



## Students' Characteristics and Teachers' Estimates about Their Academic Achievement<sup>1</sup>

Renato Gomes Carvalho<sup>2</sup>  
*Secretaria Regional de Educação,  
Madeira, Portugal*

Carolina Castro Abreu  
*Secretaria Regional de Educação,  
Madeira, Portugal*

**Abstract:** The relation between teachers' expectations and students' academic achievement has received considerable interest in the education and psychology domains. In this study, we analyze the extent to which the information about students influences the formulation of teachers' estimates about their achievement. The sample consisted of 491 Portuguese teachers, aged between 26 and 82 years old ( $M_{age} = 43$  years). To assess the teachers' estimates, we created excerpts containing information about hypothetical students, in relation to whom an estimate of academic success was required. Each excerpt had two versions (A and B), according to the more or less favorable information regarding students' intellectual, family, self-regulation, and previous performance variables. The results show moderate differences between the estimates of the participants that received version A and those that received version B. The results are discussed considering the importance of a set of student characteristics for the way teachers develop estimates about student performance.

**Keywords:** teacher expectations, academic achievement, student characteristics

## Características dos Estudantes e Estimativas dos Professores acerca do seu Desempenho Acadêmico

**Resumo:** A relação entre as expectativas dos professores e o desempenho acadêmico dos estudantes tem recebido muito interesse da investigação. Neste estudo, analisamos a extensão em que a informação sobre os estudantes influencia as estimativas docentes acerca do seu potencial desempenho acadêmico. A amostra consistiu em 491 professores, com idades entre 26 e 82 anos ( $M_{idade} = 43$ ). Para avaliar as estimativas, foram criados diferentes excertos contendo informação sobre estudantes hipotéticos, acerca dos quais era solicitada estimativa de sucesso escolar. Cada excerto tinha duas versões (A e B), conforme a informação sobre o estudante fosse mais ou menos favorável, relativamente a variáveis intelectuais, sociodemográficas, autorregulação e desempenho anterior. Os resultados mostram diferenças moderadas entre as estimativas dos participantes que receberam a versão A, comparativamente aos que receberam a versão B, permitindo concluir que aquelas características são relevantes na forma como os docentes desenvolvem estimativas acerca do desempenho acadêmico dos estudantes.

**Palavras-chave:** expectativas do professor, rendimento escolar, características do estudante

## Características de los Estudiantes y la Estimación de sus Logros Académicos por los Profesores

**Resumen:** La relación entre las expectativas de los profesores y el rendimiento académico de los estudiantes ha sido investigada con gran interés. En este estudio se analiza la influencia de la información sobre los estudiantes, en la formulación de estimaciones docentes acerca de sus rendimientos académicos. La muestra estuvo compuesta por 491 profesores, comprendidos entre los 26 y 82 años de edad ( $M_{edad} = 43$ ). Para evaluar las estimaciones, fueron creados diferentes extractos con información sobre estudiantes hipotéticos, acerca de los cuales era solicitada una estimación de éxito académico. Cada extracto poseía dos versiones (A y B), sobre la información del estudiante, más o menos favorable sobre variables intelectuales, sociodemográficas, familiares, autorregulación y rendimiento académico anterior. Los resultados muestran diferencias moderadas entre las estimaciones de los participantes que recibieron la versión A y las efectuadas por los que recibieron la versión B. Lo anterior, permite arribar a la conclusión de que aquellas características son relevantes para los profesores para realizar sus estimaciones, relativas al desempeño académico de los estudiantes.

**Palabras clave:** expectativas del profesor, rendimiento escolar, características del estudiante

<sup>1</sup>Paper deriving from the data of the master's dissertation by the second author, under the advice of the first author, defended in the Masters Program in Educational Psychology at the Universidade da Madeira.

