

Educational Challenges of the 21st Century - Stormarnschule Ahrensburg -



PISA Shock 2000

✓PISA

- New millennium starts with an 'earthquake' for educationalists and the general public in Germany
- PISA¹- and TIMMS² Studies show unexpectedly weak results for Germany
- „Miserable Noten für deutsche Schüler" (Abysmal marks for German students) [Frankfurter Allgemeine Zeitung](#), December 4, 2001



1) Programme for International Student Assessment

2) Trends in International Mathematics and Science Study

PISA Shock

✓PISA

- Results 2000:

Skills	Points	Rank
Literacy, Reading	484	21
Mathematics	490	20
Science	487	20

- Results 2009:

Skills	Points	Rank
Literacy, Reading	497	20
Mathematics	513	16
Science	520	13



Consequences

✓PISA

✓Consequences

- The PISA results (PISA Shock) initiate a broad educational debate in Germany
- This debate focusses on the following points:
 - The role of education for Germany's future as a leading industrialized country
 - The efficiency of the school system (three-tier selective system vs. comprehensive system)
 - Possibilities of a better educational integration of immigrant children and children from disadvantaged social backgrounds
 - Methodological weaknesses of the PISA studies



OECD
PISA
Deutschland

Political and legal framework of education in Germany

- ✓ PISA
- ✓ Consequences
- ✓ Framework

- Germany has not one educational system but 16
- According to the Constitution: school education is the exclusive domain of the State Governments
- Central Government has only limited powers in educational matters
- Standing Conference of Education Ministers of the States (KMK - Kultusministerkonferenz) acts as coordinating body
- Coordination and reform processes are slow



Changes

- ✓PISA
- ✓Consequences
- ✓Framework
- ✓Changes

- PISA Shock triggers changes in the following fields:
 - Curriculum
 - School organisation
 - Evaluation and assessment
 - Teacher training
- No all-German approach to the changes
- Changes are characterized by different speeds and different emphases in different States



Curriculum

- ✓PISA
- ✓Consequences
- ✓Framework
- ✓Changes
 - curriculum

- The curriculum debate had already started in the 1990s
- A modern curriculum has to take into consideration:
 - A changing social environment
 - The demands of a globalizing world and the international market place
 - An enormous increase in knowledge
 - Rapid technological change



Curriculum

- ✓ PISA
- ✓ Consequences
- ✓ Framework
- ✓ Reforms
 - curriculum

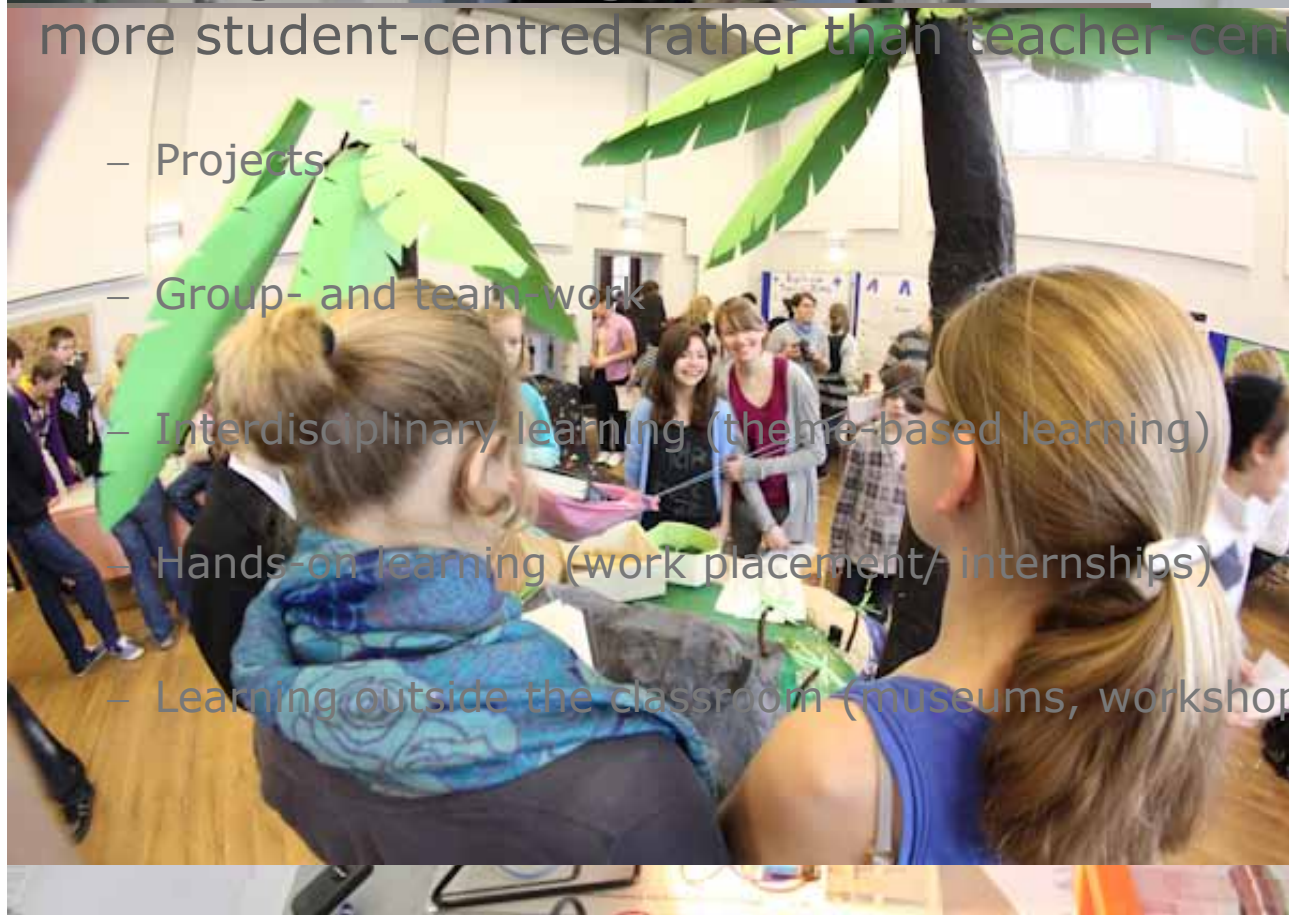
- Shift in the curriculum from knowledge-based to skill-based teaching objectives such as:
 - Knowledge-acquiring skills
 - Method-acquiring skills
 - Intercultural skills
 - Self-organizing skills
 - Social skills
 - Presentation skills



