

Respected Students Equal Better Students: Investigating the Links between Respect and Performance in Schools

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Abstract

This study examines the relationship between students' (N = 334) perceived teacher respect and their performance on a math exam in school settings. The incremental validity of respect on performance beyond that accounted for by intelligence is assessed. Results suggest that respect accounts for significant additional variability in students' performance above that accounted for by intelligence. Further analyses reveal that the relationship between respect and performance is moderated by immigration. For German students (N = 150), perceived respect accounts for a part of the variability in performance over the variability accounted for by intelligence. For students with an immigrant background (N = 181) this relationship is not significant. Cultural implications of respect in school settings are discussed.

Keywords: respect, performance, intelligence, immigration, school

1. Introduction

Respect is likely one of the most powerful and complicated concepts involved in governing human's relations to others and themselves. It affects aspects of politics, society, and our personal life and it influences the way in which we interact, our feelings of justness and belonging. There is a growing body of research on respect, however, a generally agreeable conceptual accounting of respect remains elusive. Integrating research findings on respect is, therefore, difficult because researchers have conceptualized respect in many different ways. Respect has been looked at as an attitude or a behavior, as a moral quality, and as an indicator for justness, while other times it is confused with acceptance, tolerance, or even fear. To do justice to the complexity of the term respect, researchers began to treat it not as a single variable, but as potentially differentiated types of respect. Darwall (1977), for example, introduced the concepts of appraisal respect and recognition respect, that several researchers investigated. According to him appraisal respect is an attitude of positive appraisal for a person "either as a person or as engaged in some particular pursuit" (p. 38). The reasons why a person deserves appraisal respect can mostly be attributed to a person's character. Recognition respect is different in that it entails giving "appropriate consideration or recognition to some feature of its object in deliberating about what to do" (p. 38). Every person is entitled to this kind of respect; however, there may be disagreement as to what is appropriate. People will, for example, think differently about what behaviors or attitudes are appropriate for students to display toward a particular teacher. Van Quaquebeke, Henrich and Eckloff (2007), built on this distinction between recognition and appraisal respect by introducing the concepts of horizontal and vertical respect. Vertical respect acknowledges people's achievements and their work, and further focuses on the often hierarchical relationship between the person providing and the person receiving respect. It is, thus, very similar to Darwall's appraisal respect. Conversely, horizontal respect legitimizes and values another person as an equal. The focus lies here on being on the same level with someone and seeing eye-to-eye. Horizontal respect is, therefore, different from recognition respect as rank or status is absent in the prior. Darwall refers to this horizontal respect as "moral recognition respect". It is this kind of respect that this research focuses on and that Dillon describes as "not something individuals have to earn or might fail to earn, but something they are owed simply because they are rational beings." (Dillon, 2007, p. 208).

1.1 Respect in the Present Study

The way in which respect is defined throughout this research work relies heavily on Van Quaquebeke and Eckloff (2010). Inspired by Dillon's work (2007) they define respect as "a person's attitude towards other people, in whom he/she sees a reason that, in itself, justifies a degree of attention and a type of behavior that in return engenders in the target a feeling of being appreciated in importance and worth as a person" (p. 344). In the following, they point to three important facets of the concept respect.

- (1) A person who respects another, considers the other person in the sense of seeing the other's significance and value, and understanding the other in his/her frame of reference.
- (2) A person who respects another, sees a motive in the other person that justifies the respect in itself.
- (3) A person who respects another, acts in a way that makes the other person feel that his/her value has been acknowledged. This feeling results from resonating with the person offering the respect.

Respecting someone, thus, entails seeing the worth and value of another person, acknowledging it, and also communicating it.

