



Examining the Implementation and Lessons Learnt from the Annual National Assessment in a South African Education District

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ABSTRACT

In the pursuit of enhancing educational practices and systems, this study delved comprehensively into examining the implementation and lessons learned from the Annual National Assessment (ANA) within an educational district in South Africa. A stratified random sampling technique was used to pick up schools from different tiers. A sample of 108 teachers from 22 schools within the UMkhanyakude education district, situated in the KwaZulu Natal province of South Africa participated in the study. The study examined the effects of the ANA on schools and its impact on teaching and learning. Data was collected using a questionnaire and were analyzed with SPSS software version 26. The findings indicate that teachers received sufficient training on the administration procedures of the assessment and recognized its positive influence on schools in general. However, a majority of the teachers disagreed with the notion that the assessment had positive effects on teaching and learning. They expressed a lack of confidence in the assessment, both in themselves and in their students, and also raised concerns about parental involvement. Therefore, this study suggests the inclusion of a comprehensive consultative approach and the involvement of stakeholders in future assessment administration and implementation processes. Additionally, it advocates for the importance of aligning assessments with the curriculum to prevent teachers from solely teaching to the test in most situations. This study will contribute to knowledge on test construction as well as the different approaches to assessment.

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Publication History

Received 24th October, 2023

Accepted 12th December, 2023

Published online:

22nd December, 2023.

Keywords: Administration, Annual National Assessment, Assessment, High Stakes, Management, Parental Involvement, Standardized Testing.

INTRODUCTION

The South African education system identified shortcomings in literacy skills, leading to the introduction of the Annual National Assessment (ANA).¹ Prior to the ANA's implementation, South Africa engaged in global and regional assessments like the Trends in International Mathematics and Science Study (TIMSS), the Southern and Eastern African Consortium for Monitoring Educational Quality (SACMEQ), and the Progress in International Reading Literacy Study (PIRLS) from 1995 to 2011.²

The ANA was created in 2009 with the purpose of assessing and monitoring the quality of education in the General Education and Training (GET) phase, specifically for grades 3, 6, and 9.

¹ Thembi A. Phala and Anna Hugo, "Difficulties in Teaching Grade 3 Learners with Reading Problems in Full-Service Schools in South Africa," *African Journal of Disability* 11 (February 10, 2022), <https://doi.org/10.4102/ajod.v11i0.906>; Frank Joseph Mensah, Pravina Pillay, and Patrick Themba Sibaya, "The Experiences of Primary School Educators with the National Reading Strategy (NRS) in Mbabane Circuit, Ingwavuma," *Gender and Behaviour* 15, no.2 (2017):8738–49.
² N. Spaull, *Accountability and Capacity in South African Education. Education as Change*, vol. 19 (Sage Publications, 2015).

The assessment took place consecutively from 2011 to 2014. However, in 2015, the ANA was suspended due to negotiations between the Department of Basic Education (DBE) and teacher unions, such as the South African Democratic Teachers Union (SADTU), the National Professional Teachers Organization of South Africa (NAPTOSA), and the National Teachers Union (NATU). These unions argued that the annual ANA cycle was poorly conceived, lacked direction, and challenged established teaching methods. They suggested restructuring the ANA to allow for better analysis and feedback. Although the DBE reported positive trends in student performance based on the ANA results and analysis, these reports contradicted findings from various studies conducted in the GET phase. For example, the 2016 PIRLS report, released a year after the suspension of ANA, indicated that almost 80% of South African grade 4 students had functional illiteracy.³ What's more concerning is the 2021 PIRLS report, which demonstrated a continued decline in the reading abilities of Grade 4 learners, plummeting from 80% to 81%.⁴

The Department of Basic Education introduced ANA in 2009 to address disparities between educational outcomes and assessment standards in primary schools. ANA was conducted annually from 2011 to 2014, but was halted in 2015 due to negotiations with educational stakeholders, mainly teachers and their unions. Despite the DBE's consistent organization and positive performance reports, these conflicted with established research findings. Notably, both the 2016 as well as 2021 reports showed a drastic decline in the literacy levels of South African grade 4 students.⁵ Teacher unions like SADTU, NAPTOSA, and NATU opposed yearly ANA cycles and suggested redesigning the assessment for better analysis and feedback.⁶ While various studies explored ANA's diagnostic nature,⁷ limitations,⁸ design,⁹ and teacher perceptions,¹⁰ as well as comparisons with other assessments, none focused on ANA's administrative lessons.¹¹ These unexplored lessons could offer valuable insights, especially those related to challenges, successes, and teacher perspectives, to enhance teaching, learning, and assessment practices. This study therefore aims to explore the implementation and lessons learned from the Annual National Assessment in a district in South Africa.

LITERATURE REVIEW

Assessment Administration

There are several technical procedures involved in the administration of a national assessment. These processes encompass test design and development, sampling, test administration, data collection, data cleaning, data analysis, reporting and sharing of results, as well as enhancing the capacity of stakeholders.¹² Childs and Umezawa indicate that there is limited literature on the administration of assessments, specifically concerning the roles and responsibilities of teachers in large-scale assessments.¹³ The authors attribute this lack of

³ S.J. Howie et al., "Progress in International Reading Literacy Study (PIRLS)," 2016.