<sup>2</sup>Correspondence address: EB23 Cónego João Andrade, Estrada da Lapa, 9350-079, Campanário, Madeira, Portugal. E-mail: [renatoggc@gmail.com](mailto:renatoggc@gmail.com)

The study of the relation between teacher expectations and student achievement has received considerable interest from researchers and practitioners in the educational psychology domain. Among the most well-known early

studies in this topic is Rosenthal and Jacobson (1968), who have shown that students introduced to teachers as having higher intellectual potential presented significantly higher gains in skills development afterwards, even though they were initially randomly assigned. For the authors, these results sustained the idea that teachers' expectations about children' level of intellectual ability resulted in the fulfillment of those expectations (Bruns, McFall, McFall, Persinger, & Vostal, 2000; Jussim & Harber, 2005). This conclusion led to extensive enthusiasm, but also to criticism, due to the limitations of the study methodology and interpretation of results. Nevertheless, this early study paved the way for new perspectives of research in psychology and education, not only by establishing connections between teacher expectations and student achievement, but also by suggesting the need to study the factors that may exert an influence on that relation. In the present study, we assess the importance of the information about a set of students' characteristics for the way teachers formulate expectations about students' potential academic achievement. Particularly, we weigh whether different information about a specific student characteristic can lead to the formulation of different expectations of academic achievement by the teachers. By doing this research, we approach an empirically understudied topic in the Portuguese context, and thus provide concurrent data regarding the factors that may be related to the way teachers formulate expectations about students' achievement.

### **Teacher Expectations and Students' Academic Achievement**

In a review of the literature focusing on teacher expectations, Jussim and Harber (2005) show that compelling evidence exists concerning the influence of teacher expectations on student achievement. Whereas induced positive expectations can increase students' academic achievement, teacher underestimation of students' abilities is related to lower student achievement than would be predicted on the basis of their test scores (Sorhagen, 2013). Moreover, and although there is no general consensus about the exact long-term effect and mechanisms through which self-fulfilling effects of biased teacher expectations influence students' achievement, evidence shows that the effects of misperceptions of abilities or differential expectations according to teacher perceptions of abilities can continue throughout schooling, as revealed by Sorhagen (2013). Similarly, de Boer, Bosker, and van der Werf (2010) show a significant relationship between teacher expectation bias at the end of primary school and Dutch student performance in the fifth year of secondary school.

The connection between teacher expectations and student achievement is considered possible through teacher intervention in the lecturing and learning processes (Begeny, Krouse, Brown, & Mann, 2011; Bruns et al., 2000; Soares, Fernandes, Ferraz, & Riani, 2010). Research has shown that teachers' perceptions, appreciations and expectations concerning students' academic aptitude may have implications

for their teaching practices by influencing, on the one hand, the way they select teaching strategies and evaluate students and, on the other, by influencing students' self-evaluations and perceptions about their abilities (Alvidrez & Weinstein, 1999; Ready & Wright, 2011; Südkamp, Kaiser, & Möller, 2012). For instance, according to their expectations, teachers may present different patterns of interaction with students, including the use of nonverbal cues or positive reinforcement (Babad, 1993; Kuklinski & Weinstein, 2000; Rubie-Davies, Hattie, & Hamilton, 2006). The concretization of teacher expectations on students' achievement can be of an indirect or direct nature (Kuklinski & Weinstein, 2000). The latter can arise from differences in the curriculum exposure, that is, students may perform differently because they are given distinct opportunities for knowledge acquisition and achievement of skills. Indirect effects include students' internalization of expectations from the teachers' messages.

### **The Role of Student Characteristics in the Formulation of Teacher Expectations**

Notwithstanding the connection between teacher expectations and student performance, which potentially occurs through the intervention of teachers in lecturing and learning processes (Bruns et al., 2000; Soares et al., 2010), student characteristics, which those expectations are based on, can vary considerably. In their study, Jussim and Harber (2005) propose that one of the topics that need to be addressed involves the relationship between teacher expectations and the characteristics of the students. In a recent review, Nurmi (2012) sustains this perspective, by mentioning that the literature emphasizes that students' characteristics play a more relevant role in classrooms.

Among the student characteristics that may influence teacher expectations, students' previous achievement, their sociodemographic background (e.g., age, ethnicity, gender, socioeconomic status) and motivation have been emphasized (Alvidrez & Weinstein, 1999, de Boer et al., 2010; Bruns et al., 2000; Dusek & Joseph, 1983; Nurmi, 2012; Rubie-Davies et al., 2006). Accordingly, one of the factors that exert considerable influence on teachers' expectations and that may influence their practice involves students' previous performance (Bruns et al., 2000). It is expected that a student presenting a good record of achievement and interested behavior at school will behave consistently in the present, as well as the opposite (i.e. low previous performance generates lower expectations). Concerning the sociodemographic factors, ethnicity and socioeconomic status (SES) are considered relevant factors for the formulation of teacher expectations, which are frequently lower for students from minority ethnic backgrounds and/or of lower SES (Dusek & Joseph, 1983). In the sphere of the sociodemographic factors, the influence of gender is less consensual, given that whereas some studies identify scarce or inexistent differences in teacher expectations based on gender, others identify some specific effects according to school grade and area of studies