1.2 Workings of Respect

Despite the diverging definitions, horizontal respect or aspects of it can be found throughout several research works dealing with respect (e.g. Lind & Tyler, 1988; Simon & Stürmer, 2003). These works show that respect has a fundamental effect on humans and their relations to others and themselves. The literature on procedural justice, for example, regards (horizontal) respect as an indicator of fair treatment and comes to the conclusion that perceiving to be treated fairly influences people's health. For example, Elovainio et al. (2005) showed that fair and respectful treatment had a positive influence on employee's sickness-related absences from work. Additionally, Greenberg (2006) found that nurses whose supervisors had received training for behaving in a fair and respectful manner, suffered from fewer sleeping problems. Respect is further related to more psychological variables like people's self-esteem (Tyler, DeGoey, & Smith, 1996), their well-being in general (Huo & Binning, 2008) and Erez et al. (2009) noted positive outcomes (e.g. feeling appreciated and valued) for people scoring high on attachment anxiety. In work and business settings respect has shown to have an impact on employee's identification with their leaders as well as organizational commitment (Eckloff & Van Quaquebeke, 2008; Van Quaquebeke & Eckloff, 2010). Additionally, respect has a positive influence on work satisfaction and employees rate it as one of the most important values at work (Van Quaquebeke, Zenker, & Eckloff, 2009; Zenker & Van Quaquebeke, 2006). In research on recognition respect in group settings respect has been operationalized as the way in which people and their input into group-work are perceived to be evaluated by the group or an authority or peer. Consequently, respect carries information about one's status and standing in a group, and messages about whether one is a valued group member. It further serves as a sign of having an equal standing in the group (Simon, Lücken, & Stürmer, 2006). Likewise, it can be an indicator of inclusion (Huo & Binning, 2008). Respect, thus, fulfills two core human needs: the need for a positive social reputation and the need to belong (De Cremer & Mulder, 2007; Huo & Binning, 2008). This leads to respect being an important ingredient for the cohesion of groups as it increases collective identification and the willingness to engage in group-serving behavior (Simon & Stürmer, 2003). Tyler, DeGoey, and Smith (1996) showed that respect (and pride) mediate between relational judgments of group authorities and commitment to the group, extra-role behavior directed at groups, and compliance to group rules. However, not only the presence of respect can affect humans and their interactions but also its absence. Disrespect can lead to disengagement from the group and the desire to leave the group (Sleeboos, Ellemers, & De Gilder, 2006). Anderson (1994) argues that disrespect among at-risk youths can lead to violent behavior and retaliatory acts. (Although some of the different cultural implications of respect become apparent in Anderson's work, the ways in which respect works e.g. as a sign of status and regard stay the same.) Additionally, Leary, Brennan and Briggs (2005) who developed the "African American Respect Scale" found negative correlations between high scores on their scale and violent behavior.

1.3 Respect in Schools

As all these research findings suggest, the ways in which respect influences us are manifold. In schools, respect for the teacher, respect from the teacher, and the teaching of respect itself also seem to be important factors for learning. Again, the two types of respect become apparent: In interviews about respect in the classroom, students reported that they were more willing to learn and to show commitment in class when they respected (in a sense of vertical respect) their teachers (Meyer, 2008). Deutsch and Jones (2008) further found that (horizontal) respect moderates youths' perceptions of and relations to authority. They state that students are more willing to comply

with authorities when they feel respected, and their reactions to authority, as suggested by the researchers, may influence their engagement in class. Similarly, Skinner and Belmont (1993) show that teacher behavior and student engagement are related and mutually influence each other. Respect, thus, is an important factor for students' compliance with teachers, paying attention to what teachers have to say, and being motivated to learn. So if horizontal respect indeed has an impact on students' engagement in classrooms, we hypothesize that it may also positively influence their grades as stronger engagement in class should result in an enhanced performance.

Hypothesis 1: *There is a linear relationship between respect and performance such that more perceived teacher respect is related to increased student performance.*

While the relationship between respect and performance has to our knowledge not been researched yet, much research has been done on performance as it relates to a variety of other factors. Di Fabio and Busoni (2007), for example, showed that personality influences students' GPA (Grade Point Average) at the end of the academic year. Moreover, as demonstrated by Steinberg, Lamborn, Dornbusch and Darling (1992), parental involvement in school (e.g. parents helping with their children's course selection, monitoring their progress or attending school programs) has an impact on students' performance in high school. Steinberg et al. (1992) further report that a "warm, firm and democratic" (p. 1278) parenting style was associated with improvement in school grades and school engagement over a 1-year period. Steinmayr and Spinath (2009) found that students' motivation contributes to their performance. Among the most influential variables in their research were ability self-concepts and values, as well as learning goals and need for achievement. Additionally, socioeconomic status (SES) affects students' achievement. Gregory and Weinstein (2004) report that "beyond considerations of race and gender, the wealthier students (1 standard deviation above the mean SES) gained close to an extra year of progress as compared to the poorer students (1 standard deviation below the mean SES)" (p. 415).

