Aligning curriculum, teacher-training and learning assessment: the role of large-scale learning assessments
More than half of children and adolescents are NOT LEARNING THE BASICS

Source: UNESCO Institute for Statistics. 2017. More than one half of children and adolescents are not learning worldwide. Fact Sheet No. 46
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Assurer une éducation inclusive et équitable de qualité et promouvoir des possibilités d’apprenstissage tout au long de la vie pour tous
SDG4 Outcome Targets:
Effective and Relevant Learning Outcomes

✓ Relevant and effective learning outcomes in primary and secondary education [4.1]

✓ Readiness for primary education [4.2]

✓ Technical and vocational skills for employment, decent jobs & entrepreneurship [4.4]

✓ Youth and adult literacy and numeracy [4.6]

✓ Competencies for global citizenship and sustainable development [4.7]
No shortage of large-scale learning assessment in Sub-Saharan Africa

• Half (28/54 or 52%) have their own national learning assessment
• 41% have participated in the latest cycle of a cross-national assessment

... in addition to public examinations AND classroom/formative assessments for informing teaching strategies

However, these DO NOT contribute to monitoring learning achievement at the global level

Source: Compiled from UIS Database of Learning assessments, 2011 ISCED Classifications, GMR 2015 and EPDC mapping (FHI 360, 2015)
Cross-national learning assessments

• Conducted in more than one country
• Measure cross-curricular knowledge, skills and competencies in a limited number of domains
• Provide feedback on the comparative performance of the system at particular grade or for a particular age or age-group
• Generally sample-based
• Uniform and standardized in terms of content, administration process, timing, scoring and analysis
Cross-national learning assessments around the world

✓ PISA  Programme for International Student Assessment
✓ TIMSS  Trends in Mathematics and Science Survey
✓ PIRLS  Progress in International Reading Literacy Study
✓ ICCS  International Civics & Citizenship Education Study
✓ ICILS  International Computer and Information Literacy Study

Regional assessments

✓ PASEC and SEACMEQ  Sub-Saharan Africa
✓ LLECE  Latin America
✓ SEA-PLM and PILNA  South East Asia / Pacific Islands
Why do you think that cross-national assessments are important to consider for the alignment of teacher training, curricula and learning assessment?

Pourquoi pensez-vous qu'il est important de prendre en compte les évaluations transnationales pour l'alignement de la formation des enseignants, des curricula et de l'évaluation des apprentissages?
Cross-national learning assessments in Sub-Saharan Africa
Cross-national learning assessments: the international report and national reports

• **Describe the knowledge** and skills of a target population;
• **Highlight disparities in learners’** (sub-populations’) cognitive abilities by important socio-economic, regional, gender or other dimensions, including migration status and mother tongue;
• **Understand the factors that influence learning** achievement [e.g. home and school context and practices], and if these are changing over time; and
• **Identify general trends** in learning achievements and evaluating progress towards specific targets, using a set of indicators.
Girls perform significantly better than boys, particularly at the higher grades in Burundi.

Source: PASEC 2014 Results report, 2015
Trends over time such as narrowing gender gaps amongst high performers in Ghana

Source: Sakellarion, 2012
Varying disparities in performance by socio-economic status (SACMEQ III)

Source: Spaull, 2013
Children who are bullied perform significantly worse than those who are not across all subjects in Botswana.