(Alvidrez & Weinstein, 1999; Bruns et al., 2000; Dusek & Joseph, 1983). Regarding students' other personal, social, and behavioral factors, the literature indicates a wide set of characteristics that can lead to the formulation of higher expectations, namely intellectual ability, social assertiveness, physical underestimation, and other study-related behaviors and attitudes such as study habits, compliance with rules, self-control, and autonomy (Bennett, Gottesman, Rock, & Cerullo, 1993; Dusek & Joseph, 1983).

Concurring with the perspective of interplay between student characteristics and teacher estimates, de Boer et al. (2010), in a longitudinal study with Dutch students, found differences in the susceptibility to expectation bias effects between students with different backgrounds and abilities; they also found that the effects of teacher expectation bias on student performance were moderated by prior achievement, students' IQ, parents' aspirations, SES, and grade repetition in primary school. Self-fulfilling prophecies in the classroom may also vary across academic subjects and family income, given that "under- and overestimation of early math and language abilities, but not reading abilities, seemed to have a more meaningful effect on students from lower income families" (Sorhagen, 2013, p.475).

Despite the identification of various effects of student characteristics on the variability of teacher expectations, findings are often inconsistent and require replication through distinct methodologies and in different contexts. Because most studies are performed with American samples, further research is necessary regarding other samples. In order to address these issues and provide further knowledge in this domain, in the present study, we assess in a Portuguese sample of teachers whether the existence of information about specific student characteristics is associated to teacher formulation of expectations about their potential academic performance. Particularly, we assess whether information regarding students' previous academic performance, individual features (intellectual ability, self-regulation, social skills, disciplined behavior), family support and socio-demographic characteristics (school context, socioeconomic status, gender), can be relevant to the way teachers estimate students' potential success. Taking into account the previously mentioned research findings, we hypothesized that the estimates about students' performance vary according to the information that is presented about them. Specifically, we hypothesized that teachers present higher estimates about students' academic achievement according to the presentation of more favorable information about students' (h1) previous academic achievement, (h2) family support/parents' aspirations, (h3) social environment, (h4) SES, (h5) intellectual ability, (h6) self-regulation capacity, (h7) social skills, and (h8) disciplined behavior. We also hypothesized that estimates about potential academic achievement are superior for female than for male students (h9), because of the consistently better indicators of academic success in females (Carvalho, 2016), which may lead to the formulation of different expectations based on gender.

## Method

### Participants

The sample consisted of 491 teachers (76% female,  $N = 373$ ), working or retired from basic (1<sup>st</sup> to 9<sup>th</sup> grades) and secondary education (10<sup>th</sup> to 12<sup>nd</sup> grades). Most of the participants were living in urban areas at data collection (about 74%) and their ages varied between 26 and 82 years old ( $M_{age} = 43$ ,  $SD = 10$ ). The majority of the sample had at least ten years of professional experience (75%,  $N = 365$ ).

### Instrument

For the assessment of teacher estimates, a two-part instrument was created specifically for this research, in order to overcome some limitations that were mentioned in previous studies (Auwarter & Aruguete, 2008; Del Río & Balladares, 2010). In the first part, a sociodemographic questionnaire was presented, involving data about participants' gender, age, years of professional experience, area of residence, and study cycle in which they were teaching or had taught. In the second part, several excerpts were presented concerning a hypothetical student, in relation to whom participants were asked to estimate his/her potential academic achievement. Ranging from 1 (Very unlikely) to 5 (Very likely), participants were asked to indicate the likelihood of the student described in the excerpt: (1) successfully concluding secondary school (12<sup>th</sup> grade); (2) obtaining an above average GPA at the end of the school year; (3) fulfilling the curricular goals for that year, and; (4) potentially presenting a global good academic achievement (overall achievement).