Throughout the literature on school performance, however, there seems to be one very prominent finding: intelligence repeatedly emerges as an influencing factor. Hence, most of the studies on performance control for it (e.g. Chamorro-Premuzic & Furnham, 2008; Deary, Strand, Smith, & Fernandes, 2007; Di Fabio & Busoni, 2007; Hamre & Pianta, 2001; Steinmayr & Spinath, 2009). Many use intelligence as a base factor and establish the incremental validity of other factors above and beyond the variability accounted for by intelligence (Chamorro-Premuzic & Furnham, 2008; Di Fabio & Busoni, 2007; Steinmayr & Spinath, 2009). Di Fabio and Busoni (2007), for example, who tested 286 students in their last two years of high school, found that intelligence accounted for 4% of the variance in performance (using GPA as a performance index). After adding the personality factors extraversion, agreeableness, conscientiousness, emotional stability, and openness the model accounted for an additional 10% of the variance. In their fifth year sub-sample (N = 99), the researchers found that intelligence explained 13% of the variance in performance. After adding the five personality factors the model accounted for an additional 20% of the variance. Furnham and Mosen (2009) report that intelligence accounted for 18% of the variance in students' grades in math. The Big Five personality factors added an incremental validity of 9%. Given the informational content of this procedure, the aim of this study then is to investigate the incremental validity of students' performance in class that perceived respect can account for above base measures of intelligence.

Hypothesis 2: *Respect can account for a part of the variability in students' performance above and beyond the variability accounted for by intelligence.*

In Hamburg, Germany where this study was conducted 40% of adolescents have an immigrant background (Konsortium Bildungsberichterstattung, 2006). It is well established that immigrated students and their German peers do not have equal opportunities in the educational system (Gogolin & Krüger-Potratz, 2006). Further, the literature on respect reveals a cultural variability of the term respect and shows that it has an eminent importance for some minority groups, as for example African Americans, but not for others (e.g. Anderson, 1994). Apart from that, Deutsch and Jones (2008) point out that "the macrosystem of race/ethnicity influences respect" (p. 671) and that "for some minority and low-income youth, respect is of paramount importance" (p. 686). An additional concern of this study, thus, is to explore the experience of respect and its relationship to performance in the cultural minority population of immigrants in German classrooms. Specifically, we would like to explore whether immigration moderates the relationship between respect and performance. While we assume that respect plays an important role for all students (cf. Hypothesis 1), we hypothesize that the influence of respect may be even greater for immigrated students.

Hypothesis 3: *The relationship between respect and performance is moderated by immigrant status, such that the relationship is stronger for immigrated students.*

2. Method

In order to investigate the relationship between respect and performance, we look at eighth graders' perceived respect from math teachers and their performance in math in a variety of German secondary schools. Students' intelligence is controlled. We, further, examine whether immigration serves as a moderator for the relationship between respect and performance.

2.1 Research Site

The research was performed in three different scholastic contexts. In Germany, after the completion of four years of primary school, students usually attend one of the three following school types: "Gymnasium" prepares for an entry into university and in the following will be called university-track school. "Realschule" is a high school that focuses on an advanced general education and in the following will be called general level school. "Hauptschule" is a school that concentrates on a basic general education and will be referred to as basic secondary school (for more information on the German school system see e.g. Werning, Löser, & Urban, 2008). We included all three school types in the study to control for effects that may be attributed to the different learning concepts of the schools or the different student populations attending these schools. Further, only eighth graders were included in the study because when this study was executed they had not been part of one of the other big school studies, e.g. PISA, KESS, TIMMS or LAU. This was important to prevent re-test effects as we used parts of the same intelligence measure (see below) applied in some of these studies.

2.2 Social Index

High socioeconomic status tends to be associated with higher academic achievement (Drechsel & Carstensen, 2005; Gregory & Weinstein, 2004). This is why it was controlled for by only including social index 3 schools in this study. The social indices were established in a Hamburg-wide school study called KESS where students' social situation was analyzed (among other factors) by questioning students and their parents. Items targeted the economical situation of the parents, their nationality, educational background, cultural activities with their children (e.g. visits to theatres, museums), as well as involvement and interest in their children's (social) activities. The social index ranges from 1 (very disadvantaged social situation) to 6 (advantaged social situation). Social index 3 is used because the majority of the schools in Hamburg are social index 3 schools (followed by social index 2 and then 4). Thus, the participating student population is slightly socially disadvantaged.

