

NALA Methodology

by

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HSRC RESEARCH OUTPUTS

62228

Outline of presentation

- **Brief Background of NALA**
- **Strategies for developing test items**
- **Assessment of learners' achievement levels**
- **Reporting**
- **Quality control**
- **Conclusion**

Brief Background of NALA

- **National Assessment of Learning Achievement**

DoE expected to carry out systemic evaluation studies for Grade 3, 6 and 9 learners

Systemic Evaluation of Grade 3—2001

Systemic Evaluation of Grade 6---2005

Systemic Evaluation of Grade 9 ---????

- **Baseline Systemic Evaluation of Grade 9**
- **Entail two main assessment issues:**
 - » **Learners' achievement levels**
 - » **The contextual factors that explains differences in learners' achievement levels**

Developing Test Items

- Framework linking items to curriculum and assessment standards
- Practicing teachers consulted to develop test items to cover three curriculum areas:
 - » Mathematics test items (316 items)
 - » Science test items (230 items)
 - » Language (291 test items)

Assessing Learners' Responses to Items

- *matrix sampling (items grouped into blocks and distributed into booklets)*
 - » **Mathematics booklets (16 booklets)**
 - » **Science booklets (11 booklets)**
 - » **Language booklets (16 booklets)**
- *In the sampled schools, booklets were randomly distributed to learners (each learner provided responses to questions in only one booklet)*

Measure of learners' Achievement

- *Item Response Theory (IRT)*
- *Instead of scale measure of learners' achievement dependent solely on number of correct response IRT allows us to weight this measure by:*
 - » **Difficulty of items**
 - » **Item discrimination function (correlation of item with total score—extent to which test items is a true measure of learners achievement level)**

Linking current to previous achievement levels

- *Equating (included common test items in current and previous assessments so that scales for learners' achievement levels in the two assessment can linked)*
- *Common assessment items in NALA and MONITEQ (1996, 2002)*
- *These items will allow us to link learners achievement scales for NALA and MONITEQ*
- *The link will allow us to determine if the South Africa Grade 9 learners' achievement levels have improved over the years*

Linking Achievement Levels to the Curriculum and Assessment Standards

- Standard setting**
- IRT to link learners' achievement to test items**
- Because test items are link to the curriculum and assessment standards**
- We can link learners achievement levels to the curriculum and assessment**
- So that for a learner with a score 20% (as an example) we would be able to determine areas in the curriculum and assessment standards where this learner is successful and areas where the learner is having difficulties**

Reporting

- *National (sample of over 13,000 learners in about 360 schools with enough schools in each province to allow for comparison of provincial achievement levels)*
- *In Limpopo school/learners population was oversample (3500 Learners in 100 schools) so that a complete analysis and report for the province is possible*

Example of Table

		Subject areas		
		Mathematics	Science	Language
National				
Province	Western Cape			
	Eastern Cape			
	Northern Cape			
	Free State			
	KwaZulu Natal			
	North West			
	Gauteng			
	Mpumalanga			
	Limpopo			
Sector	Rural			
	Urban			
School poverty quintile	1			
	2			
	3			
	4			
	5			
Gender	Female			
	Male			

Quality Assurance of Methodology

- *Through workshops conducted by the International Association for the Evaluation of Educational Achievement (IEA) officials*
- *Workshop in May and June, 2008 to Develop contextual questionnaires (learner, educator and principal)*
- *Workshop in July and August, 2009 to Develop a framework for IRT analysis of NALA data*
- *Workshop scheduled in the last week of February, 2010 for standard setting*
- *DoE official actively involved in all workshops*

Conclusion

- *With the inclusion of a number of international large scale assessment practices and the quality assurance from IEA we hope to produce data and analysis that are of very high quality*

Thanks