Each excerpt involved a target variable that could be included in one of three distinct categories of information about the student: (1) socio-demographic, namely gender, SES, social environment, family support; (2) personal features, such as intellectual ability, self-control capacity, discipline, and social skills; (3) previous academic achievement. In each excerpt, only one of these characteristics was targeted, as we intended each variable to be assessed separately by participants in each description provided.

For each target variable, six excerpts were created, half of which in a version A, in which the target variable was presented in a more favorable way (e.g., higher SES, or more intelligent, or with previous high achievement), and the other half in a version B, in which the target variable was presented in a neutral or less favorable way (e.g., lower SES, or presenting intellectual difficulties, or with a history of low achievement). Both versions A and B were the same, the only difference being the information provided about the target variable. Participants did not know therefore which variable was being targeted. In the specific case of gender, the distinction between versions A and B was the name of the hypothetical student (feminine or masculine name) (Figure 1).

<p>Paul is a 15-year-old high school student. He is currently enrolled in a course of socioeconomic sciences, and his GPA is 12. After concluding high school (12<sup>th</sup> grade), he intends to apply for college, in order to take an accounting and administration degree. Paul presents mean intellectual capacities for his age. He doesn't study much, putting just the enough effort on study to get satisfactory results. However, during the classes, he is very attentive and performs correctly the proposed tasks. Paul is very active and participates in different extracurricular activities, which are offered at school.</p>	<p>Sophie is a 15-year-old high school student. She is currently enrolled in a course of socioeconomic sciences, and his GPA is 12. After concluding high school (12<sup>th</sup> grade), she intends to apply for college, in order to take an accounting and administration degree. Sophie presents mean intellectual capacities for his age. She doesn't study much, putting just the enough effort on study to get satisfactory results. However, during the classes, she is very attentive and performs correctly the proposed tasks. Sophie is very active and participates in different extracurricular activities, which are offered at school.</p>
<p>Patricia is a 15-year-old high school student. She finished the last school year with a below average performance, because in most subjects she got a GPA inferior to 3. Patricia is presently enrolled in a science and technology course. She intends to get good results so she can have a good GPA that allows her to go to university. Patricia is a disciplined and motivated student, although sometimes she reveals some insecurity concerning her capacities. She can rely on a very present and stable family support.</p>	<p>Patricia is a 15-year-old high school student. She finished the last school year with a very good performance, because in most subjects she got a GPA above 4. Patricia is presently enrolled in a science and technology course. She intends to get good results so she can have a good GPA that allows her to go to university. Patricia is a disciplined and motivated student, although sometimes she reveals some insecurity concerning her capacities. She can rely on a very present and stable family support.</p>
<p>Teresa is a 12-year-old 7<sup>th</sup> grade student. She never had school year retention due to poor performance, although her results were barely satisfactory since she was at 5<sup>th</sup> grade. She is described as having excellent reasoning capabilities. However, her results are inferior to what she could have. Teresa is not persistent in tasks and frequently doesn't finish some of the requested tasks. Her teachers have been discussing various strategies to increase the involvement of Teresa in tasks, which include new pedagogical strategies, tutoring programs, and even different curricular contents.</p>	<p>Teresa is a 12-year-old 7<sup>th</sup> grade student. She never had school year retention due to poor performance, although her results were barely satisfactory since she was at 5<sup>th</sup> grade. She is described as having poor reasoning capabilities. However, her results are inferior to what she could have. Teresa is not persistent in tasks and frequently doesn't finish some of the requested tasks. Her teachers have been discussing various strategies to increase the involvement of Teresa in tasks, which include new pedagogical strategies, tutoring programs, and even different curricular contents.</p>

Figure 1. Example of three sets of excerpts regarding gender, previous performance, and intellectual ability, which illustrate excerpts A and B (translated from Portuguese).

### Procedure

**Data collection.** A pre-test with a group of teachers was performed in order to identify potential difficulties in the understanding of the excerpts and of the instructions provided. After pre-test, a set of eight excerpts per person was prepared and given to each participant individually. Participants wrote down the answers and returned them in a closed envelope. The same excerpt was not repeated in each set, nor were the versions A and B presented simultaneously to any participant; therefore, participants who received version A excerpts were different from those that received version B excerpts.

**Data analysis.** After collection and categorization, data were entered into an SPSS data base. Student's *t* tests were performed in order to test potential mean differences between the participants who received version A excerpts and those that received version B excerpts.

