

# South Africa's participation in TIMSS, PIRLS, SACMEQ and ANA



Stephen Taylor

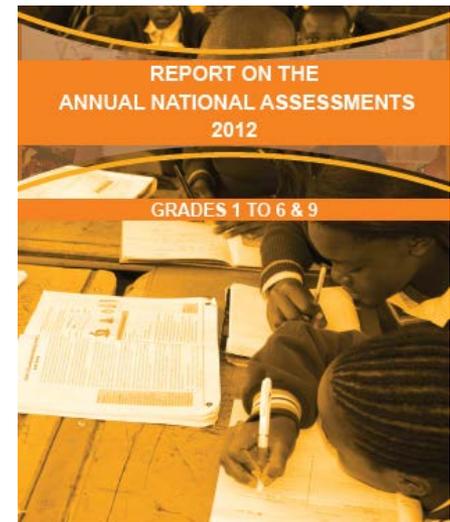
DBE

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SACMEQ



Southern and Eastern  
Africa Consortium for  
Monitoring Educational  
Quality



# Plan

- Overview of TIMSS, PIRLS, SACMEQ
- Benefits of participating in TIMSS, PIRLS, SACMEQ
- Selected lessons from TIMSS, PIRLS, SACMEQ
- Limitations of TIMSS, PIRLS, SACMEQ
- Purposes of ANA

# TIMSS

- Grade 4 & 8 maths & science
- Roughly 50 participants, 5 African (in 2011)
- SA: 1995, 1999 (Grade 8), 2002 (Grade 8, grade 9), 2011 (Grade 9)

# PIRLS

- Grade 5 reading
- Roughly 50 participants, mainly developed countries
- SA: 2006: grade 5  
2011: grade 5 Afr&Eng schools only  
grade 4 Pre-PIRLS test

# SACMEQ

- 15 Southern & East African education systems
- Grade 6 reading & maths
- 1995, 2000, 2007

# Benefits of participating in T,P,S

- Independent assessment (credibility)
- Rigorous process: Test development, test administration, data capturing, data cleaning...
- Representative samples
  - Cheaper than population/universal data collections
  - Often more accurate than universal assessments
    - Selection bias: Incorrect estimates
    - Comparability across provinces (different capturing patterns)
    - Comparability over time (different capturing rates)

