

The Grade 9 Maths ANA – What Can We See After Three Years?

Craig Pournara, Sihlobosenkosi Mpofo & Yvonne Sanders

School of Education, University of the Witwatersrand

craig.pournara@wits.ac.za sihlobosenkosi@gmail.com Yvonne.gubler@gmail.com

INTRODUCTION

The Annual National Assessments (ANA) were introduced to address South Africa's poor performance in international mathematics assessments such as TIMSS and SACMEQ. The Grade 9 test was first written in 2012 with a national average of 12.7%. In 2013 the average increased to 13.9% but then dropped to 10.8% in 2014. The overall picture is one of very poor performance with the result that many questions are being asked about the value and purpose of the ANA.

The Department of Basic Education (DBE) identifies three purposes for the ANAs: (1) a measure for the state to gauge improvement in the education system, based on learner performance year-on-year; (2) a diagnostic assessment to identify areas of weakness in learners' performance; and (3) to provide a model of good assessment practice. While these are all important goals, they are not necessarily achievable through a single instrument. However, this is not the focus of our article. Our purpose here is to report on a content analysis of the three ANA papers which we undertook in the first quarter of 2015, paying particular attention to cognitive demand and levels of difficulty. We share our findings on these aspects, as well as on trends that arise as we look across the first three years of the Grade 9 Maths ANA.

CLASSIFICATION OF ITEMS

Classification of items into taxonomies is never a simple matter, and there are no perfect taxonomies. We have attempted to use existing taxonomies with which teachers are familiar but we are not suggesting that these are definitive levels or categories.

LEVELS OF COGNITIVE DEMAND

Levels of cognitive demand describe the nature of the item in terms of the mathematical demand. An early Grade 9 ANA document (DBE, 2011) distinguishes three levels: knowledge of basic concepts, application of concepts and non-routine problem solving. However, we chose to work with the four levels of cognitive demand as described in the CAPS document since these are the levels that teachers work with regularly.

- *Knowledge* – requires straight recall, use of mathematical facts, identification and direct use of formulae.
- *Routine procedure* – well-rehearsed and familiar algorithms, simple calculations that may involve several steps, use of formulae requiring change of subject.
- *Complex procedure* – several calculations that are not all of the same type, complex calculations, route to solution is not entirely obvious, connecting representations, developing proof, requires conceptual understanding.
- *Problem solving* – unseen, non-routine problems, route to solution is not suggested, also requires conceptual understanding.

Grade 9 Ana Maths Term 2 2014

Ian Goldman, Mine Pabari



Grade 9 Ana Maths Term 2 2014:

World Yearbook of Education 2021 Sotiria Grek, Christian Maroy, Antoni Verger, 2020-11-26 Providing a comprehensive introduction to the topic of accountability and datafication in the governance of education the World Yearbook of Education 2021 considers global policy dynamics and policy enactment processes Chapters pay particular attention to the role of international organizations and the private sector in the promotion of performance based accountability PBA in different educational settings and at multiple policy scales Organized into three sections chapters cover the global local construction of accountability and datafication global discourse and national translations of performance based accountability policies and enactments and effects of accountability and datafication including controversies and critical issues With carefully chosen international contributions from around the globe the World Yearbook of Education 2021 is ideal reading for anyone interested in the future of accountability and datafication in the governance of education

Using Evidence in Policy and Practice Ian Goldman, Mine Pabari, 2020-06-10 This book asks how governments in Africa can use evidence to improve their policies and programmes and ultimately to achieve positive change for their citizens Looking at different evidence sources across a range of contexts the book brings policy makers and researchers together to uncover what does and doesn't work and why Case studies are drawn from five countries and the ECOWAS west African region and a range of sectors from education wildlife sanitation through to government procurement processes The book is supported by a range of policy briefs and videos intended to be both practical and critically rigorous It uses evidence sources such as evaluations research synthesis and citizen engagement to show how these cases succeeded in informing policy and practice The voices of policy makers are key to the book ensuring that the examples deployed are useful to practitioners and researchers alike This innovative book will be perfect for policy makers practitioners in government and civil society and researchers and academics with an interest in how evidence can be used to support policy making in Africa The Open Access version of this book available at <https://doi.org/10.4324/9781003007043> has been made available under a Creative Commons Attribution Non Commercial No Derivatives 4.0 license

Annual Performance Plan Mpumalanga (South Africa). Department of Education, 2015

Handbook of Australian School Psychology Monica Thielking, Mark D. Terjesen, 2017-01-26 This handbook addresses the current state and practice of school psychology with a focus on standards unique to Australia including historical legal ethical practical and training factors It provides a compilation of the most current research based practices as well as guidelines for evidence based assessment and intervention for common conditions e.g. autism depression learning disabilities and for delivering appropriate services to targeted student populations e.g. LGBT gifted medical issues Chapters discuss the application of national and international school psychology practices within the Australian educational and psychological structure The handbook also examines the lack of formal resources specific to Australia's culture and psychology systems with its unique mix of metropolitan cities and the vast geographic

landscape that spans regional and remote areas It offers numerous case studies and innovative school mental health programs as well as recommendations for professional development and advocacy that are unique to Australian school psychology Topics featured in this Handbook include Evidence based assessment and intervention for dyscalculia and mathematical disabilities Identification and management of adolescent risk taking behaviors and addictions Understanding and responding to crisis and trauma in the school setting Prevention and intervention for bullying in schools Class and school wide approaches to addressing behavioral and academic needs The role of school psychologists in the digital age Practical advice for school psychologists facing complex ethical dilemmas The Handbook of Australian School Psychology is a must have resource for researchers scientist practitioners and graduate students in child and school psychology social work and related fields that address mental health services for children and adolescents **The Compact Edition of the Oxford English Dictionary** Sir James Augustus Henry Murray,1971 Micrographic reproduction of the 13 volume Oxford English dictionary published in 1933 Alabama College and Career Ready Standards in Grade 2 Mathematics American Book Company,2014

Grade 9 Ana Maths Term 2 2014 Book Review: Unveiling the Magic of Language

In an electronic era where connections and knowledge reign supreme, the enchanting power of language has become more apparent than ever. Its ability to stir emotions, provoke thought, and instigate transformation is really remarkable. This extraordinary book, aptly titled "**Grade 9 Ana Maths Term 2 2014**," compiled by a very acclaimed author, immerses readers in a captivating exploration of the significance of language and its profound affect on our existence. Throughout this critique, we will delve into the book's central themes, evaluate its unique writing style, and assess its overall influence on its readership.

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