### Ethical Considerations

In this study, the ethical aspects of research involving human beings were met. We highlight the participants' informed consent, confidentiality in data treatment and

analysis, and also a preliminary analysis of the study, in which its potential risks and benefits were weighted.

### Results

The overall pattern of results shows moderate to high differences in teacher estimates according to the nature of the information that was presented. Concerning previous academic achievement, family support, intellectual ability, self-regulation capacity, social skills, and disciplined behavior, teachers to whom more favorable information on that variable was presented (i.e. those that received version A excerpts) report significantly higher expectations of potential academic success than teachers to whom less favorable information was presented (i.e., those that received version B excerpts). That is to say, when presented with favorable information regarding these characteristics – the student previously had good marks in this school pathway, or shows efficient study habits, or expresses signs of high intellectual ability, or behaves well at school – participants make higher estimates of academic success, when compared to the participants who were presented with neutral or less favorable information about the hypothetical student (Table 1).

Table 1

*Teachers' Mean Estimates about School Achievement According to the Information about the Student*

Previous academic achievement	Excerpt		<i>t</i>	$\eta^2$
	A ( <i>n</i> = 192)	B ( <i>n</i> = 194)		
<i>Likelihood of...</i>	<i>M (SD)</i>	<i>M (SD)</i>		
Concluding secondary school	4.02 (0.78)	2.86 (0.67)	15.65***	.39
GPA above mean	3.65 (0.87)	2.43 (0.69)	15.25***	.38
Fulfilling curricular goals	3.89 (0.77)	2.86 (0.64)	14.41***	.35
Total (overall achievement)	3.85 (0.74)	2.72 (0.56)	16.98***	.43
Family support				
	A ( <i>n</i> = 171)	B ( <i>n</i> = 183)	<i>t</i>	$\eta^2$
<i>Likelihood of...</i>	<i>M (SD)</i>	<i>M (SD)</i>		
Concluding secondary school	3.04 (0.67)	2.35 (0.63)	10.06***	.22
GPA above mean	2.50 (0.67)	2.02 (0.62)	7.08***	.12
Fulfilling curricular goals	2.88 (0.59)	2.36 (0.60)	8.18***	.16
Total (overall achievement)	2.81 (0.56)	2.24 (0.54)	9.78***	.21
Intellectual ability				
	A ( <i>n</i> = 182)	B ( <i>n</i> = 195)	<i>t</i>	$\eta^2$
<i>Likelihood of...</i>	<i>M (SD)</i>	<i>M (SD)</i>		
Concluding secondary school	2.73 (0.78)	2.04 (0.74)	8.72***	.17
GPA above mean	2.33 (0.78)	1.80 (0.64)	7.16***	.12
Fulfilling curricular goals	2.69 (0.72)	2.19 (0.68)	6.94***	.11
Total (overall achievement)	2.58 (0.66)	2.01 (0.59)	8.83***	.17
Self-Regulation				
	A ( <i>n</i> = 171)	B ( <i>n</i> = 186)	<i>t</i>	$\eta^2$
<i>Likelihood of...</i>	<i>M (SD)</i>	<i>M (SD)</i>		
Concluding secondary school	4.08 (0.66)	2.65 (0.75)	19.04***	.51
GPA above mean	3.74 (0.78)	2.20 (0.70)	19.70***	.52
Fulfilling curricular goals	4.01 (0.62)	2.63 (0.70)	19.75***	.52
Total (overall achievement)	3.94 (0.61)	2.49 (0.64)	21.92***	.57
Social Skills				
	A ( <i>n</i> = 178)	B ( <i>n</i> = 206)	<i>t</i>	$\eta^2$
<i>Likelihood of...</i>	<i>M (SD)</i>	<i>M (SD)</i>		
Concluding secondary school	3.81 (0.80)	3.44 (0.84)	4.37***	.05
GPA above mean	3.41 (0.86)	3.08 (0.90)	3.64***	.03
Fulfilling curricular goals	3.67 (0.79)	3.33 (0.81)	4.26***	.05
Total (overall achievement)	3.63 (0.75)	3.28 (0.79)	4.42***	.05
Disciplined Behavior				
	A ( <i>n</i> = 171)	B ( <i>n</i> = 187)	<i>t</i>	$\eta^2$
<i>Likelihood of...</i>	<i>M (SD)</i>	<i>M (SD)</i>		
Concluding secondary school	2.97 (0.73)	2.35 (0.86)	7.40***	.13
GPA above mean	2.58 (0.77)	2.08 (0.77)	6.17***	.10
Fulfilling curricular goals	2.97 (0.66)	2.36 (0.83)	7.70***	.14
Total (overall achievement)	2.84 (0.65)	2.26 (0.73)	7.92***	.14

Note.\*\*\**p* < .001.

