Monitoring and improving educational quality in Hamburg

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Overview

1. Educational monitoring
   - Definition
   - Framework
   - Procedures / instruments
   - Normative foundations
2. Example: Data driven school improvement through school inspections?
3. Example: Assessment of students learning
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2. Example: Data driven school improvement through school inspections?

3. Example: Assessment of students learning
What is educational monitoring?

Monitoring can be defined as an ongoing process of observation and control of

- context, inputs, processes and outputs in the educational field
- at all system levels (students, classroom, school, district, state, national…)
- in order to identify strengths and weaknesses, formulating practical proposals for action to be taken, and guiding the necessary steps to reach the expected results.

Monitoring procedures are characterized by using data-based information.
Following a model of educational productivity, the IfBQ delivers several products and services to monitor and improve educational quality:

- **Context**
  - Hamburg report on education
  - regional atlas on education

- **Input**
  - reference framework on school quality („Orientierungsrahmen Schulqualität“)

- **Processes**
  - school inspection Martina Diedrich

- **Output**
  - analysis of PISA; TIMSS; IGLU/PIRLS; IQB-Ländervergleich
  - system-wide longitudinal assessments: LAU, KESS
  - system-wide assessments / feedback to schools and teachers on class-level: stage 2, 3, 5, 7, 8, 9 („KERMIT“) Jan Poerschke
  - language screening before and during school time
  - evaluation of state-wide exit exams
1. Educational monitoring
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2. Example: Evaluation of schools / school inspectorate
3. Example: Assessment of students learning
Foundations of educational monitoring

- Individual empowerment
- Equity
- Good Governance
Do we guarantee the accomplishment of individual educational demands?
Do we succeed in escorting students through all stages of institutionalised education?

Do we reduce social-related disparities in education?
Do certificates reflect individual achievement?

Do institutional structures / procedures work in an efficient and goal-oriented way?
Do we succeed in steering the system on all levels?
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School inspection in Hamburg: functions

- School inspection in Hamburg has been founded in 2007 ...

  ⇒ to facilitate school improvement

  ⇒ to guarantee minimal standards of school quality at school level

  ⇒ to create a knowledge base for school quality at system level

  ⇒ to make schools aware of normative expectations about school quality

  ☝ functional mixture with sometimes contradictory expectations school inspection has to fulfill
Development / Improvement

rather formative perspective – support for new programs, measures etc.

Research

effectiveness and efficiency

Accountability/control

Controlling of implementing programs; accordance to planning

Chelimsky, 1997; Klieme/Abs, 2005
Relevant actors in school improving

School supervisory board

Schools

School inspection

Teacher training/School improvement agencies
Hamburg school inspection should …

• … inspect every public school in Hamburg within 4 years (de facto 6 to 8 years)

• … write reports about individual school findings to schools and school supervisory board

• publish biannual reports about findings aggregated at the system level for policy making and public interest
Process of inspection

School visit

Presentation of findings at school

+ 2 weeks

Publication of the report at www.hamburg.de/schulen/schulinspektionsberichte

+ 8 weeks

Response to school supervisory board

+ 4 weeks
Some findings at the system level

- **Schools are doing good in**
  - leadership and management skills except for human resources development
  - stakeholder participation
  - stakeholder loyalty and employee satisfaction

- **Schools have to improve in**
  - individual facilitation of students
  - evaluation of students’ achievement
  - making up their curricula
Evaluating instructional quality

- **instrument:** classroom observation form with 30 items describing 4 areas of instructional quality
  - classroom management
  - variation of didactics
  - motivation and student orientation
  - differentiation, competence oriented learning
- **classroom observation**
  - 40 * 20 minute sequences in small schools
  - 80 * 20 minute sequences in large schools
- **Results**
  - classroom management, variation of didactics
  - motivation and student orientation
  - differentiation, competence oriented learning
Challenges and lessons learned

• School inspection does not deliver eternal truth.
  ⇒ Rather, we offer a specific view, a data driven interpretation, one possible perspective among others.
  ⇒ Schools should process this perspective and try to integrate it into their own perceptions.

• School inspection is one evaluation instrument among others.

• The quality of the data does not determine the quality of the reception process at the school.
  ⇒ Rather, it depends on the communication process between schools and school inspection and on the openness of the schools.
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Concept and objectives of KERMIT

- KERMIT – Kompetenzen *ermitteln* = identifying competencies

- obligatory and system wide assessments in all schools in Hamburg

- monitoring the knowledge gain and learning success of all students

- the results of KERMIT serve primarily the improvement of school and classroom education
## Concept and objectives of KERMIT

<table>
<thead>
<tr>
<th>Time of testing</th>
<th>Test contents</th>
<th>Test realization</th>
<th>Reference framework</th>
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</thead>
<tbody>
<tr>
<td>2nd grade</td>
<td>• German</td>
<td>Teacher</td>
<td>Educational curriculum of Hamburg</td>
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<td></td>
<td>• Mathematics</td>
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<tr>
<td>3rd grade</td>
<td>• Mathematics</td>
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<td>5th grade</td>
<td>• German</td>
<td>external test administrator</td>
<td>Educational curriculum of Hamburg</td>
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<td>7th grade</td>
<td>• German</td>
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<td>• Mathematics</td>
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In general, the schools receive the response six to eight weeks after testing.

Feedback formats:
- school based
- based on the classes
- for the school public
- individual feedback for the students

In addition:
- Feedback for the supervisory board
Comparison schools…

- eight schools of the same type of school, which are as similar as possible in their social composition
- Features for "similarity" is selected socioeconomic information, for example reached educational qualifications of parents, household net income, number of books etc.

Transformation of the scale values:

Average of all students = 500 / standard deviation = 100 (based on PISA)

Differences of 30 points (about one-third of a standard deviation) and more are pedagogically significant on class or school level.
Comparison of mean values for school, comparison schools and type of school (KERMIT 5, Stadtteilschule)

Feedback of the results and how to deal with them
Feedback of the results and how to deal with them

Comparison of means between the parallel classes (KERMIT 5, Gymnasium)

Mean value of comparison schools

difference = 98 points!

<table>
<thead>
<tr>
<th>Klasse 5.1 (N=24)</th>
<th>Klasse 5.2 (N=27)</th>
<th>Klasse 5.3 (N=27)</th>
<th>Klasse 5.4 (N=29)</th>
</tr>
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<tbody>
<tr>
<td>493</td>
<td>540</td>
<td>554</td>
<td>591</td>
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mean value of comparison schools
Feedback of the results and how to deal with them

Medium improvement of performance (KERMIT 5 - KERMIT 7, Gymnasium)

- Your class (N=23): 467 to 511 (+44)
- Your school (N=57): 464 to 500 (+36)
- Comparison schools: 490 to 557 (+67)
- Gymnasien: 491 to 559 (+68)
Feedback of the results and how to deal with them

Distribution of individual test results (KERMIT 5)
Feedback of the results and how to deal with them

Distribution of individual learning success (K 5 - K 7)
Cycle of quality management

- Decide, improve
- Evaluate
- Set goals, plan measures
- Implement measures
- Do
- Check
- Act
Thank you for your attention!

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