⁴ Department of Basic Education, "PIRLS 2021: South African Preliminary Highlights Report." (Pretoria: Department of Basic Education, 2023).

⁵ Department of Basic Education, "PIRLS 2021: South African Preliminary Highlights Report"; Howie et al., "Progress in International Reading Literacy Study (PIRLS)."

⁶ B. Wolhuter and T. Magubane, "Hated ANAs Said to Make a Comeback Every Three Years.," *Independent Online News*, 2016, www.iol.co.za.

⁷ Paul Sillitoe, "Indigenous Knowledge in Development," *Anthropology in Action* 13, no. 3 (2006): 1–12.

⁸ M C Maphalala and J J Dhlamini, "Standardized Testing: A Case of Annual National Assessments in South African Primary Schools," *Gender and Behaviour* 15, no. 4 (2017): 10334–46.

⁹ Sarah Bansilal, "The Difficulty Level of a National Assessment of Grade 9 Mathematics: The Case of Five Schools," *South African Journal of Childhood Education* 7, no. 1 (2017): 1–8; Howie et al., "Progress in International Reading Literacy Study (PIRLS)."

¹⁰ Anil Kanjee and Qetelo Moloi, "South African Teachers' Use of National Assessment Data," *South African Journal of Childhood Education* 4, no. 2 (2014): 90–113; Tshogofatso D Thulare, "A Policy Analysis of the Annual National Assessments in South Africa," in *Cross-Nationally Comparative, Evidence-Based Educational Policymaking and Reform*, vol. 35 (Emerald Publishing Limited, 2018), 71–100.

¹¹ M. Chetty, "Comparing School-Based Assessments with Standardised National Assessments in South Africa" (University of Witwatersrand, 2016); Martin Gustafsson, "Standardised Testing and Examinations at the Primary Level Current Thinking and Practices" (Stellenbosch: Stellenbosch University, 2018); Howie et al., "Progress in International Reading Literacy Study (PIRLS)"; Thulare, "A Policy Analysis of the Annual National Assessments in South Africa"; Stephen Taylor, "Uncovering Indicators of Effective School Management in South Africa Using the National School Effectiveness Study," *Stellenbosch Economic Papers*, no. 10/11 (2011).

¹² Mollie Tobin et al., *Using Large-Scale Assessments of Students' Learning to Inform Education Policy: Insights from the Asia-Pacific Region* (Insights from the Asia-Pacific region, Australian Council for Educational Research (ACER), 2015).

¹³ Ruth A Childs and Linda Umezawa, "When the Teacher Is the Test Proctor.," *Canadian Journal of Education* 32, no. 3 (2009): 618–51.

information to the widespread assumption that assessment administration is merely a formal requirement and therefore not of significant interest to teachers. For instance, a study conducted by Flynn and Anderson examined the impact of test instructions on the performance of Grade 7 students in California.¹⁴ The results revealed that students scored significantly higher on tests when the instructions were delivered by teachers who did not have a particular interest in the administrative processes of the test. Subsequently, Trentham investigated the effects of anxiety and instructions on Grade 6 students during a creativity test.¹⁵ The study concluded that distractions during the test led to a decrease in the students' scores. These studies underscore the importance of test protocols and related procedures in assessment administration. These processes should specify various aspects, including the physical arrangement of students in the testing room, the distribution and collection of materials, the reading of scripts to students, guidelines for the test administrators (invigilators) regarding what they can or cannot say, and the timing of the test.

One critical aspect of assessment administration procedures that is often overlooked is concessions. Concessions are provided to students with evident disabilities who, under normal circumstances, would be unable to perform on the same academic level as their peers, particularly in the context of an examination. Concessions may involve assisted reading of test questions or even writing assistance in extreme cases for students with disabilities.¹⁶ According to Sireci et al., if it is assumed that all test takers possess the same abilities to undergo standardised test administration procedures, such as working swiftly within the specified time and reading and comprehending the content, the assessment outcomes will be severely compromised.¹⁷ Conversely, if assessment administration procedures are adjusted to accommodate the specific needs of students, the negative impact on students with disabilities will be minimised.

Similarly, a study by Graven and Venkatakrishnan examined the possibilities and constraints of the Annual National Assessment (ANA) for mathematics learning.¹⁸ The study found that teachers felt more comfortable invigilating their own grade students and viewed anyone else as strangers. Consequently, the authors called for flexibility in assessment processes, including allowing learners to ask questions and providing assistance throughout the assessment process, particularly when language barriers impede their understanding of test questions

The Effect of Assessment Administration on Schools

Most education systems worldwide have placed significant hope in school systems to address learning gaps and nurture the potential of learners, regardless of their socio-economic backgrounds.¹⁹ The impact of standardised assessments in schools has increasingly become a topic of intense debate and controversy. This is primarily due to the unequal quality of education provided in rural and urban schools. Additionally, the evaluation of school performance based on student achievement has become the standard practice within and across countries.

