Germany

19 18 17 16 15 14 13 12 11 10 9 8 7 6	Compulsory schooling	**Upper secondary school** **General** (66 %) **Vocational** (34 %)
		Lower secondary school
		Primary school (Common track)
5 4 3		**Pre-school**

34.9% Population aged 25-34 with a tertiary degree [a]

14.9% Percentage of immigrant stock (% population) [b]

11.4% Population below the poverty line [c]

7.5% Youth not in employment, education or training (NEET) [d]

Average TIMSS/PIRLS scores (4th grade) [e]

Center point: 500

Reading	Math	Science
537	521	518

Average PISA scores (10th grade) [f]

OECD average

Reading	Math	Science
498 *487*	500 *489*	503 *489*

5% public spending in education as a % of GDP [g]

27.9 billions allocated in NPRR [h]

Sources: a, b, c, d, g: World Bank Indicators ; e: TIMSS 2019 report, PIRLS 2016 report; f: PISA 2018 results, h: European Commission

General features

Educational system

In Germany compulsory education starts at 6 and lasts until pupils are 18 or 19 years old (depending on the region). The majority of the education system is public, with roughly 10% of students enrolled in private schools[75] (although there is some evidence that the number of students in private schools is growing [76]).

While primary education follows a common path for everyone, with some exceptions (in Berlin and Brandenburg after grade 6), after grade 4 students are already asked to choose a track between (i) general education (ii) vocational education and training (iii) dual-system educational training (which includes both education in school and education at the workplace).[77]. In some federal states of Germany, students enroll in 2 years of ”orientation” after primary school, which is intended to help them decide in which secondary schools they would like to enroll. Usually, the primary school teacher provides parents with counseling on which school they should send their child to. Immigrant stock represented roughly 15% of the population, and migrants' main countries of birth are Poland (12%), Turkey (10%) and Russia (7%). The top three nationalities of newcomers in 2018 were Romania, Poland and Bulgaria[78] The rate of early school leavers is similar when compared to the EU average (10.3% versus 10.2% in 2019), while the percentage of people with tertiary educational attainment is lower (35.5% compared to 40.5%). The percentage of youth not in employment nor in education and training is low compared to the EU average (7.5% versus roughly 13 %).

Governance and funding

Governance in education is highly decentralized, with federal states (Länder) themselves having the right to legislate even on matters that in most countries are responsibility of the central state, such as teacher's career path, remuneration and pension are within the Lander jurisdiction.[79] The system is predominantly public, with the majority of the institutions financed from public budgets. Financing decisions are taken at the three different administrative levels that have jurisdiction (Federation, Länders and local authorities or Kommunen), but the overwhelming majority of public expenditure (around 90 per cent) is provided by Länders and local authorities[80].

Performance

According to the last PISA assessment (2018), students in Germany scored higher than the OECD average in all the subjects of the assessment (reading, maths and science). The percentage of students who reached basic skills in reading, maths and science is higher than the OECD average in all subjects: (respectively 79% 79% and 80% compared to OECD averages of 77% 76% and 78%).

Overall, the trend in reading performance throughout the past editions is small but negative, slowly returning to the levels of 2009. In mathematics, the trend is decreasing as well, with a significant lower score in 2018 than in 2012 (500 versus 514). Also performance in science saw a downward trend (503 points), with a score below the level of 2006 (516 points). This might be due in part to the change in demographics (immigrant, gender and socio-economic status) since Germany is a destination country, where many low-educated immigrants are settled[81].

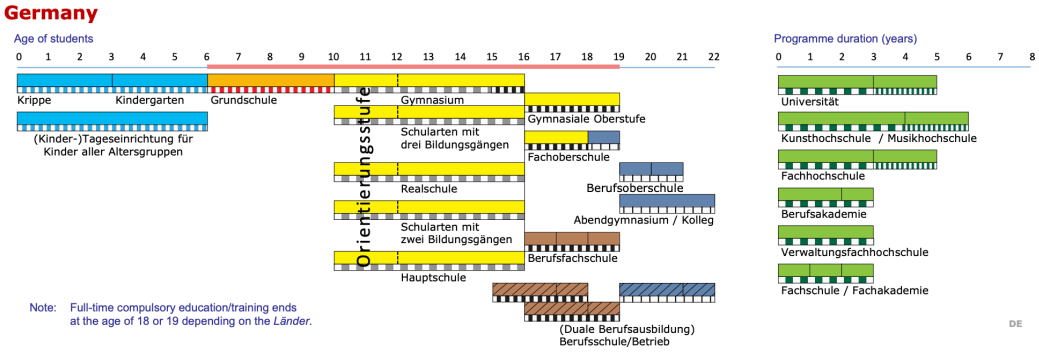
The gender gap in reading is in favour of girls (26 percentage point), slightly lower than the OECD average (30), while in maths the gap is reversed, with boys outperforming girls by 7 points (OECD average: 5 points). Girls performed similar to boys in science, but this is due to a decline in boys' performance compared to past PISA editions[82].

