



DIPF

Educational Research
and Educational Information

Germany: Education System and Issues

Nina Jude

German Institute for International Educational Research

The 16 federal states



- 12 Mio. students in schools between grade 1 and 13
- 8.6 Mio students in primary and lower secondary education
- 15,2 % (1.3 Mio.) in all day schools
- 7.6 % (900 000) in private schools
- Different school types and systems
- Differences in curriculum
- Comparable degrees
- Comparable educational standards to measure achievement in primary and secondary education

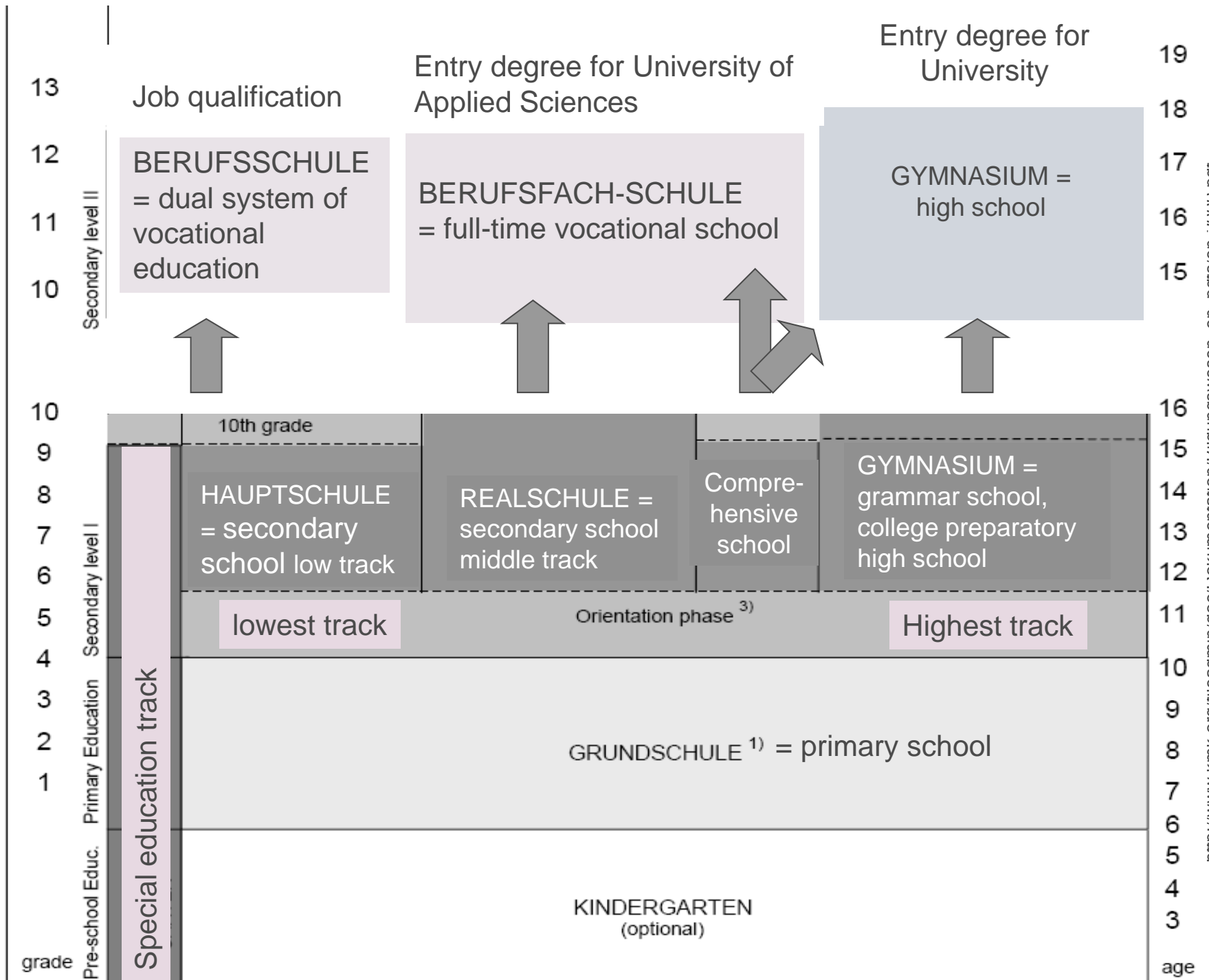
Administrative structure – Federal system