Governments are highly interested in assessing all aspects of their education systems using economic models from the private sector to measure the performance of the public sector.²⁰ As a result, schools are viewed as the problem, and government control is seen as the solution. Instead of teachers, students, and parents working together to address teaching and learning challenges and improve outcomes, the focus shifts to the government's role in selecting, sanctioning, and implementing appropriate teaching methods and relevant content for assessment. The government's aim is to produce large-scale assessments that are valid, reliable, and norm-

¹⁴ John T Flynn and Barbara E Anderson, "The Effects of Test Item Cue Sensitivity on IQ and Achievement Test Performance.," *Educational Research Quarterly*, 1977.

¹⁵ Landa L Trentham, "Anxiety and Instruction Effects on Sixth-grade Students in a Testing Situation," *Psychology in the Schools* 16, no. 3 (1979): 439–43.

¹⁶ Stephen G. Sireci, Stanley E. Scarpatti, and Shuhong Li, "Test Accommodations for Students With Disabilities: An Analysis of the Interaction Hypothesis," *Review of Educational Research* 75, no. 4 (December 30, 2005): 457–90, <https://doi.org/10.3102/00346543075004457>.

¹⁷ Sireci, Scarpatti, and Li, "Test Accommodations for Students With Disabilities: An Analysis of the Interaction Hypothesis."

¹⁸ Mellony Graven and Hamsa Venkatakrishnan, "ANAs: Possibilities and Constraints for Mathematical Learning," *Learning and Teaching Mathematics* 2013, no. 14 (2013): 12–16.

¹⁹ S. Van der Berg, "What the Annual National Assessment Can Tell Us about Learning Deficits over the Education System and the School Career Year," 2015.

²⁰ Allan Anderson, "The Dubious Legacy of Charles Parham: Racism and Cultural Insensitivities among Pentecostals," *Pneuma* 27, no. 1 (2005): 51–64; Eric A Hanushek, Ludger Woessmann, and Stephen J Machin, *Handbook of the Economics of Education* (Elsevier, 2023); Fred Newmann, M Bruce King, and Mark Rigdon, "Accountability and School Performance: Implications from Restructuring Schools," *Harvard Educational Review* 67, no. 1 (1997): 41–75..

referenced as it is more cost-effective and efficient.²¹ The Annual National Assessment (ANA) initially started as a diagnostic assessment with a focus on improving quality at the foundational and intermediate levels.²² However, according to teacher unions, ANA has evolved over time into a high-stakes assessment.²³

Heissel et al. explain high-stakes assessment as an evaluation used to make critical decisions that not only affect students but also influence a teacher's teaching methodology and a school's philosophy.²⁴ Such a system creates a tense relationship between schools, represented by teachers and students, and education officials. One consequence of this system is the narrowing of the curriculum to specific subjects like English Language and Mathematics in most cases,²⁵ discouraging schools from implementing experiential learning programs²⁶ and compromising authentic learning experiences in favor of rote learning.

In some low-income schools already struggling with limited resources, there is pressure not only to adhere strictly to assessment guidelines but also to resort to unethical practices to avoid the perceived rigidity, imbalance, and narrowness of the assessment regime, which is seen as undermining the professional character of schools. For example, in the state of Atlanta, United States, some schools were found to have engaged in cheating practices to inflate their test scores. In 2008, as many as 109 teachers and school heads were involved in systematic cheating through erasing and changing test answers.²⁷ Chen further explains that many teachers are not in favor of frequent assessments and high-stakes testing due to the negative psychosocial outcomes associated with them, including increased test stress, decreased motivation and morale, and burnout and attrition.²⁸

Saeki et al. conducted a study on the influence of test-based accountability policies on primary school teachers and found that, in addition to higher stress levels, the school climate became more stressful for students, teachers, and school heads.²⁹ On the other hand, Dickinson argues that standardised tests have been able to create a level playing field for students in schools.³⁰ Other researchers such as Benjamin and Pashler, Brown and Hattie, and Styron and Styron have explored the benefits of standardised assessments on schools, focusing on teachers and students as the subjects of analysis.³¹

Regarding the benefits of assessments, Benjamin and Pashler suggest that assessments have cognitive benefits that increase learners' commitment to learning.³² Assessments provide students with valuable feedback on how to direct their study efforts toward important examinable materials. School-related factors can influence student achievement in assessments through internal and external influences. For example, unsatisfactory school conditions, such as poor structures and lack of amenities like electricity and water, can negatively impact teachers' working conditions and the teaching and learning process.³³ Class size is another internal factor that can affect student achievement. Additionally, the socio-economic status of a school, represented by the quintile

²¹ J.A. Heissel et al., "Testing, Stress and Performance: How Students Respond Physiologically to High Stakes Testing," www.people.tamu.edu/jmeer/HADFM-testingstress.pdf, 2018.

²² Department of Basic Education (DoE), "Report on the Annual National Assessment. Grade 1 to 6. ," 2011 (Pretoria: Government Publishers, n.d.).

²³ South African Democratic Teachers Union, *Perspective on ANA* (Executive Summary, 2015).

²⁴ Heissel et al., "Testing, Stress and Performance: How Students Respond Physiologically to High Stakes Testing."

²⁵ Cranley, L., "An Investigation into the Impact of High Stakes Testing through the NAPLAN Assessment on Teaching on the Teaching and Learning of Mathematics in One Primary School" (The University of Notre Dame, Australia., 2018).