Socio-economically advantaged students outperformed disadvantaged one by 113 score points, a number that is higher than the OECD average of 89. 10% of them, a slightly lower number than the OECD average (11%), was able to score in the top quarter for reading. Socio-economic status explained a higher portion of the variation in performance when compared to the OECD average: respectively 18% of the variation in maths and 19% of the variation in science compared to the OECD average of 13% and 14%.

In the PISA sample, students with an immigrant background grew from 18% to 22% in Germany. Roughly half of them comes from a socio-

[75] UNESCO data, 2019
[76] https://www.thelocal.de/20190807/explained-why-private-school-enrolment-across-germany-is-growing/
[77] https://eurydice.eacea.ec.europa.eu/national-education-systems/germany/overview
[78] International Migration Outlook 2020
[79] https://eurydice.eacea.ec.europa.eu/national-education-systems/germany/organisation-and-governance
[80] idem
[81] PISA 2018 Results, Germany Country Note
[82] idem

Figure 1.6: Educational system in Germany



economically disadvantaged background. Native students scored on average 63 points more than immigrants, and even after having taken into account socio-economic status, the difference is smaller but persists (17 points). However 16% of immigrant students scored in the top quarter of reading, a similar number when compared to the OECD average of 17%.

On average, self-reported absenteeism is lower than the OECD average (13% versus 21% of students reported to have missed a class in the preceding two weeks of the PISA test) and the percentage of late entries to school is similar to the OECD average (46 % versus 48 %).

PISA data show that in Germany, low- and high-performing students are grouped together in certain schools more often than the OECD average. This is also due to early selection and tracking into various school forms.

Students' career aspirations reflect gender stereotypes: among high-achieving students in mathematics and science, 13% of girls expected to work in an engineering or science job, compared to 25% of their male counterparts. 25% of girls wanted to work in the health-related sector (compared to less than 10% of boys) and only 1% of girls expected to work in an ICT related job (compared to 7% of boys).

Among high-achieving students, a high percentage of disadvantaged ones (66%) expected not to complete tertiary education, compared to roughly 25% of the advantaged students.

Key policy challenges

Germany is facing challenges in ensuring educational quality and equity to everybody: despite the efforts to integrate new migrants, reading performance among foreign-born students in Germany plummeted between 2009 and 2018; immigrants are also more likely to leave school prematurely: in 2019, the percentage of foreign-born school leavers was of 24.2% compared to 8.1% of natives[83].

Another important challenge for Germany is the shortages of teachers, which is more prevalent in disadvantaged schools. The combination of ageing teachers, changes in the population of student, and declining attractiveness of the teaching profession is exacerbating the problem. In this context, an opportunity emerges to directly empower schools, redefining the role of the principals to be a driver of school improvement.

During the next academic year, Germany will face increasing challenges in order to offer quality of education to refugee children in their schools. According to the United Nations, Romania, together with Poland, Germany, Czech Republic, Italy, Moldavia and Slovakia, is hosting the highest number of Ukranian refugees since Russia's invasion of Ukraine[84].

There are still important differences in each single Länder's capacity and funding and there is more and more pressure to increase efficiency in financing given the growing students' population.[85]

Recently enacted policies and investments

Germany has developed several measures to integrate migrants in education through vocational education and training, such as launching the *"Recognition in Germany"* portal[86] in 2012: a multilingual portal which aims to provide people with an immigrant background with informa-

[83] EU Education and Training Monitor, 2020
[84] https://data.unhcr.org/en/situations/ukraine
[85] Education Policy Outlook Country Report: Germany
[86] https://unevoc.unesco.org/pub/bibb_pp3.pdf

tion on the German labour market and recognition of acquired certifications. Another initiative carried out since 2016 is the "Career Guidance for Refugees (BOF)" (*Berufsorientierung für Flüchtlinge, BOF*)[87]: in the context of BOF, refugees participate in Vocational and Educational Training and are offered counselling and language courses. Other initiatives along the same line are the Vocational Language Training programme (2016) and the network of Co-ordination Offices for Vocational Training and Migration (enhanced from 2013)[88].

In order to strengthen digitalization of the system, Germany launched the *Digital Pact for Schools (2019)*[89], with which it is investing in improving the digital infrastructure of schools and promoting digital literacy among both teachers and students.

To facilitate digital transition in education, Germany allocated 630 million euros of the Recovery and Resilience Plan to build the first nationwide online education platform to help learners acquire competences based on their individual learning pathways[90].

[87] https://www.berufsorientierungsprogramm.de/bop/de/angebot-fuer-zugewanderte/berufliche-orientierung-fuer-zugewanderte-bof/berufliche-orientierung-fuer-zugewanderte-bof_node.html

[88] idem

[89] https://www.digitalpaktschule.de/

[90] Germany Recovery and Resilience Plan