Regarding the sociodemographic characteristics, participants make higher estimates for girls than for boys in criteria such as “GPA above mean” or “fulfilling curricular goals”. No differences were found in the estimates regarding the conclusion of mandatory school. Considering SES and social environment, no significant differences in teachers’ estimates between groups receiving A and B excerpts occurred (Table 2).

Table 2  
*Teachers’ Mean Estimates about School Achievement According to the Information about the Students’ Gender*

	A (n = 155)	B (n = 183)	t	$\eta^2$
	M (SD)	M (SD)		
GPA above mean	2.83 (0.70)	2.98 (0.71)	1.97*	.01
Fulfilling curricular goals	3.26 (0.66)	3.40 (0.71)	1.98*	.01
Total (overall achievement)	3.17 (0.57)	3.30 (0.58)	2.06*	.01

Note. \* $p < .05$ .

## Discussion

In this study, we analyzed the factors on which teachers’ representations and expectations are founded when they consider students’ academic performance. In this sense, we assessed whether the variation in the information that is presented about specific students’ characteristics leads teachers to formulate different expectations about their academic achievement. Although one never knows exactly whether teacher expectations are indeed biased (de Boer et al., 2010), taking into account the methodology that was used in this study, the results showed the importance teachers attribute to several factors when formulating expectations about students’ academic achievement, in an undeclared way. The results globally confirmed our hypotheses and concur with previous studies (Bruns et al., 2000; de Boer et al., 2010; Dusek & Joseph, 1983), showing significant differences in teachers’ estimates when they are presented with more favorable information about students’ previous academic achievement and personal attributes. The observed differences in estimates according to the variation of information, related for instance to previous academic performance, family support, intellectual ability, self-regulation capacity, social skills, disciplined behavior and gender, suggest that these correspond to relevant information that may be taken into account when teachers elaborate analyses and expectations about the students, and also in their representations about the factors underlying school success. Nevertheless, in this study, no significant differences were observed for sociodemographic variables such as SES, contrarily to other research, showing that expectations are lower when concerning students from low-income families with lower SES (Alvidrez & Weinstein, 1999; Auwarter &

Aruguete, 2008; Bruns et al., 2000; Del Río & Balladares, 2010; Dusek & Joseph, 1983; Sorhagen, 2013).

Taken together, the results of the present study underline the importance of greater knowledge by teachers of the information that may, voluntarily or not, influence their projections regarding the potential academic performance of their students and may potentially bias their behavior.

The results that were obtained can originate some lines of discussion regarding the importance teachers attribute to specific student characteristics. Firstly, the results show the value that is given to students’ ability to self-regulate their learning, including the development of work and study routines. Attributes such as proactive posture, effort and persistence, homework delivery, and effective study habits are associated with school adaptation, and therefore influence teacher representations about the factors that underlie student achievement (Bennett et al., 1993; Dusek & Joseph, 1983). Secondly, the information about previous performance played a remarkable role in teachers’ estimates about students’ future achievement, which goes along with the literature showing the importance of previous performances in the projection of students’ future success (Alvidrez & Weinstein, 1999; Bruns et al., 2000; de Boer et al., 2010; Dusek & Joseph, 1983).

Although the existence of records about previous performances can be informative about student patterns of attitudes and behaviors, leading or not to success, as these records influence teachers’ present expectations, one may discuss whether they cannot contribute to higher susceptibility for their confirmation (Daly & Wiemann, 1994).

Another factor the teachers valued was family support. This result is in line with the evidence about the influence of that factor on several dimensions, such as student motivation, attitudes towards school and investment in learning, which by their turn lead to academic success (Chawla, 2012). The significant differences in results regarding students’ social skills also underline the perspective that the quality of students’ interpersonal relationships is a relevant factor for their academic achievement (Carvalho & Novo, 2013, 2014), and is considered pertinent by teachers when they assess the likelihood of their students’ success.

