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## Wasting brains

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### Germany's school system fails to make the most of the country's human capital

Alamy

WHAT is the best way of measuring improvements in a school system? Grades, perhaps; or the proportion of students getting a high-school diploma. In Germany, though, it may be the number of cafeterias in schools. Hundreds are being built in a nationwide effort to create the infrastructure that will allow schools to operate all day so that children can spend more time learning, instead of being sent home in time for a hot lunch.

Yet this construction activity also shows how far Germany still has to go to modernise its school system, and to turn it into an efficient engine for promoting talent and brains. German schools are superb at separating insiders from outsiders. But in so doing, they squander the human capital that the country needs to prosper.

"In Germany, there is nothing more controversial than education," says Helmut Rau, minister of education and cultural affairs in the state of Baden-Württemberg. He has just been grilled in the state parliament in Stuttgart over his government's school reforms. Parents have complained that even younger pupils are now required to stay in school for several afternoons a week and are given lots of homework on top. This is because Baden-Württemberg has just become the first western state to cut the period of secondary schooling from nine to eight years (in the east, eight years has always been the norm). "It's just getting too much," exclaims one MP who is also a mother.



Wait till you see the homework

To understand such complaints, you need to know a bit about the history of German education. Like other European countries, Germany from the Middle Ages developed a school system based on class. But whereas most other European countries have since moved on to more inclusive systems, Germany has essentially stuck to a three-tier structure: the *Hauptschule* (for students who hope to go on to an apprenticeship), the *Realschule* (whose graduates typically take middling white-collar jobs) and the *Gymnasium* (awarding the *Abitur* that admits the holder to university). Only at the *Grundschule* (elementary school) are pupils from all ability groups taught together.

After the second world war the Allies tried to impose a unified school system on the country, but the *Länder* refused to play. They have always seen education as a question of local power, which explains why state governments ended up with such wide-ranging responsibilities for it. Yet in practice this has meant that German education combines the worst of both centralisation and devolution. To comply with the constitutional requirement for "equality in living conditions", the *Länder* must agree on some common rules, which has proved a barrier to reform: the body created for that purpose, the Standing Conference of the Ministers of Education and Cultural Affairs, has to agree unanimously on any change.

Another barrier to reform is ideology. Education has always been a battleground of ideas, particularly since the first *Gesamtschulen* (comprehensive schools) opened in the mid-1960s. Many on the left saw this type of school as a silver bullet to ensure equal opportunities for all. The right, for its part, made "Save the *Gymnasium*" its rallying cry. It seems to have won: only about 700 out of over 19,000 secondary schools are now *Gesamtschulen*.

Crucially, the main beneficiaries of the present system are determined to resist change. "This is about keeping many away from society's feeding troughs," says Wilfried Bos, head of the Institute for School Development Research in Dortmund. And indeed Germany's school system is brilliant at what it was built for: selection. In most *Länder*, following four years at elementary school, pupils are streamed into one of the three kinds of secondary school. A pupil who happens to be a slow learner or whose family does not particularly value education will find it very hard to move up from a less demanding school to a *Gymnasium*. By contrast, those who cannot keep up with the pace at the *Gymnasium* soon find themselves demoted.

Add the facts that teachers' unions wield lots of power and that schools are overregulated and underfunded, and it is easy to understand why German schools are inefficient and often ineffective. There are hundreds of curriculums that describe what teachers should teach, but few mechanisms to ensure that the children have

actually taken it in. Nor is much official attention given to individual support, whether for weaker or for exceptionally bright students. Instead, parents spend vast sums on supplementary private tutoring, often provided by teachers in their spare time.

## Life after PISA

Despite all this, Germans long considered their country's school system among the best in the world. What persuaded them otherwise was PISA, the OECD's Programme for International Student Assessment, which compares educational achievement in different countries. The first results in 2001 came as a nasty surprise: Germany ranked only 21st in reading skills and 20th in maths and science among 31 countries assessed. "The loss of reputation became a powerful force for change," says Dieter Lenzen, president of Berlin's Free University.

The "PISA shock", as it came to be known, did indeed trigger much reform activity, but all within the existing system. Western *Länder* began shortening the *Gymnasium* course, clearing out their curriculums and controlling their schools' output through state-wide exams. Their standing conference is now working on drawing up nationwide educational standards. And the federal government has started a euro4 billion programme to create *Ganztagsschulen*, or full-time schools.

The state of Baden-Württemberg is generally seen as a model in education, partly because its school system provides for some upward mobility and partly because it started out on reforms even before PISA. It was the first west German state to shorten the *Gymnasium* course by a year. But the core of the reforms, says Mr Rau, the education minister, are the new curriculums, which give each school a fair amount of autonomy. "It has always been an illusion to think that we are able to tell schools exactly what to do," says Mr Rau.

Since the reform, the schools themselves can decide how to fill a third of the lessons. The character of the curriculums has changed as well. In the past, for instance, English teachers in 10th grade were told how many words and which grammatical rules they had to teach their students and exactly what they should tell them about America. Now the curriculums are all about "competencies", general skills that students are expected to master. To make sure they do, they have to take state-wide tests every other year.