²⁶ Stephen C. Scogin et al., "Learning by Experience in a Standardized Testing Culture," *Journal of Experiential Education* 40, no. 1 (March 12, 2017): 39–57, <https://doi.org/10.1177/1053825916685737>.

²⁷ G. Chen, "When Teachers Cheat: The Standardized Test Controversies ," www.publicschoolreview.com/blog/when-teachers-cheat-standardised-test-controversies., 2018.

²⁸ Chen, "When Teachers Cheat: The Standardized Test Controversies ."

²⁹ Elina Saeki et al., "The Influence of Test-based Accountability Policies on Early Elementary Teachers: School Climate, Environmental Stress, and Teacher Stress," *Psychology in the Schools* 55, no. 4 (April 7, 2018): 391–403, <https://doi.org/10.1002/pits.22112>.

³⁰ K. Dickinson, "Standardised Tests: Finland's Education System vs. the U.S. ," <https://bigthink.com/politics-current-affairs/standardized-testing>, 2019.

³¹ Aaron S Benjamin and Hal Pashler, "The Value of Standardized Testing: A Perspective from Cognitive Psychology," *Policy Insights from the Behavioral and Brain Sciences* 2, no. 1 (2015): 13–23; G. Brown and J. Hattie, "The Benefits of Regular Standardized Assessment in Childhood Education: Guiding Improved Instruction and Learning. ," www.researchgate.net/publication/233871126, 2012; J L Styron and R A Styron, "Teaching to the Test: A Controversial Issue in Quantitative Measurement," *Systemics, Cybernetics and Informatics* 10, no. 5 (2012): 22–25.

³² Benjamin and Pashler, "The Value of Standardized Testing: A Perspective from Cognitive Psychology."

³³ A.P. Kutame, "Researching Sensitive Issues in Education in the Limpopo Province of South Africa" (Stellenbosch University, 2004).

level in South Africa, can influence the success or failure of students' achievements. The primary inputs that influence student achievement include the immediate family, peers, and the school itself.³⁴

The debate on the significance of schools and how factors such as student location, parents' background, and school quality measures impact student achievement continues to be a fundamental concern for policymakers and researchers.³⁵ This debate persists despite the Coleman et al. report suggesting that schools do not have a powerful influence on student achievement.³⁶ On the other hand, Savasci and Tomul argue that while there is a relationship between educational resources offered by schools and academic achievement, this relationship is limited.³⁷ They contend that educational resources alone cannot fully mitigate the effects of socioeconomic factors.

In South Africa, the South African Schools Act, amended in 2005, implements a quintile system.³⁸ Schools are categorised into five groups (quintiles) based on the relative wealth of the surrounding communities. Quintile 1 represents the poorest communities, while quintile 5 represents the wealthiest communities.³⁹ Quintile 1, 2, and 3 schools are classified as no-fee schools and are not allowed to charge fees. The quintile system aims to provide under-resourced schools in disadvantaged communities with resources comparable to well-endowed schools, with the expectation that this will lead to improved student achievement. However, evidence suggests that this policy alone is insufficient for improving student achievement.⁴⁰

Llie and Lietz argue that factors influencing student achievement are not only external, such as government funding, but are also deeply rooted in the context in which students are raised.⁴¹ They contend that the family plays a significant role in conveying and reflecting the structures and values of society, which inevitably impacts the school's status. Therefore, understanding the impact of school factors on student achievement requires considering intermediate factors at the policy level, family level, school level, and individual student level.⁴²

Effects of Assessment Administration on Teaching and Learning

One obstacle to effective student teaching and learning is the widespread use of ineffective learning techniques. Many of the techniques that have been proven to be highly effective in research on learning and memory are the ones that learners find uncomfortable.⁴³ As a result, when a student takes repeated assessments, they discover which study methods have been successful and which have not.⁴⁴ Similarly, Styron and Styron argue that modern work environments indicate that students will encounter standardised tests throughout their academic and professional careers.⁴⁵ They explain that while some practices and techniques may differ in assessment, it is generally only in the education sector that criticism is made about the use of standardised assessments. Conversely, professional testing is common in fields such as architecture, interior design, and the medical field, where effective strategies for studying, preparing, and taking tests are often encouraged.⁴⁶

³⁴ Eric A Hanushek, "Assessing the Effects of School Resources on Student Performance: An Update," *Educational Evaluation and Policy Analysis* 19, no. 2 (1997): 141–64.

³⁵ M. Helal, "School Resources Autonomy and Student Achievement: Evidence from a Regression Discontinuity Design.," *Melbourne Institute of Applied Economics and Social Research*. (University of Melbourne., 2012); Van der Berg, "What the Annual National Assessment Can Tell Us about Learning Deficits over the Education System and the School Career Year."

³⁶ J.S. Coleman et al., "Equality of Educational Opportunity" (Washington. D.C:U.S.: Government Printing Office,1967).

³⁷ Havva Sebile Savasci and Ekber Tomul, "The Relationship between Educational Resources of School and Academic Achievement.," *International Education Studies* 6, no. 4 (2013): 114–23.

³⁸ Raj Mestry and Raymond Ndhlovu, "The Implications of the National Norms and Standards for School Funding Policy on Equity in South African Public Schools," *South African Journal of Education* 34, no. 3 (2014).