Finally, in relation to gender, the results obtained in this study, namely that teachers presented better estimates for girls than for boys, diverge from other research, in which the influence of gender was inexistent or the results were mixed (Bruns et al., 2000; Del Río & Balladares, 2010; Dusek & Joseph, 1983). Because the participants in this study received a description of a situation in which the only difference was students’ gender (female or male name), the results withdraw attention for the potential involuntary activation of gender stereotypes or social representations of gender, which are characterized by girls’ behaving better and presenting better results at school (Auwarter & Aruguete, 2008; Carvalho, 2016; Fischer, Schult, & Hell, 2013; Robinson & Lubienski, 2011). Although these differences in estimates do not necessary lead to a discriminatory approach to male students, this effect should be taken into

consideration, because it may create the conditions for potentially differentiating actions by teachers, such as providing different opportunities, distinct feedback styles, patterns of interaction, and reinforcement, depending on the student. These potentially distinct patterns of action may ultimately lead to the confirmation of previous estimates or expectations, especially since there is a susceptibility to guiding behavior according to expectations (Daly & Wiemann, 1994) – not least because those expectations are, across several situations, effectively adequate.

Despite the set of significant results, which encourage reflection about the influence of students' characteristics on teacher estimates about students' academic performance, this study has some limitations, which should be taken into account and simultaneously encourage further research. One of the main aspects is the use of an instrument that only permitted the analysis of fictional situations, as a substitute of analyses based on real students and situations that teachers actually deal with. Although the situations included in the excerpts were based on school reality and on the sort of data that can be found in school records, being therefore familiar to teachers' daily activities, one should not neglect the need to weigh this aspect. Furthermore, although the instrument used in this study allows us to make some inferences about the factors that influence the elaboration of teacher expectations, it does not necessarily predict consequences or implications for students' actual behavior, whether in the short or long term; therefore, it only reflects that the available information about students is a prominent aspect that teachers take into consideration when estimating future performances. The implementation of longitudinal studies and in real school contexts is therefore encouraged, as it would contribute to overcoming these limitations.

## References

- Alvidrez, J., & Weinstein, R. S. (1999). Early teacher perceptions and later student academic achievement. *Journal of Educational Psychology, 91*(4), 731-746. doi:10.1037/0022-0663.91.4.731
- Auwarter, A. E., & Aruguete, M. S. (2008). Effects of student gender and socioeconomic status on teacher perceptions. *The Journal of Educational Research, 101*(4), 242-246. doi:10.3200/JOER.101.4.243-246
- Babad, E. (1993). Pygmalion: 25 years after interpersonal expectations in the classroom. In P. D. Blanck (Ed.), *Interpersonal expectations: Theory, research and applications* (pp. 125-153). New York, NY: Cambridge University Press.
- Begeny, J. C., Krouse, H. E., Brown, K. G., & Mann, C. M. (2011). Teacher judgments of students' reading abilities across a continuum of rating methods and achievement measures. *School Psychology Review, 40*(1), 23-38.
- Bennett, R. E., Gottesman, R. L., Rock, D. A., & Cerullo, F. (1993). Influence of behavior perceptions and gender on teachers' judgments of students' academic skill. *Journal of Educational Psychology, 85*(2), 347-356. doi:10.1037/0022-0663.85.2.347
- Bruns, C., McFall, L., McFall, M., Persinger, T., & Vostal, B. (2000). *Great expectations? An investigation of teacher expectation research*. Retrieved from [http://www.users.muohio.edu/shermalw/edp603\\_group2-f00.html](http://www.users.muohio.edu/shermalw/edp603_group2-f00.html)
- Carvalho, R. G. (2016). Gender differences in academic achievement: The mediating role of personality. *Personality and Individual Differences, 94*, 54-58. doi:10.1016/j.paid.2016.01.011
- Carvalho, R. G., & Novo, R. F. (2013). Características da personalidade e relacionamento interpessoal na adolescência [Personality characteristics and interpersonal relationships in adolescence]. *Avaliação Psicológica, 12*(1), 27-36.
- Carvalho, R. G., & Novo, R. F. (2014). The relationship between structural dimensions of personality and school life in adolescence. *Psicologia: Reflexão e Crítica, 27*(2), 368-376. doi:10.1590/1678-7153.201427218
- Chawla, A. (2012). The relationship between family environment and academic achievement. *Indian Streams Research Journal, 1*(12), 1-4. doi:10.9780/22307850
- Daly, J. A., & Wiemann, J. M. (1994). *Strategic interpersonal communication*. Hillsdale, NJ: Lawrence Erlbaum.
- de Boer, H., Bosker, R. J., & van der Werf, M. P. C. (2010). Sustainability of teacher expectation bias effects on long-term student performance. *Journal of Educational Psychology, 102*(1), 168-179. doi:10.1037/a0017289
- Del Río, M., & Balladares, J. (2010). Género y nivel socioeconómico de los niños: Expectativas del docente en formación [Childrens' gender and socio-economic level: Expectations of teachers in training]. *Psykhé, 19*(2), 81-90. doi:10.4067/S0718-22282010000200008
- Dusek, J. B., & Joseph, G. (1983). The bases of teacher expectancies: A meta-analysis. *Journal of Educational Psychology, 75*(3), 327-346. doi:10.1037/0022-0663.75.3.327
- Fischer, F. T., Schult, J., & Hell, B. (2013). Sex-specific differential prediction of college admission tests: A meta-analysis. *Journal of Educational Psychology, 105*(2), 478-488. doi:10.1037/a0031956
- Jussim, L., & Harber, K. D. (2005). Teacher expectations and self-fulfilling prophecies: Knowns and unknowns, resolved and unresolved controversies. *Personality and Social Psychology Review, 9*(2), 131-155. doi:10.1207/s15327957pspr0902\_3