- Responsible body: *The Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany* (“Länder” = federal states)
- unites the ministers and senators of the federal states responsible for education, higher education and research as well as cultural affairs.
- based on an agreement between the federal states :
 - to agree on the accordance and comparability of certificates and final qualifications,
 - to work towards safeguarding quality standards in schools, vocational training and higher education,
 - to promote co-operation among educational, scientific and cultural institutions.
- Development and evaluation of national educational standards to ensure the comparability of educational tracks and final exams.
- For more information <http://www.kmk.org>

School structure

- Tracked system
 - Track specific teacher education
 - 9 (10) years of compulsory general education
 - 3 years compulsory vocational education
- In Berlin and Brandenburg the primary school comprises six years.
- Since 2007: Gradual conversion to eight years at the Gymnasium
 - Different educational pathways after transition between primary school and lower secondary school

Tracks	
Hauptschule	22 %
IGS	15 %
Realschule	26 %
Gymnasium	32 %
Special education	5 %





DIPF

Educational Research
and Educational Information

School structure

- HAUPTSCHULE
 - practical skills rather than academic knowledge,
 - one foreign language
 - further qualification or vocational education after grade 9 depending on marks.
- REALSCHULE
 - extended education
 - minimum one foreign language
- GYMNASIUM
 - wide range of subjects
 - minimum two foreign languages
- Comprehensive schools
 - main subject are divided into different tracks/courses
 - Transition after grade 10 depending on achievement and marks

Assessment systems

- International :
 - Trends in International Mathematics and Science Study TIMSS in 1995, 2007
 - Programme for International Students Assessment PISA since 2000
 - Progress in International Reading Literacy Study PIRLS 2001, 2006
 - Programme for the International Assessment of Adult Competencies PIAAC
- Not participating in the Teaching and Learning International Survey TALIS, but teacher questionnaires for PISA sample

Assessment systems

- National educational standards as part of the system monitoring (low stakes)
 - for grades 3 (primary education) in German and Mathematics
 - And grade 8/9 (end of compulsory education) in German, Mathematics, Science, English/French
 - Sample of schools
 - Feedback to teachers
 - Feedback to ministries
- National tests grade 3 and 8 based on national standards
 - German, Mathematics, English/French
 - All schools
 - Feedback to teachers and students
 - Relevant for promotion

Major educational issues discussed in the country

- Rather huge variance between competencies of 15-year olds in Germany
- Differences between achievement of federal states within Germany
- Differences in instruction time between federal states
- Low achievers (on or below level I) 15% or more
- In 2006: 76.000 students left school without final exams
- High achievers in mathematics and reading do not reach international maximum
- Girls outperform boys in reading, boys show higher competencies in mathematics
- Higher-than-average number of students with immigrant background and low socio-economic status in the lowest educational tracks,
- Students with immigrant backgrounds are represented lower-than-average in the highest educational tracks