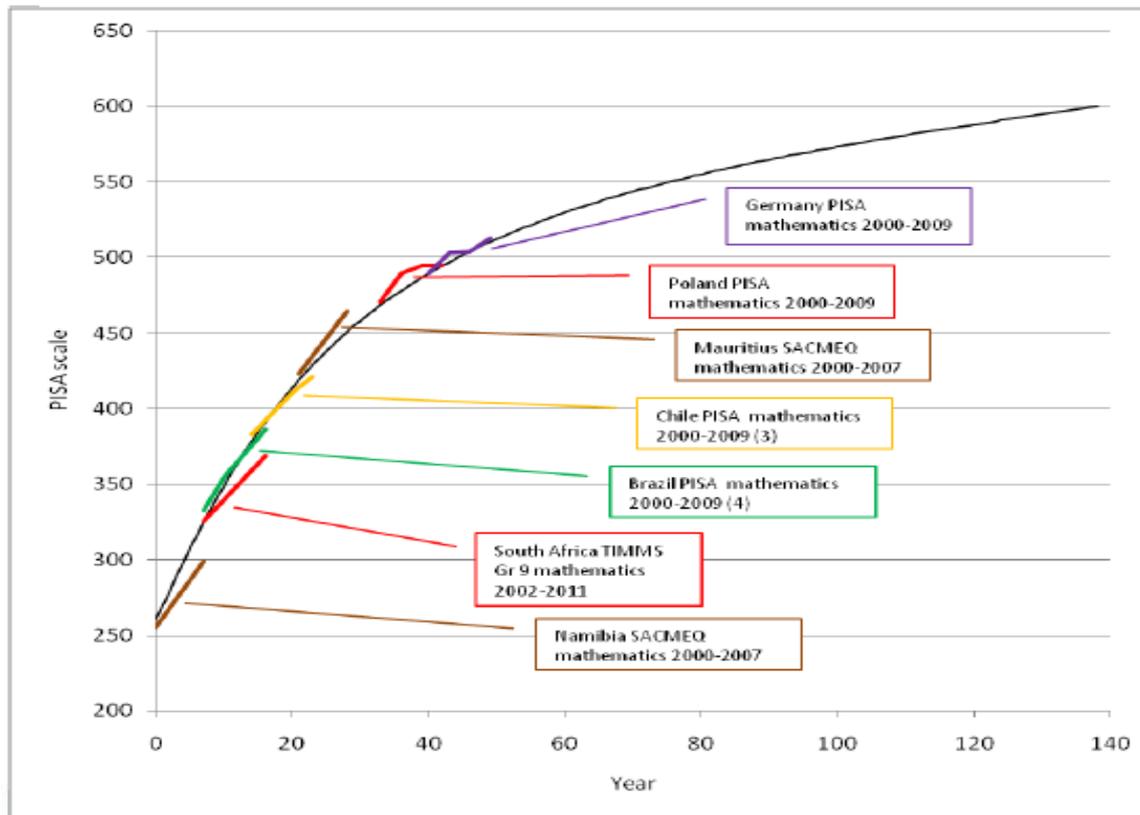
# Benefits of participating in T,P,S

- Consistent methodology across countries
  - Relative performance
  - Lessons from elsewhere
- Consistent methodology across time
  - SACMEQ 2000 – 2007
  - TIMSS 2002 – 2011
  - These are the only two valid trend estimates
- Background questionnaires
  - Allows for investigation of determinants of learning
  - More accurate access-to-resource indicators than census information systems

