Teacher Education and Development Study (TEDS-M)
Mathematics Teaching in the 21st Century (MT21)
Learning to Teach German and English (TEDS-LT)

Humboldt University of Berlin, Department of Instructional Research

Teacher Education and Beginning Teachers in Germany

Sigrid Blömeke (Humboldt University of Berlin, Germany)
Brief historical overview

- development of teacher education linked to the development of schools
- no organized structure until 1800, teaching profession not a special career but second choice e.g. of priests or soldiers, Wilhelm von Humboldt crucial
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- since 1810 university-based teacher education including state exam for Gymnasium teachers (5-13) in Prussia and Bavaria, since 1890 additional on-the-job training, since 1910 second state exam
- since 1820 two-year trainings for elementary school teachers (grades 1-7), continually expanded, introduction of examinations until 1900
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- high school teachers and teachers for elementary schools were considered to be two totally different professions
Several vocational schools

Hauptschule (practical abilities)

Realschule (secondary modern school)

Gymnasium (grammar school)

Gesamtschule (comprehensive school)

Elementary school

[In Berlin and Brandenburg lasting for six years]

Grade

Regular school system

Special-needs schools

Several kinds of schools

(attendance depends on kind of handicap)
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<td>grades 1–4</td>
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<td>Realschule 5–10</td>
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Important organizational features

- academic study at universities as first phase, then practical training phase
- within universities training in CK and PCK at departments of math, humanities etc., GPK at departments of education; 2- or 3-subject teachers
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- Academic study at universities as first phase, then practical training phase
- Within universities training in CK and PCK at departments of math, humanities etc., GPK at departments of education; 2- or 3-subject teachers
- Every state its own legislative framework, general agreement across states
- Length of the first phase: 3.5-4.5 years, second phase: 1.5-2.0 years
- ISCED 3 (Abitur) entry requirement, high-stakes exam in 4-5 subjects covering math, science, German, humanities; no entry exams at univ.
- First state examination high-stakes exam with written, oral exams and thesis, ISCED 5A First Degree; second state examination high-stakes exam with teaching lessons, oral exams and thesis, ISCED 5A Second Degree
National level governance

- legislation for education and cultural affairs devolved to the federal states
- Conference of Ministers for Education and Cultural Affairs coordinates educational issues (KMK) but gives only recommendations
- Mathematics compulsory in all grades and school types, at elementary school 20% (5 lessons/week), middle school 13% (3-4 lessons/week)
- national standards for mathematics since 2004, grades 4, 9/10 and 12
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Recruitment and entry into teaching

- limited selection processes, freedom of career choice constitutional right
- future teachers with a first state exam have the right to continue
- Employment procedures vary across federal states: application at the Ministry of Education, regional or local education authority or schools
- teachers employed as civil servants, first on probation, after 3 years tenure
The special case of novice teachers

- Germany’s second phase could be regarded as induction process
- full responsibility for 6-8 lessons/week including student assessment
- novice teachers have therefore more experience than in other countries
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First video (00:00-02:30 and 09:45-10:45):
- Opening of a lesson about path-time-diagrams, then group work
- Typical advantage of a novice teacher: creative idea, motivating approach
- Typical problem: questions too open, inprecise wording, fillers; waiting time short, therefore much teacher talk, little mentoring during group work
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Second video (00:00-02:30):
- Opening of a lesson about weight of a sphere, modeling approach
- Typical advantage of a novice teacher: creative idea, combination of several approaches, modern idea of math, rules about participation
- Typical problem of a novice teacher: not very efficient