Promise and perils of learning data on schools and students: international lessons

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Regional workshop on promoting the use of information for accountability in education

Marseille, 12 September 2017
Two words about the Report

As Education for All Global Monitoring Report, 12 issues were published between 2002 and 2015 monitoring the six EFA goals

Editorially independent team based at UNESCO and funded by 15 bilateral donors / foundations

Received extended mandate in 2015 to monitor education in the SDGs

The GEM Report will be the mechanism for monitoring and reporting on SDG 4 and on education in the other SDGs ... It will also report on implementation of national and international strategies to help hold all relevant partners to account for their commitments as part of the overall SDG follow-up and review.
Report themes

2016  Education and the SDGs
       + SDG monitoring challenges
       (launched 6 September 2016)

2017/8  Accountability
        (to be launched 24 October 2017)

2019  Migration and displacement

2020  Inclusion
Who has responsibility for access, equity and quality in education?

Actors involved in accountability for SDG 4

- Governments
- Private sector
- International organizations
- Schools
- Teachers
- Parents and students
How are actors held accountable for access, equity and quality in education?

General approaches to accountability

<table>
<thead>
<tr>
<th>Approach</th>
<th>Description of approach</th>
<th>Motivation</th>
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<tbody>
<tr>
<td>Electoral</td>
<td>Citizens vote politicians in or out of office</td>
<td>Removal from office</td>
</tr>
<tr>
<td>Regulatory/Legal</td>
<td>Laws or regulations set formal checks and balances and government publishes inspection, audit or evaluation reports</td>
<td>Disciplinary action</td>
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<tr>
<td>Performance-based</td>
<td>Authority evaluates performance information with respect to processes, outputs or outcomes</td>
<td>Sanctions or rewards</td>
</tr>
<tr>
<td>Market-based</td>
<td>Parents and students evaluate publicly available, comparable information and choose the preferred education option</td>
<td>Profit</td>
</tr>
<tr>
<td>Social</td>
<td>Individuals or communities use own experience or other available information to put pressure on education providers to meet norms</td>
<td>Moral duty</td>
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<td></td>
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<td>Public pressure</td>
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<tr>
<td>Professional</td>
<td>Peers observe and review others in their group to ensure that they meet shared standards and expectations</td>
<td>Professional duty</td>
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<td></td>
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<td>Peer pressure</td>
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A framework for quality

**Target 4.1** ‘ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to **relevant** and effective learning outcomes’

Four sets of factors: learner, system, school/classroom and outcomes
More data on quality – and learning

* Routinely*: info on infrastructure conditions, teacher characteristics

* Increasingly*: supply of data on tests and exams to monitor schools, assess students ... to enable education leaders at national, sub-national and school levels to take decisions that improve quality

This also depends on demand; education leaders must be:

- data literate, understanding and processing information
- able to make decisions that respond to diverse school needs
- free from entrenched political interests

Collecting, reporting, analysing, interpreting and using such info becomes complex and resource-intensive if precise conclusions must be drawn for school / student progress
Multiple uses of summative information on school and student learning outcomes

At individual level
- student admission/progression decisions
- award certificates or qualifications,
- identify students in need of supplemental support, e.g. Spain

At institution level
= compare schools and identify areas for improvement
- Direct input into accountability mechanisms
- Indirect input into evaluations/inspections, e.g. Ireland, Lithuania

At the system level
= allow comparison of outcomes among schools and over time
- monitor if standards are met, how local authorities perform,
  e.g. Brazil tracks schools/municipalities but not students;
  Philippines can track students with unique identification numbers
How does MENA do on learning assessments?

Percentage of countries administering national learning assessment and an assessment used to report on the global indicator, 2015

<table>
<thead>
<tr>
<th></th>
<th>All national assessments</th>
<th>Assessments used to report on global indicator 4.1.1 b/c</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Reading</td>
<td>Maths</td>
</tr>
<tr>
<td></td>
<td>During primary</td>
<td>End of primary</td>
</tr>
<tr>
<td>World</td>
<td>47</td>
<td>56</td>
</tr>
<tr>
<td>Northern Africa/Western Asia</td>
<td>35</td>
<td>45</td>
</tr>
</tbody>
</table>
Systematic information on individual learning outcomes is now more common

Extent to which countries use individual learning data to track progress over time at system level against standards varies.