³⁹ A. Zoch, "The Effects of Neighbourhoods and School Quality on Education and Labour Market Outcomes in South Africa. ," 2017, www.econ.sun.ac.za/wpapers.

⁴⁰ Hanushek, "Assessing the Effects of School Resources on Student Performance: An Update"; Helal, "School Resources Autonomy and Student Achievement: Evidence from a Regression Discontinuity Design. "; Zoch, "The Effects of Neighbourhoods and School Quality on Education and Labour Market Outcomes in South Africa. "

⁴¹ S. Llie and P. Lietz, "School Quality and Student Achievement in 21 European Countries. The Heyneman-Loxley Effect Revisited," 2003.

⁴² Llie and Lietz, "School Quality and Student Achievement in 21 European Countries. The Heyneman-Loxley Effect Revisited."

⁴³ John Dunlosky et al., "Improving Students' Learning with Effective Learning Techniques: Promising Directions from Cognitive and Educational Psychology," *Psychological Science in the Public Interest* 14, no. 1 (2013): 4–58.

⁴⁴ Benjamin and Pashler, "The Value of Standardized Testing: A Perspective from Cognitive Psychology."

⁴⁵ Styron and Styron, "Teaching to the Test: A Controversial Issue in Quantitative Measurement."

⁴⁶ Styron and Styron, "Teaching to the Test: A Controversial Issue in Quantitative Measurement."

Since standardised assessments are typically aligned with national curricula, teaching to the test allows teachers to set realistic goals for teaching and learning.⁴⁷ This is achieved through increased revision and the development of aligned curriculum maps. Standardised assessments also have the advantage of introducing teachers to the latest trends in assessing learners and improved assessment methods. This is because the assessment instruments developed by experts in the field are objective, valid, and balanced.⁴⁸

According to Zaromb and Roediger, since teaching ultimately leads to assessment, there is a higher likelihood that teachers will align their teaching and learning strategies with assessments.⁴⁹ Therefore, a teacher who consistently tests students will have an advantage in assessing and organising tested information effectively.⁵⁰ These beneficial effects are likely because testing promotes the clustering of similar items, which provides an opportunity for teachers to develop effective retrieval strategies for internal assessments.⁵¹ Furthermore, since the tests are already prepared, it reduces the burden on schools in terms of test paper creation and printing.⁵² Additionally, assessments have cognitive benefits that increase students' commitment to learning because repeated studying reduces the likelihood of forgetting.⁵³

Motivation plays a major role in student test preparation and performance. Hanushek states that students' performance on tests improves when incentives are offered.⁵⁴ A working paper from the National Bureau of Economic Research (NBER) revealed that providing incentives to students who performed poorly on assessments significantly improved their performance.⁵⁵ While poor performance is often attributed to socioeconomic factors, school systems, and culture, the researchers proposed another possible reason: students may lack a real incentive to perform well. To test this theory, the team conducted an experiment in the United States and China. The test involved three top-ranked schools in China and two schools in the United States. Students were given 25 minutes to answer multiple-choice and fill-in questions, and a surprise incentive of twenty-five US dollars was offered to encourage them to do their best. The scores of the students from the United States increased significantly, while the performance of the Chinese students remained unchanged. Low-stakes tests, in comparison to high-stakes tests, may not effectively engage student motivation and may not accurately reflect students' knowledge.⁵⁶

In low-stake situations, students must value the non-consequential tests and have high test motivation in order to exert significant effort. Simzar et al. demonstrated that students' beliefs about the usefulness and importance of low-stakes exams influence their effort, which in turn predicts their scores on such tests.⁵⁷ Particularly, if students do not understand the importance or usefulness of an exam, their effort will suffer, ultimately affecting their test scores.

While students' success in schools depends on various factors such as study habits, teaching quality, school attendance, and test-taking abilities, researchers have shown that parental involvement has a significant impact on student achievement in the classroom.⁵⁸ McNeal explains that this success is influenced by parent-

⁴⁷ Styron and Styron, "Teaching to the Test: A Controversial Issue in Quantitative Measurement."

⁴⁸ Brown and Hattie, "The Benefits of Regular Standardized Assessment in Childhood Education: Guiding Improved Instruction and Learning. ."

⁴⁹ Franklin M Zaromb and Henry L Roediger, "The Testing Effect in Free Recall Is Associated with Enhanced Organizational Processes," *Memory & Cognition* 38, no. 8 (2010): 995–1008.

⁵⁰ Zaromb and Roediger, "The Testing Effect in Free Recall Is Associated with Enhanced Organizational Processes."

⁵¹ Neil W Mulligan, "Total Retrieval Time and Hypermnnesia: Investigating the Benefits of Multiple Recall Tests," *Psychological Research* 69 (2005): 272–84.

⁵² Benjamin and Pashler, "The Value of Standardized Testing: A Perspective from Cognitive Psychology."

⁵³ Henry L. Roediger and Jeffrey D. Karpicke, "Test-Enhanced Learning," *Psychological Science* 17, no. 3 (March 6, 2006): 249–55, <https://doi.org/10.1111/j.1467-9280.2006.01693.x>.

⁵⁴ Hanushek, "Assessing the Effects of School Resources on Student Performance: An Update."