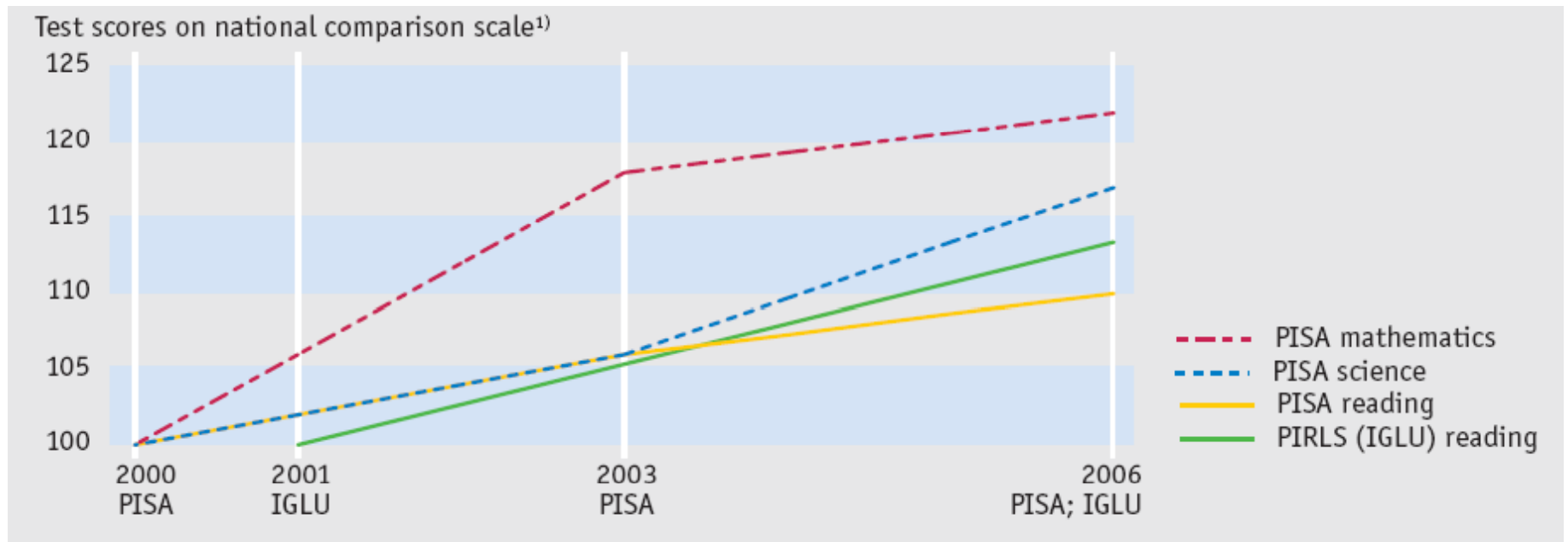
Major education issues - equality

- **Growing use of early childhood education and care provisions:**
 - Almost all four- to six-year-olds, 90% of three-year-old children
- **More than 1.2 million new entrants to vocational education and training**
- **Number of secondary general school leavers without final qualification remains high.**
 - 76,000 students left school without certification
- **Disparities of sex: young women increasingly successful / new problems for boys.**
- Girls enter the school systems earlier
 - achieve better at the key competence of reading,
 - less likely to leave school without qualification or drop out study courses,
 - are quicker and more successful as regards the transition to work.
 - But: Significant differences in employment/wages
- Boys have growing risk of failing in the education system, particularly male students with immigration background.