# Selected lessons from TIMSS, PIRLS, SACMEQ

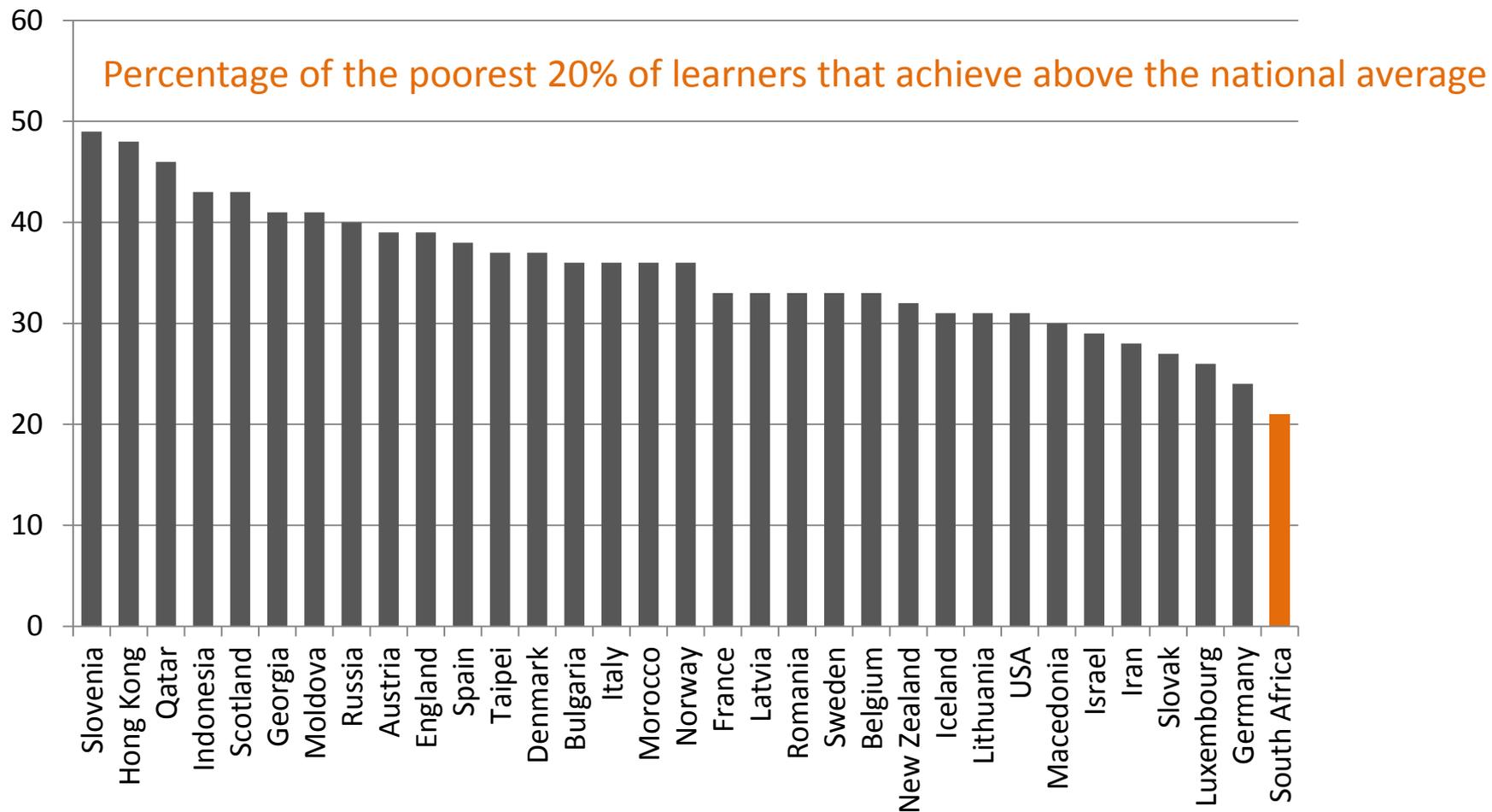
1) What kind of improvements in national performance can be aimed for?