<table>
<thead>
<tr>
<th>Frequency of bullying</th>
<th>n</th>
<th>%</th>
<th>Mathematics</th>
<th></th>
<th></th>
<th>Science</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean (SE)</td>
<td>Diff</td>
<td>SD</td>
<td>Mean (SE)</td>
<td>SD</td>
<td>Diff</td>
</tr>
<tr>
<td>At least once a month</td>
<td>1003</td>
<td>27.01</td>
<td>409.27(4.54)</td>
<td>1,2:-12.10</td>
<td>89.77</td>
<td>352.01(6.75)</td>
<td>133.03</td>
<td>1,2:-16.88</td>
</tr>
<tr>
<td>A few times a year</td>
<td>1953</td>
<td>53.93</td>
<td>421.37(4.28)</td>
<td>1,3:-39.76*</td>
<td>87.63</td>
<td>368.89(6.58)</td>
<td>130.34</td>
<td>1,3:-61.46*</td>
</tr>
<tr>
<td>Never</td>
<td>704</td>
<td>19.06</td>
<td>449.03(5.91)</td>
<td>2,3:-27.66*</td>
<td>81.77</td>
<td>413.47(8.35)</td>
<td>115.56</td>
<td>2,3:-44.58*</td>
</tr>
</tbody>
</table>

* Statistically significant at 5% level

Source: Botswana Examinations Council, 2014
Evidence to understand learning outcomes relative to socio-economic and demographic conditions as well as practices or experiences

• SACMEQ data allows to look at learning achievement by sex, region, school location, socio-economic status

• PASEC by sex, school location, type and environment (teaching resources, health and hygiene, infrastructure); teacher qualifications, parental literacy and home environment, disability, working practices outside school
What can the data analysis / evidence potentially do?

- Raise awareness on key issues
- Identify priority issues for reform
- Add depth and perspective to the analysis of education systems
- Stir public debate, and place educational issues on the policy agenda
- Inform further focused studies
How can such evidence be useful for improving teaching and learning?

<table>
<thead>
<tr>
<th>System</th>
<th>Curriculum</th>
<th>School</th>
<th>Teacher</th>
<th>Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocating resources</td>
<td>Curricular development</td>
<td>Setting faculty priorities</td>
<td>Securing resources for professional development</td>
<td>Inform programmes to encourage parental involvement</td>
</tr>
<tr>
<td>Implementing programatic reforms</td>
<td>Curricular content and methods</td>
<td>Improving student support services</td>
<td>or improving pedagogical practices</td>
<td></td>
</tr>
<tr>
<td>outlining goals for curricular achievement</td>
<td>Curriculm design</td>
<td>Enriching school environment</td>
<td>Revising courses and assignments</td>
<td></td>
</tr>
</tbody>
</table>
Direct impact of assessments on curriculum and teacher training—the case of Jordan

• Curriculum
  o Jordanian “Education Reform for Knowledge Economy/ERfKE, 2003-2009” revision of the mathematics, science and Arabic curricula
  o new textbooks developed for mathematics, science and Arabic using previously used and released PISA and TIMSS test items

• Teacher Training
  o remedial instructional strategies to support teachers’ practices to enhance students’ skills dealing with real-life problems
  o teachers’ guides developed with questions similar to PISA and TIMSS assessment items

Source: Ababneh, Tweissi & Abulibdeh, 2016
Examples from around the world: Impact of assessments on teachers and curriculum (TIMSS & PISA)

- Canada: development of instructional materials based on students’ responses to TIMSS test items
- Romania: new subdomains added to the mathematics curriculum
- Spain: new contents relating to real-life situations added to the mathematics and science curriculum
- Ireland: contributed to the development of the secondary-school science curriculum
- Slovak Republic: TIMSS findings affected curriculum document studies, teacher studies, mathematics and science teaching methodologies

(Source: Robitaille, Beaton and Plomp, 2000, as cited in Greaney and Kellaghan, 2008)
What about the Early Grade Reading Assessment (EGRA) and the Early Grade Math Assessment (EGMA) and the citizen-led assessments (Uwezo, Jangandoo, Beekunko, LearNigeria)?
Countries that conducted at least one oral assessment in Sub-Saharan Africa since 2009

Countries that conducted at least one national oral assessment in Sub-Saharan Africa since 2009

Source: EGRA tracker, UIS Catalogue and Database on Learning Assessments
Why so much focus on oral assessments in Sub-Saharan Africa?

