Trends and perspectives in data reporting, dissemination and use for policy and practice in Africa

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Presentation Overview

• ACER’s Centre for Global Education Monitoring (GEM)
• Purposes of assessment
• Assessment data reporting, dissemination and use for policy and practice in Africa
ACER and the Centre for Global Education Monitoring (GEM)
ACER

- Australian Council *for* Educational Research
- Established in 1930 as a not-for-profit research organisation
- ACER’s *mission*: Creating and promoting research-based *knowledge, products and services* to improve learning
ACER research

[Images of the Centre for Global Education Monitoring, Centre for Education Policy and Practice, Centre for Assessment Reform and Innovation, and Centre for Science of Learning at ACER]

https://www.acer.edu.au/research
ACER Centre for Global Education Monitoring (GEM)

• The GEM Centre supports the monitoring of educational outcomes worldwide to inform evidence-based education policy aimed at improving educational progress for all learners.

• Collaboration between ACER and DFAT
GEM key areas

System Strengthening

Education 2030

Reviews and Analysis
Purposes of assessment
Assessment purpose

“The fundamental purpose of assessment in education is to establish and understand where learners are in an aspect of their learning at the time of assessment.” (Masters, 2014, p. 1)
Components of an assessment system

- Classroom based assessments
- Examinations
- National large-scale assessments
- International and regional large-scale assessments
Classroom based assessments

- For monitoring the progress of individuals and providing information to determine appropriate pedagogical response
Examinations

• For monitoring the progress of individuals and to aid the selection of future educational pathways
National large-scale assessments

• Census based: For monitoring the health of the education system

• Sample based: For monitoring the progress of individuals, for accreditation purposes, or to aid the selection of future educational pathways

• For making sub-national comparisons of educational outcomes such as between provinces
International and regional large-scale assessments

• For benchmarking national performance against that of other countries

• Can be used for sub-population monitoring purposes
Regional assessments
International assessments

• PISA (Programme for International Student Assessment)
• TIMSS (Trends in International Mathematics and Science Study)
• PIRLS (Progress in International Reading Literacy Study)
• ICCS (International Civic and Citizenship Education Study)
• ICILS (International Computer and Information Literacy Study)
Assessment data reporting, dissemination and use for policy and practice in Africa
Sub-Saharan Africa: Participation in large-scale assessments

- Between 1990 and 2013, the percentage of countries in Sub-Saharan Africa conducting one or more national learning assessments increased from 35% to 61% (Benavot and Köseleci, 2015)
Improving Quality Education and Learning Outcomes and Effective Practices: Eastern and Southern Africa

1. Analysis of the existing assessments of student learning outcomes in literacy and numeracy in primary education in the region

2. Characteristics of children experiencing limited learning outcomes in literacy and numeracy

3. Effective country-level practices in the region that could improve learning outcomes in the literacy and numeracy of disadvantaged children in primary education.

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
Assessment stock-taking

- Eastern and Southern Africa region
- Study covered 23 countries and identified 58 existing assessment systems
- Assessments implemented from 2007 up to 2014/2015

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
Assessments from the stock-taking by type of assessment

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
Stock-taking: Participation in different types of assessments

- 2 countries have participated in international assessments (TIMSS, PIRLS, prePIRLS)
- 14 countries have participated in regional assessments (SACMEQ, PASEC, Uwezo)
- 13 countries have national assessments
- 12 countries have completed one or more implementations of EGRA/EGMA

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
## Stock-taking: Purposes of assessments

<table>
<thead>
<tr>
<th>Assessment purpose</th>
<th>Number of assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>System-level monitoring</td>
<td>38</td>
</tr>
<tr>
<td>Programme evaluation</td>
<td>10</td>
</tr>
<tr>
<td>System-level diagnostic</td>
<td>9</td>
</tr>
<tr>
<td>System-level diagnostic and monitoring</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>58</strong></td>
</tr>
</tbody>
</table>

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
### Stock-taking: Assessment target grades

<table>
<thead>
<tr>
<th>Target grade</th>
<th>Number of assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>4</td>
</tr>
<tr>
<td>Grade 2</td>
<td>20</td>
</tr>
<tr>
<td>Grade 3</td>
<td>20</td>
</tr>
<tr>
<td>Grade 4</td>
<td>12</td>
</tr>
<tr>
<td>Grade 5</td>
<td>8</td>
</tr>
<tr>
<td>Grade 6</td>
<td>18</td>
</tr>
<tr>
<td>Grade 7</td>
<td>4</td>
</tr>
<tr>
<td>Grade 8</td>
<td>2</td>
</tr>
<tr>
<td>Grade 9</td>
<td>4</td>
</tr>
<tr>
<td>Age-based</td>
<td>3</td>
</tr>
<tr>
<td>Unknown</td>
<td>3</td>
</tr>
</tbody>
</table>