The best possible improvement trajectories



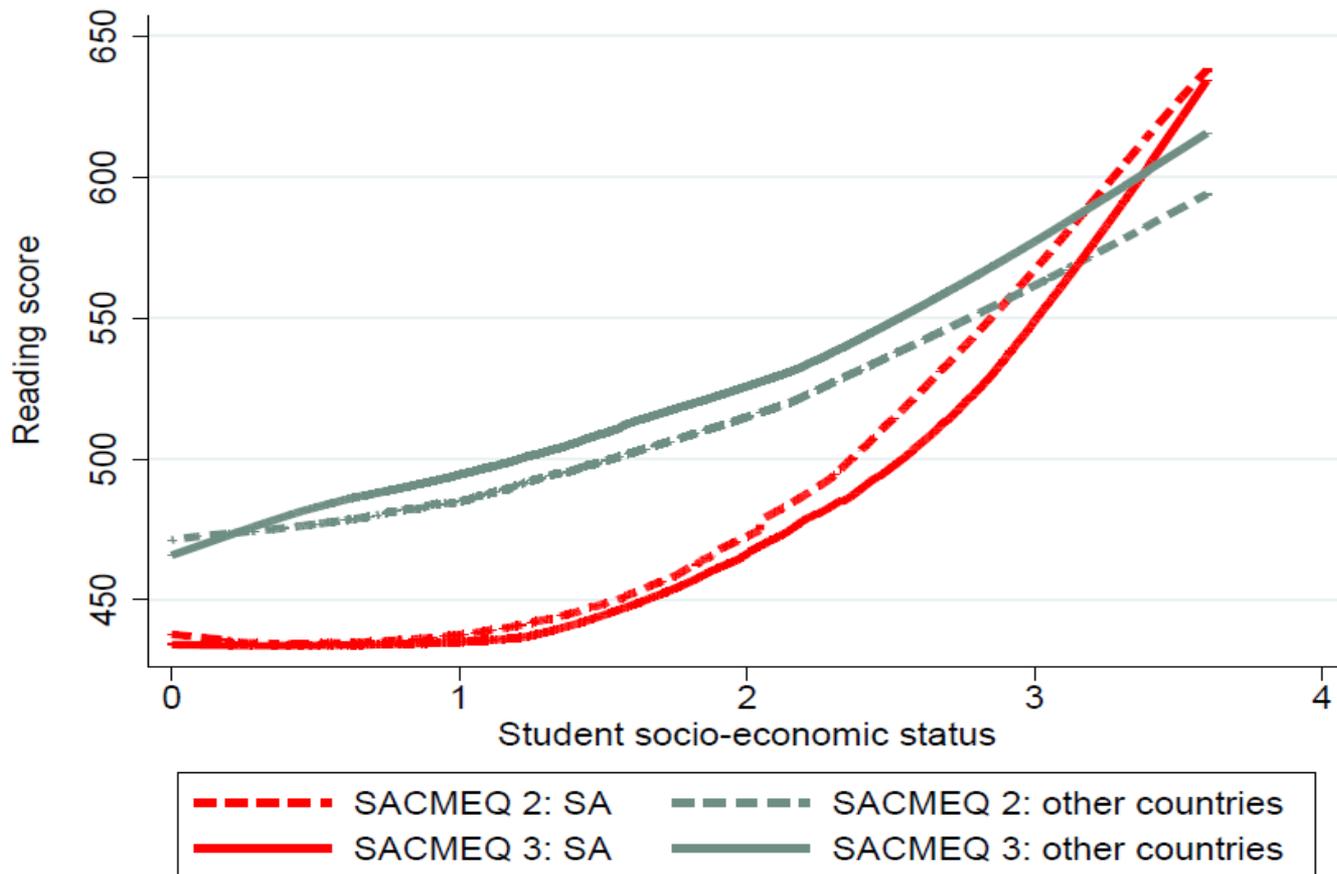
# Selected lessons from TIMSS, PIRLS, SACMEQ