2.3 Participants

334 eighth graders from 9 different schools participated in this study. 40.4% attended a university-track school, 32.6% a general level school, and 26.9% a basic secondary school. The mean age of the participating students was 13.7 years ($SD = .72$) at the time of testing. 48.5% of the students are girls, 50.3% boys, 1.2% failed to indicate their gender. 44.9% of the students are German, 54.2% are students with an immigrant background, 0.9% did not indicate their nationality.

Immigration Status. Students' immigration status is captured using information about their nationality as well as the language they speak at home. As Gogolin and Krüger-Potratz (2006) point out, it is not sufficient to only use nationality as a source when trying to determine people's immigration status. In the PISA 2000 study, for example, immigrant status was assessed using parents' place of birth and the language spoken at home. Hence, students in this study who speak a language other than German at home were counted toward the immigrant sample even if their nationality is German.

2.4 Instruments

2.4.1 Perceived Respect

Perceived Respect was measured using a 4-point Likert scale that is theoretically informed by Dillon's (2007) and Simon and Stürmer's (2003) work on respect. For this study it was adapted to fit a school context. The scale ($\alpha = .83$) consists of six items measuring the extent to which students feel that teachers behave respectfully toward them (see Table 1). Higher scores correspond to higher perceived respect.

Table 1. English (German) items and psychometric properties of the “perceived respect” scale

	Factor loading [after rotation]	Item M	Item SD	Cronbach's alpha without item
1. My math teacher accepts me the way I am. (Meine Mathelehrkraft erkennt mich so an wie ich bin.)	.80	3.27	.82	.79
2. My math teacher takes me as a fully fledged person. (Meine Mathelehrkraft nimmt mich für voll.)	.78	3.07	.85	.80
3. My math teacher thinks that it is good that I'm there. (Meine Mathelehrkraft findet es gut, dass ich da bin.)	.76	3.06	.85	.80
4. My math teacher disregards me as a person. [reverse coded] (Meine Mathelehrkraft missachtet mich als Person.)	.48	3.38	.89	.86
5. My math teacher takes me seriously. (Meine Mathelehrkraft nimmt mich ernst.)	.81	3.11	.85	.79
6. My math teacher thinks I'm ok. (Meine Mathelehrkraft findet mich in Ordnung.)	.79	3.19	.80	.79

Note. Items were measured on a Likert scale from 1 (I disagree) to 4 (I agree). A PCA [with (and without) Varimax rotation] revealed a one factor solution. 55.72% of the variance was explained by the unrotated factor solution. [N = 334]

According to Hypothesis 1, we expect a linear relationship between respect and performance such that more perceived teacher respect is related to increased student performance in math. Since these are correlational data, it is possible that students do not perform better because they feel respected but that teachers respect students more when they show a good performance. That is why we asked students also whether they thought that their math teacher respected weaker students as well. If they indicated that teachers do respect weaker students ($M > 3$ on the 4-point Likert scale ranging from 1 (I disagree) to 4 (I agree)), we can see this as support of our assumption that the alternative explanation (teachers respect students who show good performances) appears to be less plausible.

2.4.2 Intelligence

The standardized short form of the Kognitiver Fähigkeits-Test (KFT 4-13+) for eighth graders (Heller, Gaedike, & Weinläder, 1985) was used as a measure of intelligence. The KFT is the German adaptation of Thorndike's Cognitive Abilities Test. It consists of three subscales measuring verbal, numerical, and nonverbal skills. Only the nonverbal scale was used in this study. This is due to the fact that it requires the least school-based knowledge (Rindermann, 2006) and, therefore, avoids differences in students' scores based on different topics covered in class. The KFT has persistently shown good measuring qualities and its nonverbal scale has individually been used in several school studies like, for example, PISA 2003 (PISA Konsortium Deutschland, 2006). It, further, provides a table with standardized T-scores so that a comparison between the three different school types is possible.

2.4.3 Performance

Students' scores (percentage of correct answers out of the total) on the first math test of the school year were used as performance indicators. We refrained from using students' grades because of teachers' variability in grading. Further, we decided to use math scores because they seem to be among the most objective scores in school. Assessing the percentage of correct answers on a math exam is, for example, far less error-prone than assessing that of a book discussion in German or English. As the percentage of correct answers out of the total on the first math test of the school year was used as performance score, no reliability measure (i.e. Cronbach's alpha) can be reported.