Major education issues - competencies

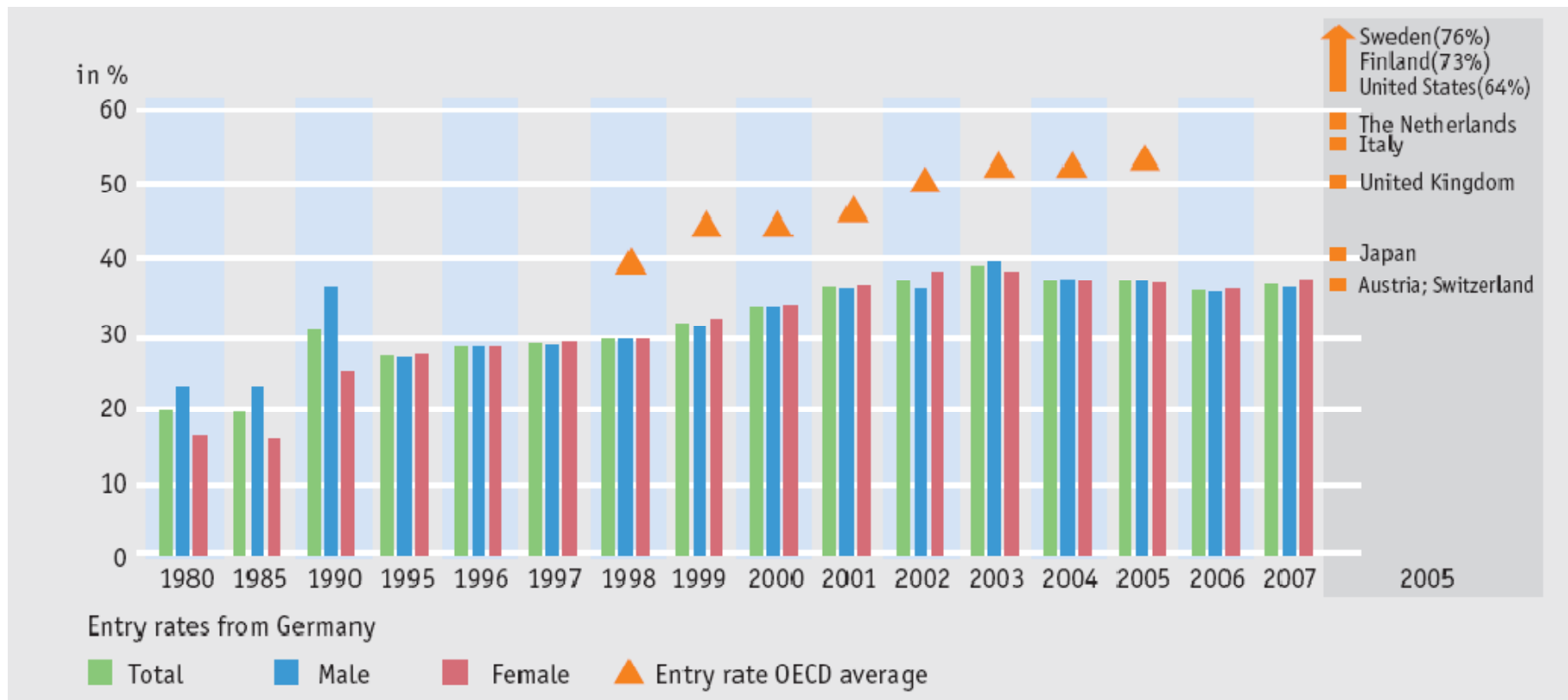
- **Average competence level at school age has risen.**

The achievement levels of 15-year-old students have increased for mathematics and the sciences between 2000 and 2006.