## 2) How equitable are educational outcomes?



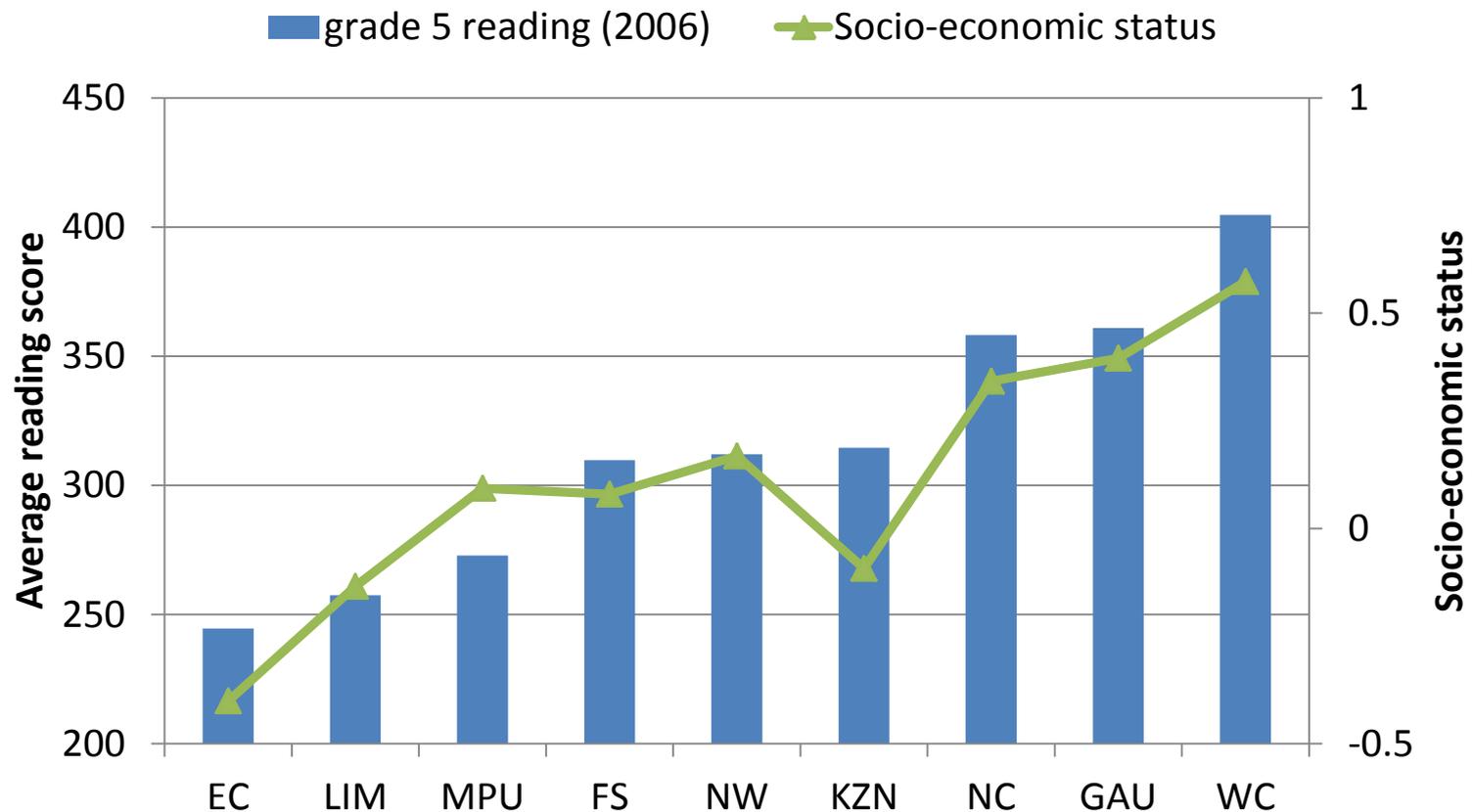
# Selected lessons from TIMSS, PIRLS, SACMEQ

3) How much room is there for improvement given the socio-economic status of learners?