Some systems focus on national exams...
  e.g. Japan, Bangladesh
  ...while other systems focus on standards

Most focus exclusively on language and mathematics...
  ...while others assess a broader range
  e.g. Uruguay monitors socio-emotional skills, citizenship knowledge

Countries vary in school/student background info they collect
  e.g. Australia parental education/occupation, indigenous, remote;
  Denmark measures student well-being
**England: elaborate, complex, ever changing system**

National curriculum tests by key stage

<table>
<thead>
<tr>
<th>Stage</th>
<th>National curriculum tests</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reception class (ages 4/5)</td>
<td>No national test (but teacher assessments of student standards are centrally collected)</td>
<td>Plans to introduce an assessment were dropped in April 2016 because the three options from which schools could choose were not deemed sufficiently comparable</td>
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<tr>
<td>End of first grade (ages 5/6)</td>
<td>Reading</td>
<td>Introduced in 2012 (known as ‘phonics screening check’)</td>
</tr>
<tr>
<td>End of Key Stage 1 (ages 6/7)</td>
<td>Reading, Mathematics (arithmetic and reasoning)</td>
<td>Baseline to measure progress by end of Key Stage 2; assessed by teachers but externally moderated</td>
</tr>
<tr>
<td>End of Key Stage 2 (ages 10/11)</td>
<td>Reading, Spelling, punctuation and grammar Mathematics (arithmetic and reasoning)</td>
<td>A science test was dropped in 2010 and is now administered every two years on a random sample of students</td>
</tr>
<tr>
<td>End of Key Stage 3 (ages 13/14)</td>
<td>No national test</td>
<td>National curriculum tests in English, mathematics and science were administered for the last time in 2008</td>
</tr>
<tr>
<td>End of Key Stage 4 (ages 15/16)</td>
<td>General Certificate of Secondary Education (GSCE) (typically at least 8 subjects)</td>
<td>GSCE is being reformed (grading scale, assessment formats etc.); a sample-based National Reference Test is also being introduced in 2017</td>
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</table>
England: excess supply of information

- Test outcomes reported relative to standards; entered in National Pupil Database; sent to schools, governors, parents, inspectors, LEAs

- **Analysis tool** RAISEonline maintained by Ministry and Ofsted with private company support since 2006 (*not in public domain*): schools and inspectors can follow at cohort, group, student levels, e.g. attainment at key stages, progress between key stages 1 and 2, and school context to compare with other schools / national trends

- **School league** tables since 2013 (*in public domain*); 500+ variables for each primary and secondary school to facilitate comparisons (but criticized for leading to misleading conclusions)

- **Non-government** services for school performance comparisons, including charities and **for-profit** companies selling commercial packages to schools
Managing all this information can be a burden

1. Unresolved issues in high income countries

Avoid simplistic interpretations in reading test result reports.
• Results need to be adjusted for school and student socio-economic background information
• Adjust for whether students and schools improve between two or more points in time; assess the contribution schools make to this e.g. Slovenia

Even so, value-added measures are not sufficiently precise: many schools (and grades) are too small ad student characteristics too variable = insufficient reliability whether school meets targets; selecting a baseline is a major challenge in primary education

Recent concern: misuse risk when access to databases is granted to marketing or other companies; calls to review privacy legislation
Managing all this information can be a burden

2. Data challenges exacerbated in low and middle income countries

Setting up systems, maintaining data flows, ensuring good quality, and training staff and users all cost, but such investment in capacity can be prohibitive in low and middle income countries

e.g. Thailand, Malaysia, Jordan, South Africa

Challenges further exacerbated by very low capacity.
• Learning assessments not sufficiently robust to measure progress against learning standards
• No resources to build institutions or disseminate results

e.g. Tanzania
Conclusions

Increasing interest among education authorities in collecting, reporting, analysing and using data on learning outcomes at school and student levels.

Countries vary in data collection purposes and extent to which they share it with local education and school leaders. Cost and capacity considerations need to be addressed before data is valid for comparisons and used for decisions, even in the richest countries.

Governments in less wealthy countries need to keep collection and reporting procedures simple, taking into account resource and capacity constraints. They need to design their information systems with clear goals for how data will be used and avoid the temptation of amassing excess information.