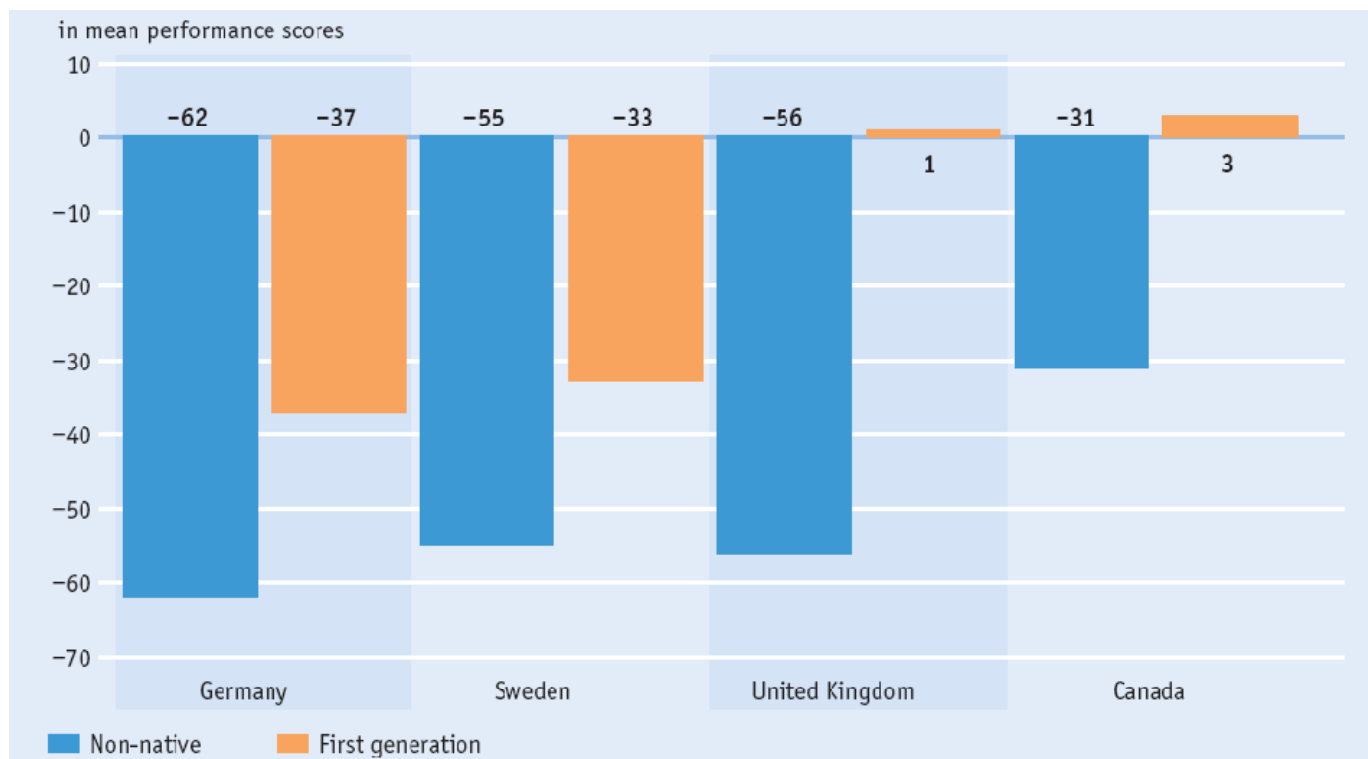
Major education issues – higher education

- Proportion of students qualifying for higher education is increasing, but
- Demand for higher education remains too low (36%). Graduates 22%



Major education issues - immigration

- Differences in mean performance scores on the reading scale (PIRLS) of non-native and first-generation immigrants compared to non-immigrants



Major education issues - immigration

- **29% of population with immigration background**
- in some areas 50% and higher, which proves a particular challenge to the education system.
- **A immigration background is disadvantageous at all stages of the school system.**
 - Less likely to attend Gymnasium/ higher secondary education
 - more often found in lower qualification school types even if their social status is equal
 - Twice as many foreign students leave school without final secondary qualification
 - German students three times more successful in obtaining higher education entry qualification
- **Youths with immigration backgrounds show delayed and less successful transitions to vocational education.**
 - German students transition after 3 months
 - Immigration backgrounds 17 months
- **No disparities caused by immigration when entering the labour market.**

Challenge

- **Implementing early and appropriate means of intervention and support**
 - Mandatory language diagnostics in kindergarten
 - Language training before primary education
 - continuous support of young persons with immigration backgrounds
 - promotion of disadvantaged groups of students
- **Professionalization of teacher and pedagogical staff**
 - Development of early childhood education as a profession and discipline
 - Recruit and professionally qualify teachers required for math, sciences and technology related subjects
- **Monitoring and evaluation of programs**