# Selected lessons from TIMSS, PIRLS, SACMEQ

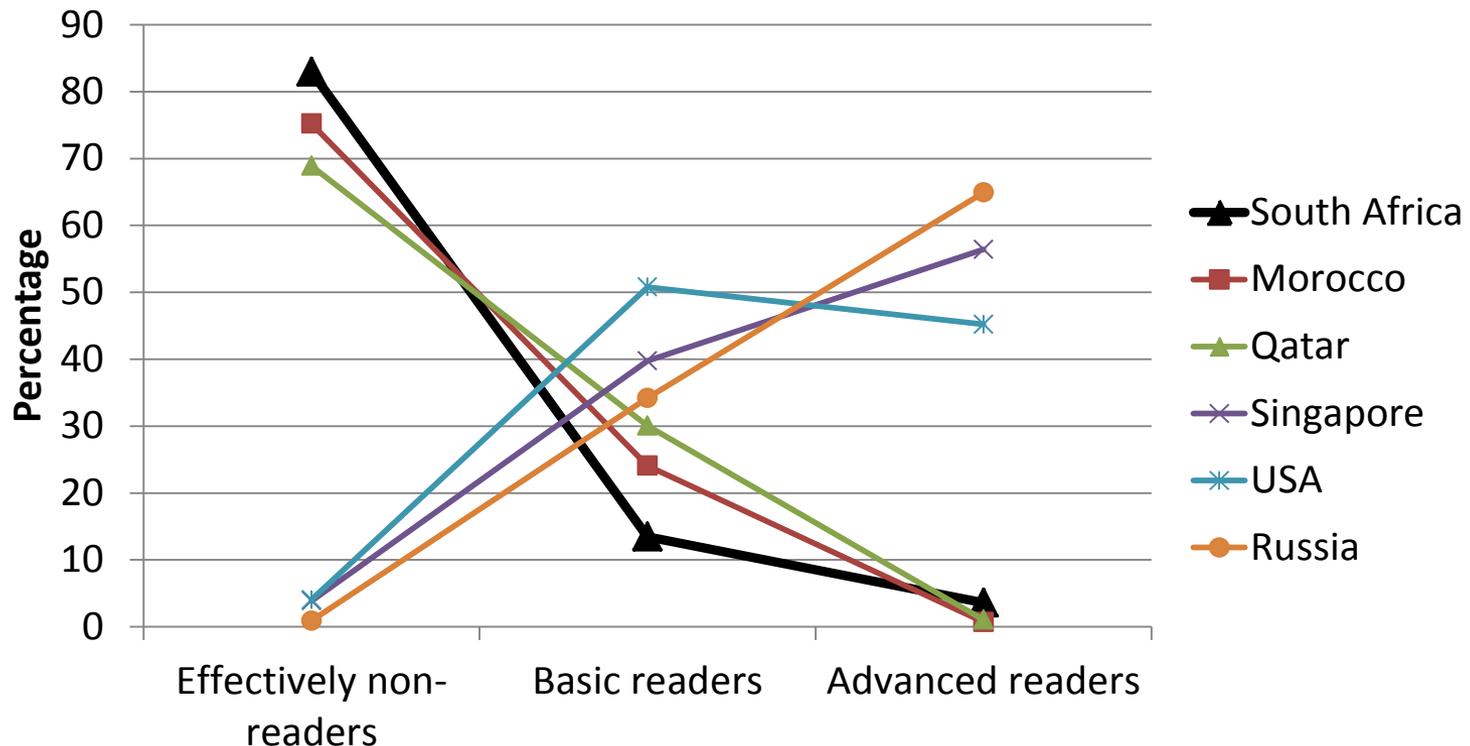
3) How much room is there for improvement given the socio-economic status of learners?