⁵⁵ K.Y. Chay, J. Guryan, and B. Mazumber, "Early Life Environment and Racial Inequality in Education and Earnings in the United States," 2014.

⁵⁶ Rahila M. Simzar et al., "Raising the Stakes: How Students' Motivation for Mathematics Associates with High- and Low-Stakes Test Achievement," *Learning and Individual Differences* 39 (April 2015): 49–63, <https://doi.org/10.1016/j.lindif.2015.03.002>.

⁵⁷ Simzar et al., "Raising the Stakes: How Students' Motivation for Mathematics Associates with High- and Low-Stakes Test Achievement."

⁵⁸ James S Coleman, *Parental Involvement in Education* (US Department of Education, Office of Educational Research and Improvement ..., 1991); Sandra M Machen, Janell D Wilson, and Charles E Notar, "Parental Involvement in the Classroom," *Journal of Instructional Psychology* 32, no. 1 (2005): 13–17; Ralph B McNeal Jr, "Parent Involvement, Academic Achievement and the Role of Student Attitudes and Behaviors as Mediators.," *Universal Journal of Educational Research* 2, no. 8 (2014): 564–76; David R Topor et al., "Parent Involvement and Student Academic

child discussions, monitoring, educational support strategies, and teacher-parent organisations.⁵⁹ According to McNeal, these mechanisms affect students' attitudes, behaviours, and academic achievement.⁶⁰ A study on parental involvement and student academic performance by Topor et al. demonstrated that increased parental involvement is significantly associated with a child's perception of cognitive competence.⁶¹ The study also found a correlation between improved student-teacher relationships and parental involvement. Additionally, the findings indicated that higher perceived cognitive competence was related to higher achievement test scores and that the quality of the student-teacher relationship significantly influenced a child's academic performance.

THEORETICAL FRAMEWORK

Efficient management of assessment administration is vital for upholding the credibility of educational evaluation procedures. Henry Fayol's five management functions present a comprehensive framework for guiding assessment administrators in successfully arranging and executing assessment processes. This study explores how Fayol's functions of planning, organizing, leading, coordinating, and controlling can be applied to assessment administration, underscoring their role in ensuring equitable and dependable assessment results. Fayol's focus on planning aligns with the initial phases of assessment administration. Planning involves defining clear goals and objectives for the assessment process.⁶² Assessment planners establish the assessment's purpose, specify the skills or knowledge to be evaluated, and select suitable assessment methods.⁶³ This phase is critical for devising a comprehensive and purpose-oriented assessment plan. Within the context of assessment administration, organizing entails structuring assessment tasks and efficiently allocating resources. This includes assigning roles and responsibilities to individuals or teams involved in assessment development, administration, and analysis.⁶⁴

Organizing assessment tasks ensures a coordinated and streamlined process for optimal outcomes. Effective leadership plays a pivotal role in managing assessment administration teams. Fayol's leadership principles correspond to the need for transparent communication, guidance, and motivation within assessment teams. Leaders in assessment administration provide direction to item developers, coordinators, and administrators.⁶⁵ They foster collaboration, maintain morale, and ensure alignment with assessment goals. Coordinating assessment activities mirrors Fayol's emphasis on harmonizing efforts. In assessment administration, coordination involves aligning various components, such as item development, logistics, and data collection.⁶⁶ Effective coordination prevents redundancies, enhances information sharing, and optimizes resource utilization.⁶⁷ This function is crucial for seamless assessment execution. Fayol's principle of control resonates with the continuous monitoring and evaluation of assessment administration. Assessment administrators employ control mechanisms to ensure adherence to established standards.⁶⁸ This includes quality assurance of assessment items, procedural fairness, and addressing unexpected issues during administration.⁶⁹ Applying Fayol's management functions to assessment administration provides a structured approach to achieving effective and trustworthy assessment outcomes. By incorporating planning, organizing, leading,

Performance: A Multiple Mediation Analysis," *Journal of Prevention & Intervention in the Community* 38, no. 3 (2010): 183–97.

⁵⁹ McNeal Jr, "Parent Involvement, Academic Achievement and the Role of Student Attitudes and Behaviors as Mediators."

⁶⁰ McNeal Jr, "Parent Involvement, Academic Achievement and the Role of Student Attitudes and Behaviors as Mediators."

⁶¹ Topor et al., "Parent Involvement and Student Academic Performance: A Multiple Mediation Analysis."

⁶² D. Roberts, "The Role of Assessment in a Learning Culture," in *The Routledge International Handbook of Sandplay Therapy* (Routledge., 2018), 98–100.

⁶³ David Boud and Nancy Falchikov, "Aligning Assessment with Long-term Learning," *Assessment & Evaluation in Higher Education* 31, no. 4 (2006): 399–413.

⁶⁴ M. K. Smith and N. Razzouk, "The Differential Effects of Teacher Training in Assessment on Student Learning: An Assessment Culture Perspective," *Assessing Writing* 14, no. 3 (2009): 170–90.

⁶⁵ K. J. Chapman and J. W. Mahoney, *Leadership for Assessment in Higher Education*. (Routledge., 2017).

⁶⁶ T. Eckes, "Assessment Administration: Issues, Approaches, and Considerations.," in *Encyclopedia of Language and Education* (Springer, 2020).

