of the Questionnaire of Educational and Learning Capital (QELC) in China, Germany and Turkey." *Psychological Test and Assessment Modeling* 55 (4): 462–478.
- Watt, H. M. G. 2004. "Development of Adolescents' Self-Perceptions, Values, and Task Perceptions according to Gender and Domain in 7th- through 11th-Grade Australian Students." *Child Development* 75 (5): 1556–1574. doi:10.1111/j.1467-8624.2004.00757.x.
- West, P., H. Sweeting, and R. Young. 2009. "Transition Matters: Pupils' Experiences of the Primary–Secondary School Transition in the West of Scotland and Consequences for Well-Being and Attainment." *Research Papers in Education* 25 (1): 21–50. doi:10.1080/02671520802308677.
- Young, D. J., and B. J. Fraser. 1993. "Socioeconomic and Gender Effects on Science Achievement: An Australian Perspective." *School Effectiveness and School Improvement* 4 (4): 265–289. doi:10.1080/0924345930040403.
- Zeedyk, M. S., J. Gallacher, M. Henderson, G. Hope, B. Husband, and K. Lindsay. 2003. "Negotiating the Transition from Primary to Secondary School." *School Psychology International* 24 (1): 67–79. doi:10.1177/0143034303024001010.
- Ziegler, A., and J. Baker. 2013. "Talent Development as Adaptation: The Role of Educational and Learning Capital." In *Exceptionality in East Asia: Explorations in the Actiotope Model of Giftedness*, edited by S. Phillipson, H. Stoeger, and A. Ziegler, 18–39. London: Routledge.
- Ziegler, A., D. P. Balestrini, and H. Stoeger. 2018. "An International View on Gifted Education: Incorporating the Macro-Systemic Perspective." In *Handbook of Giftedness in Children: Psychoeducational Theory, Research, and Best Practices*, edited by S. I. Pfeiffer, 15–28. Cham: Springer International Publishing.
- Ziegler, A., and H. Stoeger. 2017. "Systemic Gifted Education: A Theoretical Introduction." *Gifted Child Quarterly* 61 (3): 183–193. doi:10.1177/0016986217705713.

Appendix

Questions about the New Hypothetical High-Performing Male and Female Students

I would expect that the new classmate, who I only knew was the best in her (his) previous school that she (he),

- ... is very intelligent.
- ... likes learning more than friends.
- ... is carefree and cool.
- ... is nice.
- ... has a sense of humour.
- ... shares interests with other students.
- ... communicates well.
- ... doesn't care if she (he) has friends.
- ... likes to please teachers.
- ... will be popular in the class.
- ... can think well.
- ... has many good ideas.
- ... is selfish.
- ... can remember things well.