# Selected lessons from TIMSS, PIRLS, SACMEQ

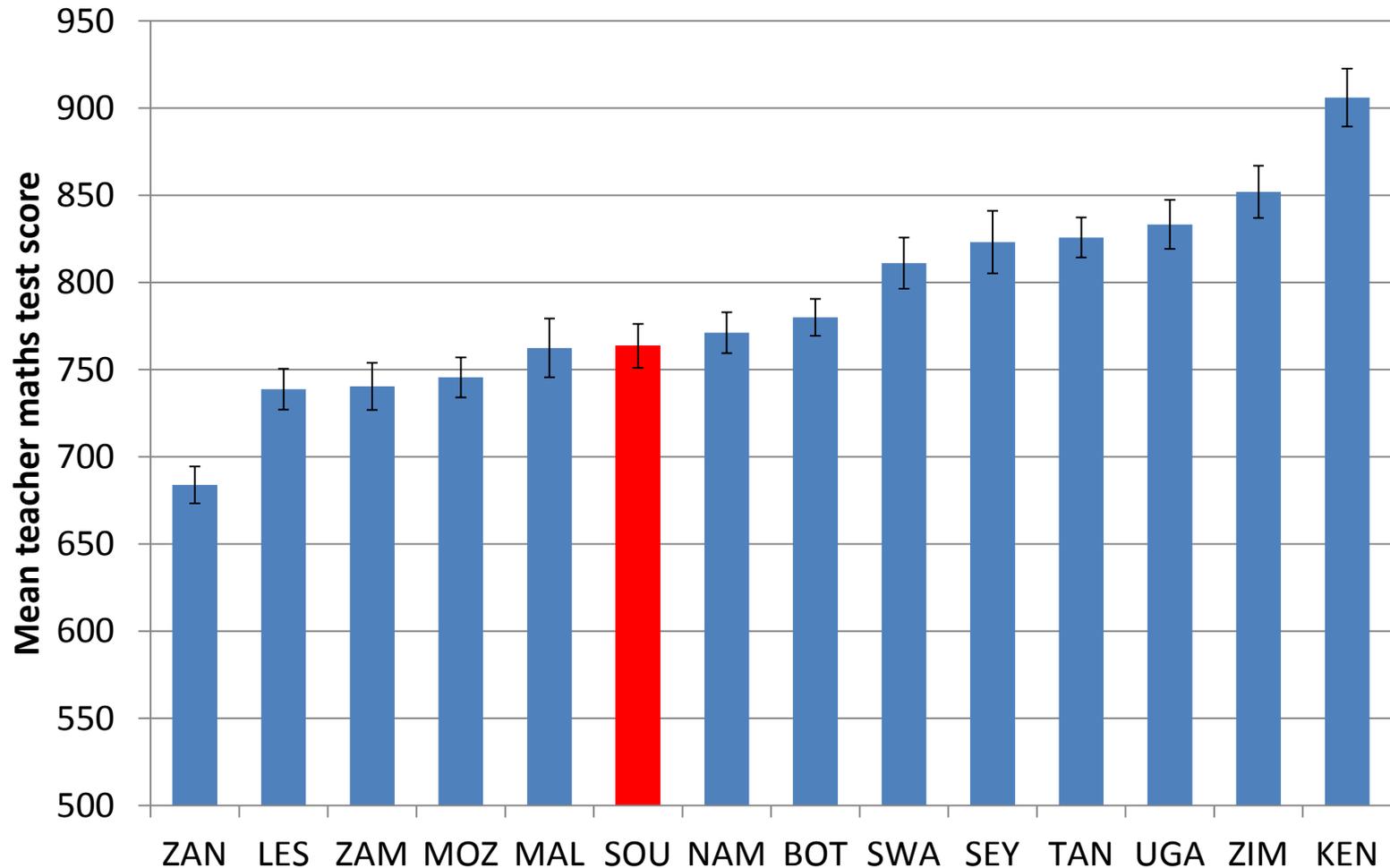
4) High school drop-out is a symptom of a more fundamental problem:

basic literacy and numeracy problems in the lower grades



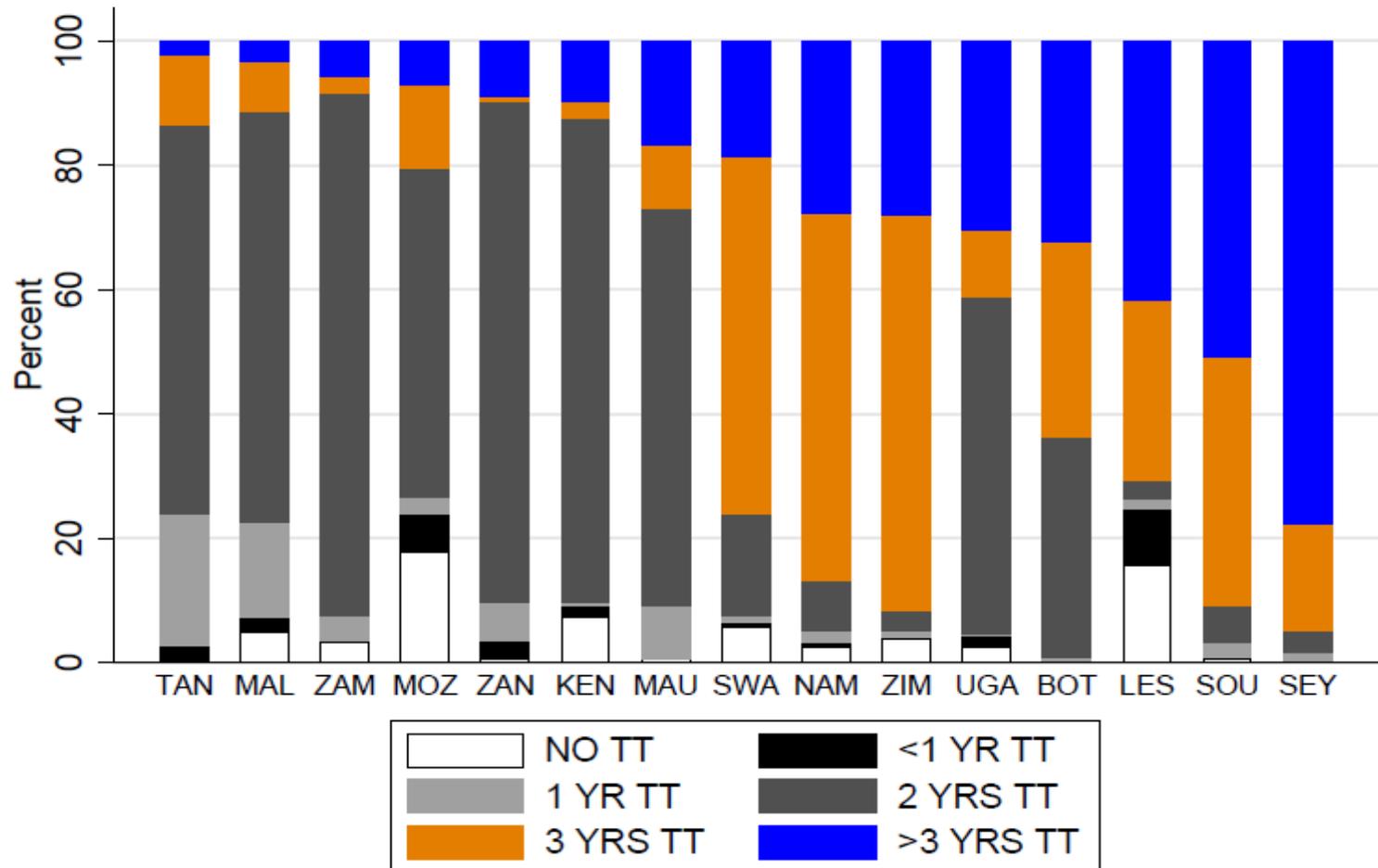
# Selected lessons from TIMSS, PIRLS, SACMEQ

## 5) Teacher content knowledge is unimpressive



# Selected lessons from TIMSS, PIRLS, SACMEQ

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# Selected lessons from TIMSS, PIRLS, SACMEQ

## 6) Factors affecting achievement:

- Resources alone do not tend to produce substantial learning
- management of school resources
- teacher work ethic
- time management and planning within schools
- curriculum coverage
- the accuracy of assessment and feedback to students
- parent commitment to education

# Limitations of T,P,S

- Only measures children enrolled in school
- Does not influence school behaviour
  - Feedback on performance to teachers, learners & parents
  - Strengthen local accountability
  - Diagnostic tool for remedial instruction
- May not measure certain SA-specific factors

# Purposes of ANA

- ANA is a two-tiered system (Action Plan)
- The Action Plan clearly differentiates between the purposes of Universal ANA and the purposes of Verification ANA

# Purposes of U-ANA

- U-ANA is expected to have four key effects on schools:
  - expose teachers to better assessment practices,
  - make it easier for districts to identify schools in most need of assistance,
  - encourage schools to celebrate outstanding performance;
  - empower parents with important information about their children's performance

# Purposes of V-ANA

- V-ANA has 2 goals:
  - Provide accurate national and provincial estimates of performance  
(sample better than universal capture)
  - Background questionnaires (including teacher testing) to allow analysis of what factors explain performance
  - There is more overlap of purpose between V-ANA and T,P,S than between U-ANA and T,P,S
  - But V-ANA is more frequent, can be linked to other data collections such as SMS, is in more grades