TIMSS in an African Context

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Achievement Tests in Math and Science

- Trends in International Math and Science Study (TIMSS)
- Performance for International Student Achievement (PISA)
- Monitoring Learning Achievement (MLA)
- Southern African Consortium for Monitoring Educational Quality (SACMEQ)

History of TIMSS

- FIMS and FISS
- SIMS and SISS
- 1995 – TIMSS - 41 countries
- 1999 – TIMSS - R 38 Countries
- 2003 – TIMSS - 50 Countries

Media Attention

- ***Grade 3 flunkers sound a warning about our schools***

  Sunday Times, 22 June 2003

- ***Bottom of the class in maths***

  Sunday Times, 14 Oct. 2001

- ***SA pupils are the dunces of Africa***

  Sunday Times, 16 June 2000

Concerns about TIMSS

- Value of international comparisons
- League table analysis
- Universal instrument
- Curriculum as key explanatory factor
- Appropriateness of background instruments
- Methodologies for analysis
- Cost –financial and human resources.

Leverage of TIMSS

- Political Involvement
- Harness Resources
- Potential to Effect Changes

TIMSS for Domestic Use

- Simple Methodology
- Time Series Analysis
- Appropriate background information
- Link to Qualitative Analysis
- Link to resource and support indicators
- Link to other users – policymakers and classroom teacher.

South Africa's Performance in Fractions: TIMSS 1999

Exhibit 2.7 Comparative results for fractions and number sense

Country	Mean score	Standard error
Singapore	608	5.6
Netherlands	545	7.1
Canada	533	2.5
Malaysia	532	4.7
United States	509	4.2
England	497	3.8
International average	***487***	***0.7***
Tunisia	443	2.8
Jordan	432	3.2
Indonesia	406	4.1
Chile	403	4.9
Philippines	378	6.3
Morocco	335	3.6
South Africa	300	6.0

SOUTH AFRICAN MATH CURRICULUM

- Mathematics has its own specialized language that uses symbols and notations for describing numerical, geometric and graphical relations.
- This Learning Area recognizes that access to mathematics is a human right in itself and is not value or culture free.
- In the teaching of mathematics, try to incorporate contexts that can build awareness of human rights, and social, economic and environmental issues relevant and appropriate to learners' realities.

MATH LEARNING OUTCOME (LO1)

The learner is able to recognise, describe and represent numbers and their relationships, and counts, estimates, calculates and checks with competence and confidence in solving problems.

This LO develops learners understanding of:

- What different kinds of numbers mean
- How they relate to one another
- Their relative size
- How they can be thought about and

Why transform TIMSS

- Effect of International Agendas in developing countries
- Funders Involvement
- Examples of Egypt & Kuwait
- Limited HR within poorer countries to develop comparative and benchmarking instruments.
- MDG 2 and 8 (universal primary education and develop global partnership for development).

HOW TO TRANSFORM TIMSS

- Methodology
- TIMSS International Report Framework
- Extend the framework for studying, analysing and reporting achievement data.
- Meaningful involvement of local actors
- Human resource development.