⁶⁷ Y. Yin and H. Zhang, "Coordinating Healthcare Operations with Competing Providers and Patients: A Survey," *European Journal of Operational Research* 259, no. 2 (2017): 461–70.

⁶⁸ Gregory J Cizek and Michael B Bunch, *Standard Setting: A Guide to Establishing and Evaluating Performance Standards on Tests*. (SAGE Publications Ltd, 2007).

⁶⁹ M. C. Rodriguez and E. H. Haertel, "On the Design and Analysis of Educational Assessments," *Educational Measurement: Issues and Practice* 27, no. 3 (2008): 20–31.

coordinating, and controlling into assessment practices, educators and administrators can enhance the credibility and equity of educational assessments, ultimately benefiting students and educational institution.

METHODOLOGY

A total of 108 educators were chosen as participants from a population of 237 individuals. The Stratified random sampling technique was utilized to pick educational institutions from different tiers (elementary, secondary) within the UMkhanyakude district. An overview of demographic particulars concerning the selected group is presented in Table 1. These details include factors like gender, type of school, workshop attendance, and membership in a union. These variables covered 46% of the teachers who were part of the broader population of 237. The research took place in the UMkhanyakude education district, situated in the KwaZulu Natal province of South Africa. This district comprises 22 educational circuits, and given their similarity, four circuits were selected for sampling purposes in this investigation. This study utilized a questionnaire containing 44 closed-ended queries intended to collect descriptive data. These questions were structured into four categorized sections denoted as A, B, C, and D. Section A encompassed personal particulars of the educators, whereas sections B, C, and D incorporated Likert scale inquiries related to the ANA implementation. These segments concentrated on distinct facets of the ANA, encompassing its implementation, impact on educational institutions, and influence on teaching and learning. The central focus of this investigation revolves around the analysis of outcomes derived from the Likert scale responses provided in sections B, C, and D. The Likert scale employed in this study adopted a five-point framework, with the subsequent scale: 1 = Strongly agree, 2 = Agree, 3 = Uncertain, 4 = Disagree, 5 = Strongly disagree.

The questionnaire's validity was evaluated by utilizing the Kaiser-Meyer Olkin (KMO) measure to gauge sampling sufficiency and internal consistency. This assessment yielded a score of 0.816. To ascertain the interrelation of variables for factor analysis, the Bartlett test of sphericity was executed, producing a result of 1862.98. The Bartlett test of sphericity was determined to have noteworthy statistical significance ($p < 0.001$). Both the KMO and Bartlett's tests revealed a satisfactory degree of internal consistency and interrelation among variables suitable for factor analysis. Cronbach's Alpha was employed to evaluate the internal consistency of the questionnaire items and ascertain their dependability. The instrument exhibited a reliability score of 0.89. Below are guidelines for appraising reliability concerning evaluation, outlined as follows:

- A reliability of ≥ 0.70 is considered adequate for comparing groups.
- A reliability of ≥ 0.90 is considered adequate for individual monitoring.

As the questionnaire's reliability exceeded the threshold of 0.70, it was considered reliable for the study.

Data from the sampled participants was quantitatively analyzed using a combination of descriptive and inferential statistics, providing a comprehensive understanding of the collected information. These statistical techniques enable us to extract meaningful insights and draw informed conclusions from the data. SPSS Version 26 was used in the analysis of data for this study.

Ethical principles regulate human behavior and interpersonal dynamics,⁷⁰ establishing standards for acceptable behavior.⁷¹ The authors proposed a situation-dependent approach to involving participants, while also showing regard for institutional differences. The construction and distribution of the research questionnaire adhered to ethical tenets such as participant willingness, prevention of harm, maintenance of anonymity, confidentiality, and accuracy. The provision of informed consent forms was coupled with introductory letters sent to educational institutions.

The data presented in this section are the results of the descriptive statistical analysis conducted on teachers' responses to the following research questions:

- a) What were the lessons learnt from the administration of the ANA during implementation?
- b) What were the effects of the administration of ANA on schools?
- c) To what extent did the administration of ANA impact on teaching and learning?

⁷⁰ Joyce Afuh Vuban and Elizabeth Agbor Eta, "Negotiating Access to Research Sites and Participants within an African Context: The Case of Cameroon," *Research Ethics* 15, no. 1 (January 24, 2019): 1–23, <https://doi.org/10.1177/1747016118798874>.

⁷¹ Earl R Babbie, *Introduction to Social Research* (Wadsworth Cengage learning, 2011); Kobus Maree, *First Steps in Research* (Van Schaik Publishers, 2007).

Presentation of Data**Table 1. Descriptive statistics on the frequency of ANA**

Variable		Frequency	%
Gender	Female	65	60
	Male	43	40
Category of school	Quintile 1	23	21.3
	Quintile 2	67	62.0
	Quintile 3	6	5.6
	Quintile 4	12	11.1
Workshop attended	Yes	74	68.5
	No	34	31.5
Membership of a union	Yes	106	98.1
	No	2	1.9

Table 2 furnishes a summary of teachers' rationales behind ANA administration and implementation, accompanied by the corresponding percentage-based responses. Table 3 succinctly outlines the statistical characteristics of the elements correlated with the factors elucidated in Table 2. The scales were uniformly distributed, and the report did not feature any absent data. The means, standard deviation, kurtosis, and skewness were accurately computed.