2.5 Procedure

All of the 37 social index 3 schools in Hamburg, Germany were asked for their consent to participate in the study. 9 schools agreed and 17 classes participated in the study, yielding a total sample of 334 students. Students were tested in groups organized by class. Instructions on responding to survey and KFT questions were given verbally and in writing. To begin, all students were administered a questionnaire containing the scales measuring perceived respect among other variables for use in unrelated research, a demographic information sheet, and a consent form (filled out by parents beforehand for students under the age of 14), which took 20 minutes. Next, they started to work on the nonverbal part of the KFT which is timed and takes 18 minutes. Two comparable versions of the KFT (Version A and Version B) were handed out to keep students from copying their neighbor's results. Prior to filling out the questionnaire and KFT, students were informed that their answers would be kept completely confidential. All questionnaires were coded and if students had given their consent, teachers transmitted their math test results directly after the first math test was administered.

3. Results

Table 2 shows means, standard deviations, and correlations for respect, performance, and intelligence, as well as the reliability (Cronbach's alpha) of the respect scale.

Table 2. Means, standard deviations, inter-correlations, and internal consistency (Cronbach's alpha in brackets)

	<i>M</i>	<i>SD</i>	1.	2.	3.
1. Perceived Respect	3.18	.62	(.83)	n.a.	n.a.
2. Performance	60.48	22.21	.19**	n.a.	n.a.
3. Intelligence	47.14	10.75	.15**	.29**	n.a.

Note. N = 334; n.a. = not applicable, ** $p < .01$

3.1 The Relationship between Respect and Performance (Hypothesis 1)

There is a significant relationship between respect and performance ($r = .19$) across the whole sample. In accordance with Hypothesis 1, students who perceive to be more respected by their teachers, show a better performance in math. Since these are correlational data, it is possible that students do not perform better because they feel respected but that teachers respect students more when they show a good performance. That is why we asked students whether they thought that their math teacher respected weaker students as well. Across the whole sample the mean was 3.03 (out of the 4-point Likert scale ranging from 1 (I disagree) to 4 (I agree)) indicating that teachers did indeed respect weaker students. Thus, our directional proposition is more plausible than the alternative explanation.

3.2 Incremental Validity (Hypothesis 2)

In order to test the second hypothesis, we used hierarchical regression analysis to establish the incremental validity of students' performance that respect accounts for above and beyond the variability accounted for by intelligence. Intelligence was entered first, followed by respect (Table 3). The regression model is significant on both stages.

Table 3. Hierarchical regression of intelligence and perceived respect

	<i>b</i>	SE <i>b</i>	β (beta)	<i>t</i>	<i>P</i>
Step 1					
Intelligence (KFT)	0.60	0.11	.29	5.57	.000
Step 2					
Intelligence (KFT)	0.56	0.11	.27	5.13	.000
Perceived Respect	5.35	1.87	.15	2.86	.005

Note. $R^2 = .09$ for Step 1; $\Delta R^2 = .02$ for Step 2 ($p < .01$).

Intelligence serves as a predictor for performance such that students with higher intelligence achieve better results on their math tests. In accordance with our hypothesis, on stage 2, respect also serves as a predictor, contributing to a significant change in R^2 . Thus, holding intelligence scores constant students who feel more respected by their teachers show better results on their math tests. Intelligence accounts for 9% of the variability in performance, respect accounts for an additional 2%.

3.3 Immigration as a Moderator (Hypothesis 3)

Testing our third hypothesis, we found that the relationship between respect and performance is indeed moderated by immigration ($\beta = -.17$; $t(327) = -3.15$, $p = .002$; predictors were z-standardized prior to analysis, cf. Aiken & West, 1991). However, the moderation effect is opposite to what we had expected. As shown in Figure 1, we found a relationship between perceived respect and performance for Germans but we did not find this relationship for students with an immigrant background.

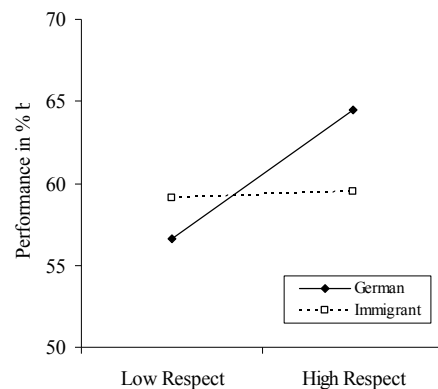


Figure 1. Immigration moderates the relationship between respect and performance

To analyze the two subgroups more closely, we thus divided the sample into Germans ($N = 150$) and students with an immigrant background ($N = 181$). Tables 4 (immigrants) and 5 (Germans) show means, standard deviations, and correlations for respect, performance, and intelligence as well as the reliability for the respect scale.