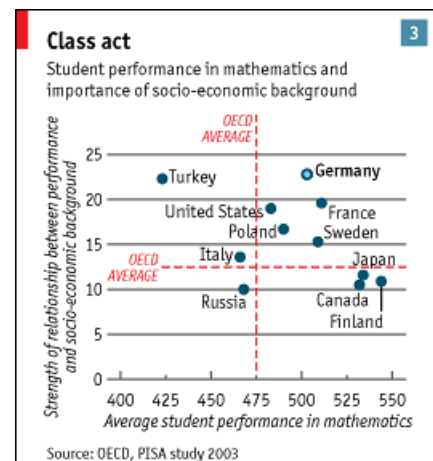
Some schools are already learning to make use of their new-found autonomy. At the Geschwister-Scholl-Gymnasium in Sillenbuch, a suburb of Stuttgart, the new curriculum has led to a series of internal reforms, says Irmgard Brendgen, the school's principal. Subject teachers, for instance, have had to start co-operating with each other and draw up guidelines for their area of expertise. Because school days are now much longer, the school decided to do away with the 45-minute lessons that are customary in Germany and replace them with periods of 90 minutes. This, in turn, set off new thinking about the best teaching methods for such a period. "It has been a demanding, but also a very positive process," says Ms Brendgen.

Yet elsewhere things have not gone so smoothly. Many *Gymnasien* in Baden-Württemberg seem to be stuck in their old ways: they do what they have always done, and just cram the same syllabus into a shorter period of time—hence the protests from parents. Yet critics also blame the plethora of new tests: schools will now teach to the tests instead of taking advantage of their greater independence.

At any rate, such reforms will not resolve the other big problem of Germany's education system: social segregation. Again, it has been PISA that has forced the country to face reality. When another round of results made headlines in November last year, German students' performance turned out somewhat better than the first time, but a different measure attracted more attention: a 15-year-old's school record depended more heavily on socio-economic background than in any other big industrial country (see chart 3). In Germany, the child of a professor is four times more likely to go to a *Gymnasium* than the equally bright child of a manual worker. The chances of an immigrant's child will be even more skewed.

Look at almost any *Hauptschule*, and you will soon discover that schools are not created equal either. The Pestalozzischule in Rohr, another suburb of Stuttgart, is certainly one of the better-run, and Maria Pfadt, the principal, goes to great lengths to give her students a good start. She works closely with local businesses, which regularly give presentations at the school (and one recently donated €250,000 for a building to house such events). She even gives classes in manners, and takes students to the opera to reduce social barriers.

Yet if the Geschwister-Scholl-Gymnasium comes across as a secondhand Mercedes in good repair, the Pestalozzischule is more like a beat-up Volkswagen. Its teachers give more lessons to larger classes but are paid less. More than a third of its students are immigrants' children, compared with 7% at the *Gymnasium* on the other side of Stuttgart (although, to be fair, fewer of them live in its catchment area). In the centres of big cities, the children of immigrants often make up the majority of a class, and sometimes all of it.



Even more disappointing for the students who attend a *Hauptschule*, Germany's famed "dual model" for apprentices (who spend half their time on the shop-floor and the other half in a vocational school) is no longer the social elevator it once was. Many would-be apprentices are crowded out by graduates of grander schools. And the maths demanded in some apprenticeships can be far too hard for somebody with only basic schooling. Besides, many German firms simply no longer take in apprentices. All this explains why more than half of vocational-school students no longer do a classic apprenticeship but enrol in some other professional programme.

At stake are not just equal opportunities, but the future prospects of the German economy. "The German education system is wasting valuable potential," says Andreas Schleicher, a co-ordinator of PISA research at the OECD. He has become something of a *persona non grata* among Germany's education establishment, perhaps because he dares to criticise his own country. Mr Schleicher thinks that in its education policy Germany needs to become more like Finland, which twice topped the PISA charts for literacy. For instance, it could start teaching children in nursery school rather than simply letting them play, stop selecting students for different types of schools so young, and create a culture of individual support.

In the long run, Germany may have no choice but to do away with its three-tier school system. Such attempts have failed before, but two new forces are now at work. One is demography: as the number of pupils drops rapidly, having just one, comprehensive, kind of school may be more efficient than maintaining three.

The other force is business, which cannot thrive without well-educated employees. It was a lobbying organisation for Bavarian business, the Vereinigung der Bayerischen Wirtschaft, that in 2003 published the most comprehensive study so far on how to reform Germany's education system. According to the PISA study, Bavaria has the best students in the country but the smallest proportion of those awarded the *Abitur*, which means that it has to import them from other *Länder*. In fact, in Germany as a whole the share of students who qualify for admission to university is low by international standards: the current number is only 35%, compared with an OECD average of 56%.

Moreover, for Mr Lenzen, the Free University's president who co-ordinated the Bavarian study, reforming Germany's schools will not be sufficient. He reckons that its nursery schools, universities and professional training also lag behind, and that the country needs to rethink its entire educational system to produce enough brains for its economy to prosper.

Yet the creation of outsiders is not the sole prerogative of Germany's school system. Social divisions are widened and deepened further by the labour market, the subject of the next article.



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