Curriculum

- ✓ PISA
- ✓ Consequences
- ✓ Framework
- ✓ Changes
 - curriculum

- Teaching and learning changes in order to become more student-centred rather than teacher-centred



- Projects
- Group- and team-work
- Interdisciplinary learning (theme-based learning)
- Hands-on learning (work placement/ internships)
- Learning outside the classroom (museums, workshops etc.)



Evaluation and Assessment

- ✓ PISA
- ✓ Consequences
- ✓ Framework
- ✓ Changes
 - Curriculum
 - Assessment

- More standardization and more diversity
 - The Conference of Education Ministers (KMK) defines educational standards for certain key levels
 - Standards exist for: German (mother tongue), Maths, 1st Foreign Language
 - Standards are based on internationally accepted models as in PISA and the Common European Framework of Reference for Languages (CERF)
 - Introduction of standardized tests such as VERA
 - Centralized elements in the school-leaving examinations
 - Alternative forms of examinations are introduced (group exams, presentation exams, portfolios, research assignments etc.)



School Organization

Traditional system

Grade	Simplified Structure of German Educational System		Abitur school leaving certificate	Age
13	Dual vocational training: on-the job-training plus technical college		Upper school Gymnasium	19
12				18
11				17
	1st general education certificate	Realschule certificate		16
10		15		
9	Hauptschule ↔ Realschule ↔ Gymnasium			14
8				13
7				12
6	Orientation phase	Orientation phase	Orientation phase	11
5				10
4	Primary education: Grundschule			9
3				8
2				7
1				6
	Pre-school education: Kindergarten (optional)			5
				4
				3
Grade				Age

- ✓ PISA
- ✓ Consequences
- ✓ Framework
- ✓ Changes
 - Curriculum
 - Assessment
 - Organization



School Organization

New system

- ✓ PISA
- ✓ Consequences
- ✓ Framework
- ✓ Changes
 - Curriculum
 - Assessment
 - Organization



Grade	Simplified Structure of German Educational System		University or vocational training	Age
13	Dual vocational training: on-the job-training plus technical college	Abitur school leaving certificate (after 13 years)	Abitur school leaving certificate (after 12 years)	19
12		Upper school Gemeinschaftsschule	Upper school Gymnasium	18
11				17
				16
10	Regionalschule/ Gemeinschaftsschule		Gymnasium	15
9				14
8				13
7				12
6	Orientation phase		Orientation phase	11
5				10
4	Primary education: Grundschule			9
3				8
2				7
1				6
	Pre-school education: Kindergarten (optional)			5
				4
				3
Grade				Age

German Education after 10 Years of Reforms

- ✓ PISA
- ✓ Consequences
- ✓ Framework
- ✓ Changes
 - Curriculum
 - Assessment
 - Organization
- ✓ Summary



- Positive aspects
 - Education is at the forefront of the political and social debate (Merkel: « Bildungsrepublik Deutschland »)
 - Many (useful) reforms have been executed or initiated
 - Some extra-money has gone into education
 - The latest PISA results show some improvements
- Negative aspects
 - No coherent concept of reforms on the national and/or State level
 - Education is still underfunded compared with similar nations (Germany 5.8% of GDP, Ø OECD 6.3%)
 - Debate is highly ideological and political (an incoming government often reverses already implemented changes)
 - Consequently a certain 'reform fatigue' exists

- Stormarnschule Ahrensburg -