Table 4. Means, standard deviations, inter-correlations, and internal consistency (Cronbach's alpha in brackets) for students with immigrant background

	<i>M</i>	<i>SD</i>	1.	2.	3.
1. Perceived Respect	3.20	.60	(.88)	n.a.	n.a.
2. Performance	59.41	21.41	.02	n.a.	n.a.
3. Intelligence	45.42	10.37	.09	.19*	n.a.

Note. $N = 181$; n.a. = not applicable, * $p < .05$

Table 5. Means, standard deviations, inter-correlations, and internal consistency (Cronbach's alpha in brackets) for German students

	<i>M</i>	<i>SD</i>	1.	2.	3.
1. Perceived Respect	3.15	.66	(.79)	n.a.	n.a.
2. Performance	61.57	23.24	.37**	n.a.	n.a.
3. Intelligence	49.31	10.92	.24**	.41**	n.a.

Note. $N = 150$; n.a. = not applicable; ** $p < .01$

In the following, hierarchical regression analyses were performed for the two samples respectively. Again, intelligence was entered on the first stage, respect on the second stage. For students with immigrant background (Table 6), respect does not serve as a predictor. Intelligence explains 4% of the variance in performance but adding respect could not contribute to a change in R^2 .

Table 6. Hierarchical regression of intelligence and perceived respect on performance for students with immigrant background

	b	SE b	β (beta)	t	P
Step 1					
Intelligence (KFT)	0.39	0.15	.19	2.54	.012
Step 2					
Intelligence (KFT)	0.38	0.15	.19	2.52	.013
Perceived Respect	0.23	2.66	.01	.09	.932

Note. N = 181. $R^2 = .04$ for Step 1; $\Delta R^2 = .00$ for Step 2 ($p = .93$).

However, for German students (Table 7) the analysis shows that respect serves as a highly significant predictor, accounting for a significant portion of the variability of performance above and beyond that accounted for by intelligence. Intelligence in the German sample explains 17% of the variance in performance, respect accounts for an additional 8%.

Table 7. Hierarchical regression of intelligence and perceived respect on performance for German students

	b	SE b	β (beta)	t	P
Step 1					
Intelligence (KFT)	0.86	0.16	.41	5.41	.000
Step 2					
Intelligence (KFT)	0.72	0.16	.34	4.58	.000
Perceived Respect	10.01	2.60	.29	3.87	.000

Note. N=150. $R^2 = .17$ for Step 1; $\Delta R^2 = .08$ for Step 2 ($p < .001$).

3.4 Comparing the Levels of Perceived Respect, Performance, and Intelligence

3.4.1 Respect

Comparing the levels of perceived respect we found that German and immigrant students do not differ in their level of perceived respect. Neither do students from the three different school types. Boys ($M = 3.11$, $SD = .66$) and girls ($M = 3.26$, $SD = .58$) show differences in their perceived respect ($t(328) = 2.23$, $p = .03$) such that girls feel slightly more respected than boys.

3.4.2 Performance

For performance, neither boys and girls, nor immigrant students and German students show differences in their performance. A one-way ANOVA revealed that students of the three school types differ in their levels of performance ($F(2,332) = 13.40$, $p < .001$). The individual comparisons were assessed using contrasts. Students from basic secondary schools show lower performances than those of both, general level ($T = -4.01$, $df = 331$, $p < .001$) and university-track schools ($T = -4.98$, $df = 331$, $p < .001$). Students from general level schools and university-track schools do not differ in their performance.

3.4.3 Intelligence

Boys and girls do not show differences on the KFT intelligence test. German students ($M = 49.32$, $SD = 10.92$) and students with an immigrant background ($M = 45.42$, $SD = 10.37$) show differences in their intelligence scores ($t(329) = 3.31$, $p = .001$) such that German students score higher. A one-way ANOVA further revealed differences between the students of the three school types ($F(2,331) = 4.64$, $p = .01$). Again the individual differences were assessed using contrasts. General level school students reach lower KFT scores than university-track school students ($T = -3.03$, $df = 331$, $p = .003$). The comparisons between basic secondary schools and general level schools, as well as those between basic secondary schools and university-track schools are insignificant.