- Less resource heavy
- Provide timely access to data to inform decision making improvement of reading skills
- Allow for detection of reading weaknesses early on and of children ‘at risk’ of dropping out
- Measure reading skills to children who are learning to read, and have not yet mastered the necessary skills to take traditional written tests
- Fill a gap in data on learning achievement for countries that do not participate in cross-national initiatives by establishing national reading and mathematics performance measures.

**Limitations:** Not comparable across countries, small samples, narrow focus in language/math domain, limited data disaggregation possibilities
DISCUSSION

Do you have any experiences you would like to share about the use (or lack) of data from a large-scale learning assessment – whether from PASEC, SACMEQ, EGRA/EGMA or other national assessment towards improving teaching and learning strategies?

Avez-vous des expériences que vous aimeriez partager sur l'utilisation (ou le manque) de données d'une évaluation d'apprentissage à grande échelle - du PASEC, du SACMEQ, de l'EGRA / EGMA ou d'autres évaluations nationales visant à améliorer les stratégies d'enseignement et d'apprentissage?
Limitations of large-scale learning assessments for teaching and learning
Limitations of large-scale learning assessments for teaching and learning

Too narrowly focused: do not adequately assess the broad range of competencies nor the breadth of knowledge within a given domain

<table>
<thead>
<tr>
<th>LIMITED DOMAINS &amp; COMPETENCIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts</td>
</tr>
<tr>
<td>Music</td>
</tr>
<tr>
<td>Citizenship</td>
</tr>
<tr>
<td>Environmental responsibility</td>
</tr>
<tr>
<td>... are rarely assessed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WITHIN A DOMAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g. Language</td>
</tr>
<tr>
<td>Literature</td>
</tr>
<tr>
<td>Writing Skills</td>
</tr>
<tr>
<td>Listening Comprehension</td>
</tr>
<tr>
<td>... are often disregarded/not measured</td>
</tr>
</tbody>
</table>
Limitations of large-scale learning assessments for teaching and learning

Cannot respond to the range of expectations from diverse stakeholders – governments, schools, teachers, partners and the students themselves

For **schools** to use the assessment results to improve the school environment, they have to also be given the **data at school level** on perception of children, but also teachers and potentially parents (depending on the additional information collection)

For **teachers** to improve their practice with some disadvantaged students, scores would have to be given at to them at both the **item level and the specific student level**, which happens rarely [items are not public, protect anonymity of students]

For **students** to benefit from their experience, they have to be given individual feedback on their performance, which is unlikely as data is analyzed at sub-group level
Limitations of large-scale learning assessments for teaching and learning

Data analyses are not generally presented in ways that enable targeting interventions at classroom level – tendencies at national level not necessarily applicable to classroom context

From a cross-national initiative

From EGRA/EGMA assessments
Despite limitations, there is increased pressure to improve ranks on cross-national initiatives’ league tables...
...resulting in large-scale learning assessments becoming more **high-stakes**

• For governments
• For schools
• For teachers
Evidence shows that high-stakes examinations can lead to

- Narrowing curricular content to areas that can be measured
- Teaching to the test
- Neglecting a broad range of competencies for personal development
What are your thoughts on whether these unintended consequences are also applicable to large-scale assessments, which generally are administered to a small sample of students?

Que pensez-vous de ces conséquences imprévues? Est-ce qu’elles s'appliquent également aux évaluations à grande échelle, qui sont généralement administrées à un petit échantillon d'élèves?
If large-scale learning assessments cannot be used to **directly** influence teaching and learning, can school-based assessment results be aggregated to provide a system-level measurement of learning?

**DISCUSSION**

It may seem feasible and cost-effective; are there any limitations you can think of?

Cela peut sembler faisable et rentable; Y a-t-il des limites auxquelles vous pouvez penser?
A Framework for quality education

LEARNERS

SYSTEMS

SCHOOLS AND CLASSROOM SETTINGS
- Teacher and teaching process
- School leadership and governance
- Structures and materials

OUTCOMES
- For learners
- For society

CONTEXT
Economic, political and social conditions

Source: UNESCO GEM report 2016 (adapted from GMR 2005)
Thank you

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