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
Stock-taking: Cognitive domains

- Comprehensive assessment frameworks were publicly available for three assessments
- 33% of assessments focused on literacy and numeracy
- 29% of assessments focused on literacy only
- 21% of assessments focused on literacy, numeracy and health knowledge
- Remaining 17% of assessments focused on other combinations
- 40% of assessments tested in multiple languages

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
Stock-taking: Contextual instruments

- Contextual data collected in almost all of the assessments
- Types of contextual data collection: classroom observation and classroom and school inventories; questionnaires for students, teachers, parents
- Contextual data collected at the student, classroom and school levels

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
Stock-taking: Data analysis

- PIRLS, TIMSS, PASEC and SACMEQ, and 5 national assessments used IRT
- 55% of assessments present results with reference to competency levels or benchmarks
- All assessments (with documentation) used frequency analysis
- 59% explored relationships between contextual and cognitive data

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
Stock-taking: Reporting and dissemination: Results reports

- For 71% of assessments the results were publically available.
- For 54% of assessments, dissemination products in addition to the main results report were provided.
- Large-scale international and regional assessments (e.g. TIMSS, PIRLS, SACMEQ and Uwezo) provide a wide range of dissemination products.
- Where results were not publically available, sometimes other dissemination methods were used (e.g. workshops, teacher materials).

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
Stock-taking: Reporting and dissemination: Databases

- Full datasets available from four regional and international assessments:
  - Uwezo, PASEC, TIMSS, prePIRLS (7 countries)

- Due to time between main data collection and release of international dataset, the most recent databases were from:

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
A macro theory of change

- Evidence-based monitoring and intervention cycle of assessment, analysis and action forms the basis of long-term and sustainable change in student performance.
- **Assessments**, the systematic, strategic and regular collection of data on educational outcomes and factors related to these outcomes.
- **Analysis** and interpretation of the findings on student performance, contexts, their relations and trends over time at the education policy level.
- **Action**, the development of targeted educational interventions to improve progress for all learners.

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
Evidence-based monitoring and intervention cycle

Assessment
- Purpose: System level monitoring
- Target population: Early, multiple grades, inclusion of out-of-school children
- Domains: Literacy and numeracy; Contexts
- Current state and progress: Performance and contexts
- Dissemination strategy: Findings and products, including datasets

Action
- Target interventions and strategies
- Integrated into a holistic programme design, involving a wide range of stakeholders
- Impact evaluation including measurement of performance

Analysis
- Policy analysis and interpretation for strategic decision-making and policy development towards improving student performance
- Student performance levels
- Association with context factors at the different levels
- Trends over time

Friedman, Schwantner, Spink, Tabata, & Waters (2016)
Impact of large-scale assessments on education policy in developing countries

- 54 studies, 73 countries
- Included studies from Sub-Saharan Africa

Best, Knight, Lietz, Lockwood, Nugroho, & Tobin (2013)
Purposes of large-scale assessments

- Evaluating and monitoring the quality of the education system
- Ensuring equity
- Exercising accountability

Best, Knight, Lietz, Lockwood, Nugroho, & Tobin (2013)
Use of assessment data to inform education policy

- Most often used for agenda setting, implementation and evaluation stages of the policy cycle.
- Less frequently used during the policy formulation stage.

Best, Knight, Lietz, Lockwood, Nugroho, & Tobin (2013)
Policy impacts of large-scale assessments

- System level policies – most common impact
- Resource allocation policies
- Teaching and learning policies – less often observed

Best, Knight, Lietz, Lockwood, Nugroho, & Tobin (2013)
Factors that facilitate the use in education policy

- Media and public opinion
- Appropriate dissemination to stakeholders
- Soundness of the assessment program
- Program’s integration into policy processes

Best, Knight, Lietz, Lockwood, Nugroho, & Tobin (2013)
References


For information about ACER see: https://www.acer.edu.au/
For information about ACER’s GEM Centre see: https://www.acer.edu.au/gem
Thank you 😊