4. Discussion

Students' performance in schools is a marker—whether reasonable or not—for employers, teachers, parents, and students themselves of their fitness to prevail on the job market and become successful individuals. In particular, bad performance in school can lead to potentially career-limiting choices such as switching to a lower-level school or even dropping out. Among other factors it can, hence, be essential to figure out ways to promote students' performance. This study shows that there is a linear relationship between respect and performance. Students who feel more respected by their teachers show a higher performance on their math exam. Since these findings are correlational it is not possible to test causality. However, students' indication that their teachers behave respectfully toward all students (regardless of their performance) renders the assumption plausible that respect indeed leads to an enhanced performance. Further, this study shows that respect accounts for a significant portion of the variance in performance above and beyond that accounted for by intelligence. When evaluating the significance of the incremental gains it is valuable to consider an article by Schmidt and Hunter (1998). They suggest, and we are tempted to agree, that even small increments can translate into substantial practical gains. The incremental validity that respect adds for German students is especially remarkable when compared to the incremental validities reported in other studies reviewed above. Furnham and Monsen (2009) found that intelligence accounted for 18% of the variance in students' math grades. This is very similar to our finding of 17%. They then report that the Big Five personality factors could account for an additional 9% in the variance of performance. In this study, respect alone accounts for an additional 8% of the variance. Di Fabio and Busoni (2007) find, with between 10% (for their total sample) and 20% (for a sub-group), an incremental validity of personality factors that is reasonably higher. However, their most significant predictor is conscientiousness which they associate with a student's organization, attentiveness and diligence—factors that should have a direct influence on the intensity a student engages in his or her study material. In this regard, the 8% incremental validity added by respect seems even more striking.

4.1 Cultural Implications of the Findings

Notwithstanding the intriguing association of respect and performance for German students, this relationship seems not to hold true for students with an immigrant background. While, in accordance with the third hypothesis, immigration indeed moderates the relationship between respect and performance, the direction of the moderation turns out to be opposite to what we had expected. Post hoc, we can think of two possible explanations for this finding. The first explanation is that we are dealing with a methodological artifact. During data collection it became apparent that some of the students spoke only basic German. Since we did not control how fluid students were in German, it is possible that not all of them understood the items on the respect scale in the way intended by us. This may also account for the fact that the correlation of KFT results and performance is lower for students with an immigrant background and accounts for less variance in performance than it does for German students.

The second explanation concerns the relationship between students and their teachers. It is possible that what students need or at least expect from their teachers differs between cultures. Maybe being horizontally respected leads to changes in attitude or behavior (e.g. more engagement in class and, hence, a better performance) for some cultures but not for others. An interesting piece of research, tapping into this consideration, was done by Bailey (2000) who examined the conflict-ridden interactions between Korean shop owners and African American customers in sales encounters in the U.S. He found that their conflict was partly due to the fact that African Americans and Koreans differed in their understanding of respect. While for African Americans respecting someone meant to treat him or her as a valued equal (much in the sense of horizontal respect), Koreans interpreted it in a sense of looking up to someone in a hierarchical relationship (which is more consistent with the definition of vertical respect). A satisfying business transaction for African Americans, thus,

included being treated with (horizontal) respect whereas for Koreans this was unnecessary or even inappropriate. Another example of cultural miscommunication is provided by Scollon and Scollon (1981). The authors researched differences in the communication of authority and power between English and Athabaskan speaking cultures. They suggest that English and Athabaskan speakers have very different ways of communicating authority and power relationships. Engaging in certain behaviors that communicate power in one culture may not be perceived as such in the other. English teachers and Athabaskan students, therefore, never meet the other's behavioral expectations which results in mutual misperceptions and stereotyping. De Cremer and Tyler (2005) also suggest that societies may have diverging views of respect: "in contrast to masculine cultures, feminine cultures stress the importance of solidarity and equality. As a result, feminine cultures, or low-power societies, may regard respect as more important than masculine or high-power societies, because due to its identity potential of communication belongingness information, people in those cultures will regard respect as more important of the viability of their groups, organizations, and societies" (p. 15). So there could be a mismatch in what immigrated students expect of their teachers and what teachers provide when treating students as valued equals and vice versa. Additionally, a principal of a school where immigrated students represented the majority of the student body told us that horizontal respect provided by a teacher was not seen as a virtue at her school but rather as a sign of weakness. This would also make it unlikely for horizontal respect to have a positive effect on students' performance. (However, this school did not participate in the study). Considering the articles reviewed above, an explanation for the culturally differing results could be as follows: teachers engage in behavior meant to convey a sense of respect that students of some cultural groups do not expect, or that they feel is inappropriate. Hence, this teacher behavior cannot result in an increased engagement followed by a better performance.

