

Policy Engagement Plan (draft): Title of research: The Grade 9 maths ANA

Research PI: Sarah Bansilal

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planning, monitoring
and evaluation

Department:
Planning, Monitoring and Evaluation
REPUBLIC OF SOUTH AFRICA



PSPPD
PROGRAMME TO
SUPPORT PRO-POOR
POLICY DEVELOPMENT



PART A

Overview of Research



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Summary of Research

- Objective: To identify ways of improving validity of the Grade 9 maths ANA ; to explore teachers' perceptions of the ANA, and in general about teaching mathematics at Gr 9 level
- Methodology:
 - Quantitative analysis of 1028 learner scores in 2014 ANA and school examinations- five schools
 - Rasch analysis – item level analysis of of 1187 learner scripts from seven KZN schools, from different quintiles
 - Teacher interviews- 30
 - Teacher questionnaires: KZN : 100 EC: 10?
 - Initial Learner notebook analysis from 5 schools

Progress, next Phase (s) and Time frames

- need to focus on EC- perhaps with the opportunity of looking at 2015 responses.
- Analysis of remarking of scripts
- Learner Notebook analysis (4th yr student project)
- Qualitative and quantitative analysis of teacher questionnaires; interviews (Masters student)
- Further Rasch analysis (doctoral student)
- Conceptual analysis- algebra, geometry (doctoral student-

Key (emerging) research findings

Comparison with internal school assessments (1028 learners, 5 schools)

- two sets of scores highly correlated-
- Level of Gr 9 maths ANA significantly higher than school examinations – half the learners had $\geq 29\%$ increase in school exam compared to their ANA
- 63% more learners got 0-39% in ANA as compared to school exam

Initial notebook analysis

- lesson records varying: 39 (2%), 62(2.4%), 117 (6.4%), 128(37%)
- Within school variation of records: 28; 80; 44

Emerging findings

Rasch analysis

- 1187 learner scripts from 7 schools, each mark recorded for each item
- The mean of the person location is -0.789 , compared to item mean of 0, showing that the test was experienced as difficult.
- many learners were located below the location of all the items, showing that the probability of them getting any items correct was low.
- 7 of the 10 multiple choice items were misfitting because of gussing.
- Some scoring rubrics did not work well and can be improved
- DIF on many items, wrt to schools

PART B

Implications of emerging findings for policy engagement planning

Spheres of influence diagram

School of Education

Education districts

Unions

Provincial Education department

National education department

Spheres of Influence Diagram:

Mapping of actors influencing the policy arena

