

Why girls should be less compliant, and boys deserve better grades: The diligence fallacy in education (and self-regulation research)

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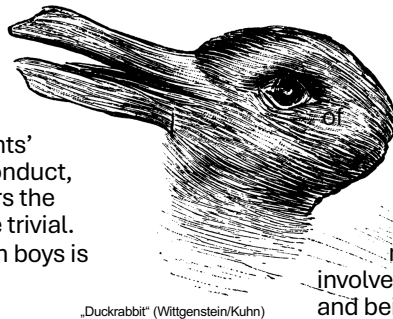
The phenomenon of interest: The gender gap in grades

Girls are thought of to outperform boys academically, as indicated by better grades across subjects (1). Yet, a conclusive explanation for this gender gap in grades is missing.

The common *diligence explanation*:

Girls are better able to solve the conflict between immediate impulses and long-term goal pursuit in favor of the latter. This helps them to learn better (e.g., by doing their homework more regularly), which leads to better grades (2). Hence, according to this diligence explanation, girls earn their benefit through better volitional self-regulation, a character strength considered to be crucial in life.

However, grades do not only reflect students' competencies, but also their academic conduct, or *good student* behavior (1), which renders the relationship between grades and diligence trivial. In addition, why girls are more diligent than boys is an open question.



The new *diligence fallacy explanation*:

Girls do not actually learn better because they are more diligent. Rather, students who behave more diligently, i.e., according to teachers' specifications, are rewarded by better grades (3), independently from the competencies they acquired. This is because teachers consider such a *good student* behavior conducive to learning and because it facilitates their work.

Hence, what is interpreted as *self-regulation* in the diligence explanation, in fact, may reflect *external control*. Specifically, girls' behavior likely mirrors introjected regulation, being characterized by high ego-involvement and the goal to gain approval from others, and being accompanied by emotional strain (4, 5).

Method, data, and results: Competencies, grades, conscientiousness (e.g., "I am diligent"), and anxiety of Luxembourgish 9th graders

Scale	N	Girls		Boys		2.	3.	4.	5.	6.	7.	8.	9.	
		M	SD	M	SD									
1. Conscientiousness	1-4	5,785	3.20	0.59	2.95	0.64	.08	.02	.09	.08	.24	.25	.31	.20
2. School anxiety	1-4	5,777	2.45	0.82	2.08	0.76	-.15	-.13	-.03	-.10	-.10	-.04	.23	
3. SAT Math	1-1000	5,803	508.55	0.89	528.24	97.63		.51	.43	.44	.34	.23	-.11	
4. SAT German	1-1000	5,386	537.80	107.21	521.98	111.24			.43	.34	.50	.19	.07	
5. SAT French	1-1000	5,803	513.51	104.04	497.86	98.84				.28	.23	.48	.08	
6. TAG Math	1-60	4,225	37.42	10.18	35.97	10.04					.53	.51	.07	
7. TAG German	1-60	3,972	40.45	7.46	36.95	7.68						.40	.23	
8. TAG French	1-60	4,224	39.51	8.02	36.07	8.13							.21	
9. Gender	(1 = male; 2 = female)	5,774												

Table 1: Descriptives and bivariate correlations. Correlations above .03, .07 are significant at $p < .05/.001$. SAT = Standardized achievement test. TAG = Teacher-administered grade.

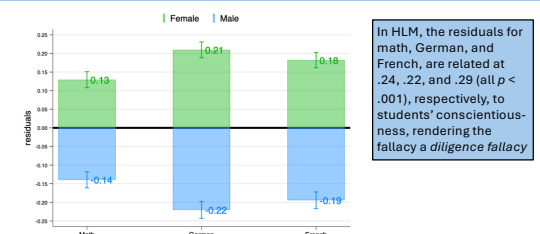


Figure 1. Over- and underestimation of standardized achievement tests (SATs) by teacher-administered grades (TAGs) by gender and subject.

Discussion: A call for a paradigmatic change in our view on "diligence" in education and the gender gap in grades

Self-regulation is easily confused with heteronomy in educational contexts. Against this background, the new diligence fallacy explanation for the gender gap in grades is more convincing than the diligence explanation. It acknowledges the multidimensionality of grades and social foundations of persistent gender-related inequalities. It also accounts for why girls experience more anxiety at school and why females are still underrepresented in leadership positions. The common diligence explanation masks these problems, thereby contributing to an education that is unfair for boys and girls. While boys' educational attainment is systematically limited, girls pay emotionally for their "better" compliance and continue to learn that they are praised for being nice instead of smart.

We recommend anonymizing and standardizing grading procedures as much as possible. If good student behavior is indeed considered crucial for student development (despite being not systematically related to students' competencies), teachers should be trained in evaluating it separately from students' academic achievement in the subject matter objectives; and it should be clearly labelled as what it is essentially: compliance with rules.

Because of grade repetition as well as the exclusion of students from the lowest school track, and because we had no data on teachers' perceptions of good student behavior, the present analyses might underestimate the diligence fallacy in education.

References

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