4.2 Differences in Intelligence Scores and Perceived Respect

Since we did not use students' raw scores but the standardized T-scores on the KFT, we did not expect different intelligence scores for the three school types. Yet, scores from students attending general level schools are significantly lower than those of students attending university-track schools. A possible explanation lies in the transformation from raw scores to standardized scores. One should expect that the same raw score translates into a higher standardized score for a basic secondary school student than for a general level school student. Consequently, one should expect that the same raw score results in a higher standardized score for a general level school student than for a university-track school student. This pattern, however, holds true only for the standardized scores for the Version A KFT tests. A closer look at the standardized scores for the Version B KFT test reveals that up to a raw score of 21 (out of 47) general level school students actually receive (far) lower standardized scores than university-track school students. The KFT manual only reports that university-track schools were over-represented in their norming sample but does not comment on the difference. We, therefore, assume that the significant difference in intelligence scores that we find in this study can be attributed to an erroneous transformation.

As discussed above, the differences in KFT results for German students and immigrant students could be due to different levels of expertise in German.

The differences in perceived respect between boys and girls, such that girls feel slightly more respected than boys, are also unexpected. Two different explanations come to mind that future studies will have to verify: either teachers treat girls with more respect or boys and girls perceive the same teacher behavior differently.

4.3 Limitations and Implications for Future Studies

A limitation of this study is the fact that we have only one performance indicator of the students and, therefore, cannot capture developments in math performance that are due to respect. Further, our findings are correlational, not causal. Future research should examine the long-term effects of perceived respect with longitudinal research designs and, eventually, move to more experimental settings in order to test causality. A possible experimental design involves three groups (respectful-treatment, disrespectful-treatment and a control group). First, a test with a speed component could be distributed. After that, the groups would be instructed respectively (preferably by the same lecturer) on how to perform better on these tests. During the lecture, groups would either be treated respectfully, disrespectfully or would simply get the facts (the control group). Next, a distractor task would be administered followed by a second speed test. It is then to be expected that participants' performance augments, with the highest increase in the "respectful treatment" group.

Further, with regard to the cultural issues discussed above, our sample of immigrated students is problematic and prohibits unambiguous interpretations. Although the majority of the immigrated students in this sample are from Turkey, the population of immigrated students is mixed. Future studies aimed at researching the underpinnings

of respect on different cultures should examine specific culture groups in order to not dilute their results. In addition, it seems important to control for expectations of and valuations of horizontal and vertical respect.

Another shortcoming in this piece of research is that we only concentrate on one particular school subject: math. Future research, however, should also consider the possibility that respect may have an even greater impact on performance in subjects where students are expected to express their own opinion. Studies that examine how respect relates to performance in a linguistic or societal subject would, thus, be very insightful.

Moreover, a study in schools with higher or lower social indices than 3 would be interesting. Gregory and Weinstein (2004) showed that for students with low socioeconomic status warmth from teachers was more important for achievement growth than for students with high socioeconomic status. It is possible that this also holds true for respect.

5. Conclusion

Very often complicated reforms are required in order to alter existing structures in schools and make a change for the students. Even more so, we are happy to find that a small measure like respecting one's students (which we should, but cannot always, take for granted) has an effect on students' performance. Many teachers today are faced with a school reality that requires them to not only engage in behaviors of a teacher but also in those of a friend, parent, or social worker. It is, therefore, not surprising that some teachers feel overwhelmed and do not always treat their students with respect. We would, thus, like to make an argument for integrating the findings on respect and performance into teacher's education. There, it would be fruitful to discuss not only the relationship between perceived respect and performance but also the complex findings regarding cultural diversity in the classroom and its implication for teachers and teaching. Teachers should be prepared for the multifaceted environment that a classroom can be and should know about (differences in) their students' needs. This would not only make teacher-student interactions easier and less conflict-ridden but most probably also result in better classroom atmospheres and learning environments. We are aware that creating useful teaching programs suitable for a diverse student population is a challenge since today's school reality provides many obstacles in the form of over-sized classes, overwhelmed parents and a lack of support for teachers, to name only a few. However, although statistics show that we live in a culturally diverse environment, integration and cultural understanding are not implicit. It may not be easy to change this but if we are serious about wanting to try, re-thinking some of the established educational practices would be a good start. Respect in all its variations is a powerful concept that can help in the process.

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