Focus on PISA skills in education

- First language, mathematics and science are core subjects in Germany
 - Importance reflected in the time table / amount of lessons
 - Marks are relevant for promotion between grades and transition within school system
 - Priority in development of national standards
- National standard based assessment focuses on these skills

Focus on PISA skills in teacher education

- Pilot programs for teacher training in math and science funded by state and federal states (SINUS) since 1998
- Goals:
 - to encourage processes of teacher professional development
 - to foster the quality of mathematics and science instruction, and
 - to enhance the students' attitudes/ interests and competencies in mathematics and science.

by

- modular approach to problems
- building co-operations and networks between teachers and schools
- quality development
- scientific support

Focus on PISA skills in teacher education

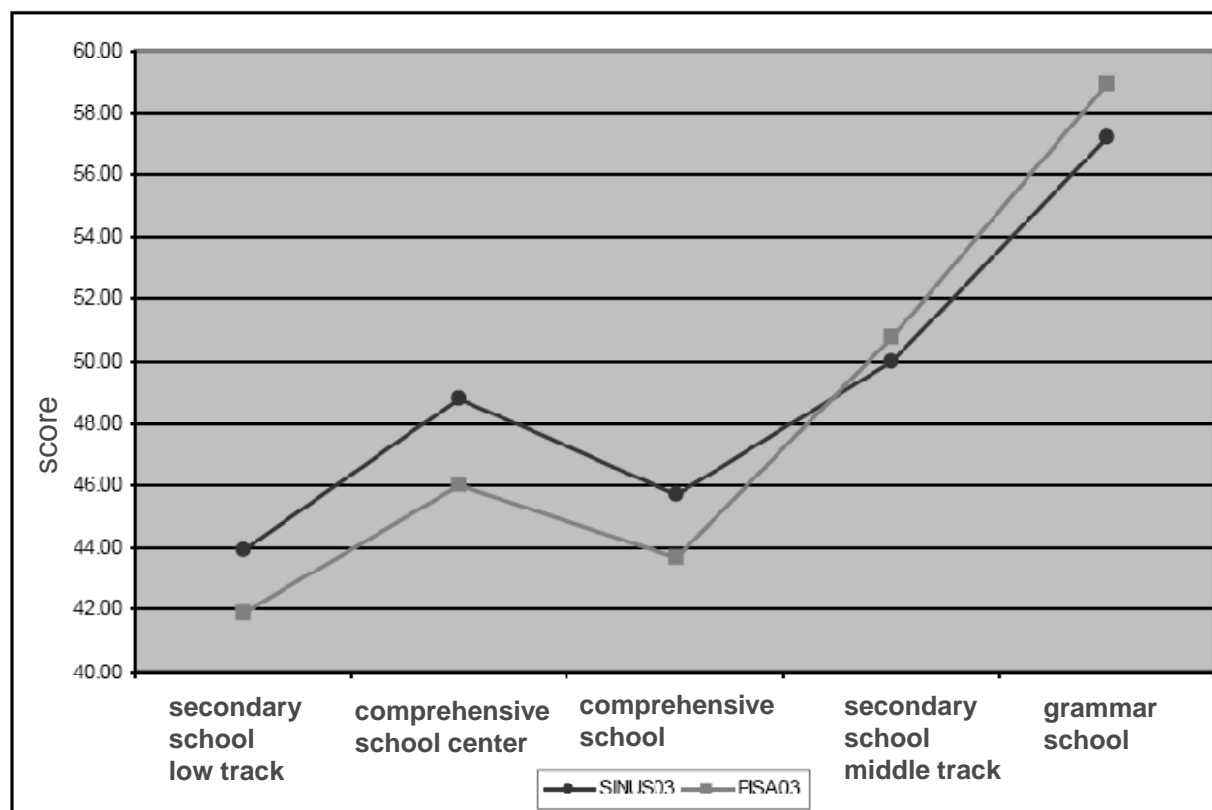
- changes in instructional tasks and materials
- meaningful experiments
- Self-regulated learning

