

# German Students Perform Poorly on the OECD's PISA Test (2002)

## Abstract

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*Gymnasium* principal Dieter Smolka reports on German students' disappointing performance on the OECD's Programme for International Student Assessment (PISA) test in 2000. Then he outlines his recommendations for a comprehensive reform of the education system.

## Source

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### The PISA Study: Consequences and Recommendations for Education Policy and School Practice

#### Introduction

The PISA study relegated the German *Bildungsnation* (i.e., education nation) to the back rows and shattered the self-image of our education system. In the debate that has raged since, people have sought ways out of the education crisis and have given focused consideration to the need to reform our school system. The PISA study and its supplementary domestic study (PISA-E) provide the basis and the impetus for change and innovation in education policy and school practice, something that – measured against the international performance standard – all German federal states need.

In addition to state-by-state [i.e., *Land*] comparisons of basic reading, math, and science skills, and of college-preparatory high schools [*Gymnasien*], both studies also include additional information on the relationship between social background and educational success, the influence of social inequalities on school attendance, the status of students from immigrant families, and the institutional conditions for school learning.

In terms of student performance, the discrepancy between the strongest and the weakest federal states proved to be substantial. Bavaria exceeded the OECD average in reading competency, but it was still no match for the top scorers from other countries. So the best federal state in this area was merely first in the “second division.”

The poor overall results of the German *Bildungsnation* make it necessary to ask “why a country with Germany's economic and political significance and rich cultural tradition cannot keep pace with the top performers internationally.” Surely, children in Germany are no slower or less willing to learn than Finnish, Swedish, or Canadian schoolchildren.

#### I. The PISA Study

##### 1. Goals of PISA

PISA (Programme for International Student Assessment) aims to provide the governments of participating countries with regular indicators to facilitate administrative policy decisions that will improve their respective national education systems. Here, administrative policy decision-making is interpreted in a broad sense. It encompasses all levels of the education system, and also the development of individual schools as well as all support systems, from teacher training to school counseling. The indicators gauge reading competency, basic mathematical and scientific literacy, and

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cross-disciplinary competencies. The study focuses on fifteen-year-old high schools students, that is, students young enough to still be subject to compulsory schooling in almost all OECD member states.

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#### **4. Summary of Results**

– Germany was relegated to twenty-first place in reading competency. “Performance in most German federal states lies clearly below the OECD average.” State-to-state variations in student performance, which are quite striking in international comparison, can be viewed, among other things, as evidence of insufficient broad-based student support and of inadequate support for students in the lower score ranges. Despite the fact that fewer students from other countries have to repeat grades, almost every other participating country seems to have done a better job at bringing all students in a given age group up to a comparable skill level.

– Bavaria was the only German federal state that made it into the top third of the international rankings. Among German fifteen-year-olds, only those in Baden-Württemberg and Saxony scored high enough to match the average performance of students from the other OECD countries.

– In hardly any other participating country was the discrepancy between the best and the worst readers as great as it was in Germany’s federal states. Students in Finland, Japan, and Canada have a high level of reading competency, and they are homogenous [meaning that there is less variation between the best and the worst readers].

– *At-risk students*: the percentage of at-risk students (at or below Proficiency Level I) is high in all German federal states, also in relation to the OECD average.

– *Pleasure reading*: an average of 42 percent of German high school students reported that they do not read for pleasure. This number was very high in international comparison; the “Land of Poets and Philosophers” is thus the sad frontrunner when it comes to *not* reading for pleasure. Students who are not motivated to read have a harder time acquiring competence than their book-loving peers.

– *Effects of social background*: the relationship between social background and competence acquisition is particularly pronounced in Germany. In none of the other thirty-two PISA countries was the difference in reading skills between adolescents from higher and lower social strata (children from educationally disadvantaged families or those with immigrant backgrounds) as great as in Germany. “Other countries succeed far better – despite similar population structures – in limiting the influence of social background and in reaching a higher overall proficiency level.”

– *A lack of successful integration*: in all federal states with a relatively high percentage of foreign nationals – that is, the old federal states – performance by non-German students was considerably lower, especially in reading, but also in mathematics and the natural sciences.

– *School attendance of children from immigrant families*: this poses an additional problem. Although more than 70 percent of schoolchildren whose parents were not born in Germany have attended educational institutions in Germany from nursery school on, it has been shown that their distribution among the different kinds of schools is clearly worse than that of their classmates whose parents were born in Germany. A high degree of urbanization inevitably leads to a proliferation of social problems in poor areas with weak infrastructures, so that local schools, which can only offer students limited options for social integration and individual support, face great burdens or are even overwhelmed at times. Therefore, schools in socially disadvantaged areas should have more teachers in order to be able to implement the necessary support programs.

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– *Competency in mathematics and the natural sciences*: in international comparison, the competency of German schoolchildren in mathematics and the natural sciences is below average. According to the PISA report, almost 25 percent of fifteen-year-olds fall into the at-risk group, meaning that their mathematical skills are not always sufficient for them to successfully complete vocational training. Reading competency was shown to be one foundation for mathematical competency.