- Kuklinski, M. R., & Weinstein, R. S. (2000). Classroom and grade level differences in the stability of teacher expectations and the perceived differential teacher treatment. *Learning Environments Research*, 3(1), 1-34. doi:10.1023/A:1009904718353
- Nurmi, J.-E. (2012). Students' characteristics and teacher-child relationships in instruction: A meta-analysis. *Educational Research Review*, 7(3), 177-197. doi:10.1016/j.edurev.2012.03.001
- Ready, D. D., & Wright, D. L. (2011). Accuracy and inaccuracy in teachers' perceptions of young children's cognitive abilities: The role of child background and classroom context. *American Educational Research Journal*, 48(2), 335-360. doi:10.3102/0002831210374874
- Robinson, J. P., & Lubienski, S. T. (2011). The development of gender achievement gaps in mathematics and reading during elementary and middle school: Examining direct cognitive assessments and teacher ratings. *American Educational Research Journal*, 48(2), 268-302. doi:10.3102/0002831210372249
- Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupil's intellectual development*. New York, NY: Holt, Rinehart and Winston.
- Rubie-Davies, C., Hattie, J., & Hamilton, R. (2006). Expecting the best for students: Teacher expectations and academic outcomes. *The British Journal of Educational Psychology*, 76(Pt 3), 429-444. doi:10.1348/000709905X53589
- Soares, T. M., Fernandes, N. S., Ferraz, M. S. B., & Riani, J. L. R. (2010). A expectativa do professor e o desempenho dos alunos [Teacher's expectations and students' performance]. *Psicologia: Teoria e Pesquisa*, 26(1), 157-170. doi:10.1590/S0102-37722010000100018
- Sorhagen, N. S. (2013). Early teacher expectations disproportionately affect poor children's high school performance. *Journal of Educational Psychology*, 105(2), 465-477. doi:10.1037/a0031754
- Südkamp, A., Kaiser, J., & Möller, J. (2012). Accuracy of teachers' judgments of students' academic achievement: A meta-analysis. *Journal of Educational Psychology*, 104(3), 743-762. doi:10.1037/a0027627

Renato Gomes Carvalho is a Professional Psychologist in the Education Agency of Madeira Region, Portugal.

Carolina Castro Abreu is a Professional Psychologist in the Education Agency of Madeira Region, Portugal.

Received: Nov. 19, 2015

1<sup>st</sup> Revision: Dec. 18, 2015

Approved: May. 20, 2016

*How to cite this article:*

Carvalho, R. G., & Abreu, C. C. (2018). Students' characteristics and teachers' estimates about their academic achievement. *Paidéia (Ribeirão Preto)*, 28, e2808. doi: <http://dx.doi.org/10.1590/1892-4327e2808>