Final data collection in 2003 and comparison to PISA schools:

- successful implementation of SINUS by the teachers
- positive student perception of the quality of mathematics and science instruction
- higher attitudes, interests and competencies
- lower and medium tracked school forms seem to have profited most by the programme

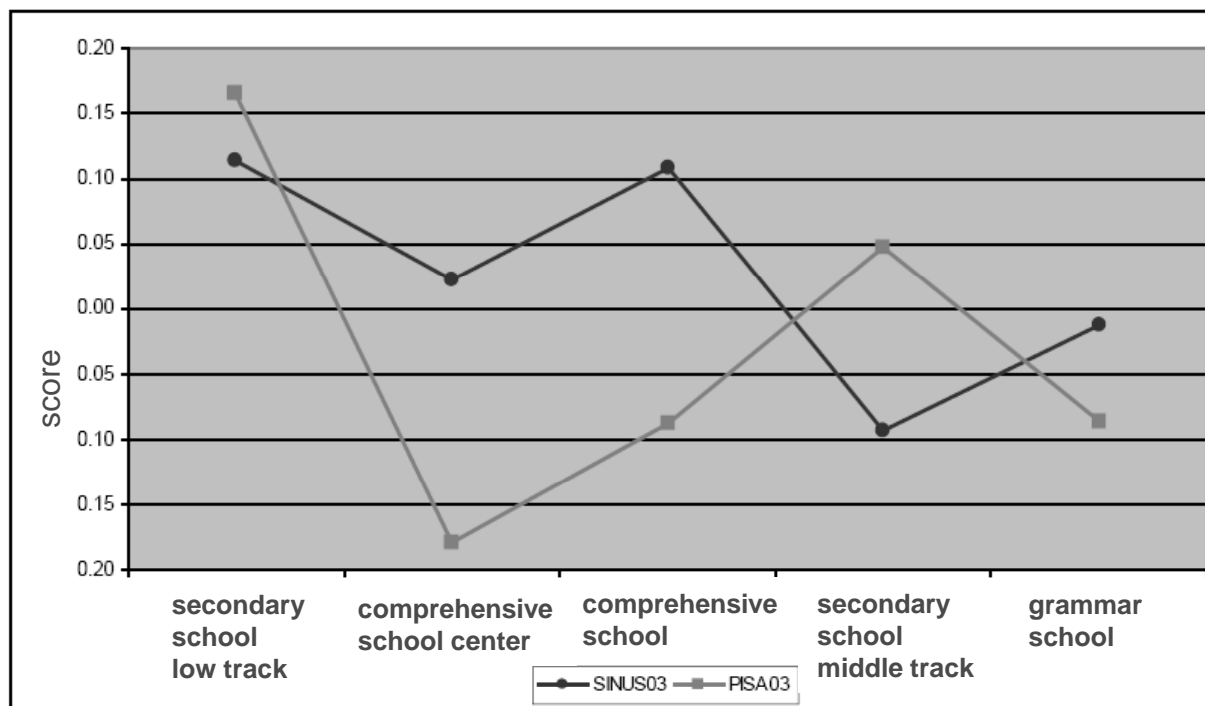
Focus on PISA skills in teacher education

- Competence in PISA 2003 mathematics, SINUS schools and regular schools



Focus on PISA skills in teacher education

- Interest in mathematics in PISA 2003, SINUS schools and regular schools



Prenzel, M./Carstensen, C. H./Senkbeil, M./Ostermeier, C./Seidel, T. (2005): Wie schneiden SINUS-Schulen bei PISA ab? Ergebnisse der Evaluation eines Modellversuchsprogramms. In: Zeitschrift für Erziehungswissenschaft Jg. 8, H. 4, S. 487-501.

Further reading

The National Report on Education 2008

<http://www.bildungsbericht.de/>