– *Inadequate support*: Germany also includes relatively large groups of high-achieving secondary-school students, also in those federal states that scored below average. The PISA consortium concludes from this that, unlike other countries, Germany does not do enough to either support weak students or challenge particularly gifted ones.

– *Unequal educational opportunities*: the PISA-E study has shown that no German federal state has met the essential objectives of a democratic school system: namely, to give all adolescents good and equal educational opportunities and optimal individual support, and at the same time to compensate for social, ethnic, and cultural disparities in educational participation and educational success. Social background largely determines students' educational success. Remedying this is a key challenge for education policy.

– *Tendency toward "homogenization"*: German schools obviously have basic difficulties in adequately supporting and challenging heterogeneous groups of students. A large number of students repeat grades, defer entry into primary school, or – unique internationally – transfer from higher level secondary schools to other, less challenging ones. Some federal states need to develop far better solutions. Every school system tries to strike a balance between what children bring with them and what schools can accomplish. "But none is so compulsively fixed upon one pole as the German system: [and that pole is] what is referred to in this country as 'aptitude' and which supposedly can be determined very early on. When people want to improve the quality of schools in this country, they do not focus on improving the schools themselves; rather, they tighten the regulations for promoting students to the next grade, or they relax the regulations for demoting students to a lower school, so that finally only the 'right' children go to the 'right' school or are in the 'right' class. [...] In countries that we could learn from schools follow a different logic: first, they ask themselves what they could do better."

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## **II. Conclusions for School and Education Policy**

One central purpose of schooling is to serve as the bedrock of a culture that strives for and appreciates learning, and to ensure and advance quality instruction. The PISA study shows that international competition demands creativity, action-oriented approaches, and problem-solving skills – in short, the ability to put acquired knowledge into practice. Only self-motivated students can do that. Schools based on cramming are passé.

### **1. Guidelines for Education Reform**

All federal states are faced with the challenge of making productive use of the national competition initiated by the PISA-E study to further develop their respective school systems. In my opinion, some existing approaches should be intensified, in particular:

– *The expansion of all-day schooling programs*, which offer additional opportunities to encourage and challenge students more intensively. All-day schools are important, especially for children who need to make up for deficits at home. The all-day school program is organized in close cooperation with the school's external partners. Within its local environment, the school becomes a venue for living and learning, one in which students and teachers can interact outside of the classroom and can learn from each other.

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– *Intensified language preparation* at the preschool level and in elementary schools, as well as targeted support for “at-risk groups” of weaker secondary-school students, especially educationally disadvantaged children of immigrants.

– *Reinforcing the autonomy and self-reliance of schools* in educational, financial, and personnel matters. If we want to improve the quality of our schools, then we have to give them greater freedom.

Responsibility for learning and education processes must remain in the schools. Schools need a high level of educational freedom and flexibility, that is, fewer centralized regulations. An educational administration that attempts to regulate everything down to the last detail is no longer appropriate for this day and age. “Instead, schools need more leeway and more decision-making power in order to respond more quickly to social change and to react appropriately to changing demands in their environment.” “Innovation instead of administration” is the motto of independent schools whose principals see it as their main responsibility to work in close cooperation with teachers to constantly improve the quality of instruction and to accept full responsibility for the outcome. One forward-looking model might be the “Independent School” project in North Rhine-Westphalia, in which about 300 students will participate (starting in August 2002).

– *The introduction of clearly defined nationwide standards and procedures for quality assurance* in the form of comparable assignments and sample test-question pools. This, however, should not become tantamount to centrally organized test inflation, which brings neither more effective class instruction nor improved student performance. It is important that teachers be given opportunities to acquire qualifications that help them expand their methodological repertoires.

– *Encourage and challenge students individually.* Education reform must aim to promote achievement and ensure equal opportunity. PISA has shown that insufficient reading skills and poorly developed math and science skills are attributable in part to schools’ inadequate support for students. The school and education systems in other countries – for example, Finland, Sweden, and Canada – are better at promoting these competencies early on, at recognizing the weaknesses of [certain] students, and at compensating for these weaknesses irrespective of the students’ background. These schools also manage to encourage top performance from more students. Therefore, individual support for *all* children and adolescents – and that includes the educationally disadvantaged, mainstream students, and the particularly gifted – must be both the point of departure and the objective of an education system that lives up to its responsibility: to raise and educate children and adolescents so that they can live as productive citizens in a democratic society and shape their personal, vocational, and social lives in a responsible way.

– *Supporting gifted students: in addition to educating the mainstream and supporting the educationally disadvantaged, cultivating special talent* is an important goal of education policy. Highly gifted children also need favorable conditions to develop their potential fully. They need to be especially encouraged and challenged. [...]

Source: Dieter Smolka, “Die PISA-Studie: Konsequenzen und Empfehlungen für Bildungspolitik und Schulpraxis,” *Aus Politik und Zeitgeschichte*, B 41/2002.

Translation: Allison Brown

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