Table 2. Teachers' response to ANA administration and implementation

Factors	Agree (%)	Not sure (%)	Disagree (%)
It was compulsory for teachers to attend orientation workshops on how ANA processes are managed	75.0	13.0	12.1
Teachers received administration guidelines for ANA management at the school	81.4	9.3	9.3
Through training, teachers understood the processes of verification of ANA according to the ANA administration	63.9	15.7	20.4
Teachers received the relevant test papers and memoranda in time before each assessment session	77.7	7.4	14.8
Teachers were provided guideline documents on the invigilation process	81.5	8.3	10.2
Teachers were allowed to invigilate their grades throughout the whole assessment process	14.9	11.1	74.1
Teachers were allowed by the chief invigilator to explain concepts that the students did not understand in test papers as they wrote the actual test paper	19.4	7.4	73.2
All students with special needs were allowed additional time according to the ANA guideline document	36.2	15.7	48.1
There were instances where the need arose for photocopies of the test papers to be made	58.3	15.7	25.9
Anomalies were recorded in the whole assessment process	44.5	43.5	12.0
Teachers were given enough time to discuss the memoranda before marking	39.9	12.0	48.2
Only the relevant subject teachers were allowed to mark the scripts	81.5	6.5	12.0
Teachers were allowed to take test papers home for marking	54.7	18.5	26.9

Table 3: Descriptive statistics for ANA administration and implementation

Response option (%)	ITEM												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Mean	2.04	1.99	2.44	2.13	2.00	3.93	3.84	3.22	2.58	2.62	3.14	2.04	2.67
Standard Deviation	1.05	0.99	1.11	1.09	1.03	1.07	1.17	1.29	1.27	0.90	1.23	1.02	1.27
Skewness	0.97	1.30	0.68	1.11	1.34	-0.88	-0.85	-0.13	0.56	0.35	-0.11	1.25	0.52
Kurtosis	0.34	1.69	-0.31	0.63	1.63	-0.08	-0.32	1.22	0.77	0.40	-1.21	1.29	-0.78

The majority of teachers expressed confidence in the ANA administration and implementation procedures for most factors listed in Table 2 and related items in Table 3, except for items 6, 7, 8, and 11. However, teachers showed disagreement with these specific items, indicating the presence of issues associated with those factors. These concerns were reflected in the mean values of 3.93, 3.84, 3.22, and 3.14 respectively. These ratings, well above 2.00, indicate that these factors pose significant challenges for teachers.

Table 4: Teachers' Response on the Effect of ANA on Schools

Factors	Agree (%)	Not sure (%)	Disagree (%)
ANA increased the commitment to learn by students	70.4	10.2	19.5
Teachers were encouraged to set realistic targets for achievement by students	64.7	18.5	16.7
Teaching methods improved as a result of ANA	59.3	15.7	25.0
The process encouraged teachers to take an interest in current trends in assessment	59.2	21.3	19.4
Underperforming schools were identified through the assessment	70.4	17.6	12.0
ANA motivated teachers towards giving attention to teaching and learning	70.4	14.8	14.8
ANA encouraged schools to improve the standard of learning	77.8	8.3	13.9
ANA results provide data on the educational standards of schools that participate	63.9	20.4	15.8
ANA results are a good indicator of a schools' overall performance	58.3	14.8	26.9

Table 5: Descriptive statistics on the effect of ANA administration on schools

Response option (%)	1	2	3	4	5	6	7	8	9
	Mean	2.31	2.38	2.48	2.40	2.15	2.23	2.11	2.33
Standard Deviation	1.17	0.98	1.18	1.10	0.95	1.06	1.08	1.04	1.26
Skewness	0.86	0.60	-0.75	0.50	0.67	0.83	1.13	0.59	0.49
Kurtosis	-0.12	-0.25	0.50	-0.53	-0.06	0.11	0.73	-0.27	-0.87

The data presented in Table 4 and Table 5, including the indicators and associated items, collectively indicate a consensus among surveyed teachers regarding the beneficial impact of ANA on schools. This conclusion is drawn from the fact that the average values fall below the midpoint of 2.00 on the rating scale.

Consequently, it implies a significant level of approval from teachers concerning the factors outlined in Table 4.

Table 6: Teachers response to the effect of ANA on teaching and learning

Factors	Agree (%)	Not sure (%)	Disagree (%)
Teachers increased time on test preparation compared to the allocated time for other subjects to ensure better results	61.1	13.0	25.9
The exemplars were useful in test preparation because they gave a scope that was easy to follow	71.3	13.9	14.9
Teaching was modeled on the ANA exemplars for ease of teaching and learner understanding of subject concepts	63.9	18.5	17.6
ANA helped improve the internal test practices of teachers in class	67.5	19.4	12.9
ANA assessments were important in identifying weak links in the teaching and learning process	74.1	11.1	14.8
ANA assessments should have been written in the fourth term for student progression to the next grade	37.1	13.9	49.1
Teachers became confident about the processes of assessment for positive teaching and learning	43.5	22.2	34.3
Students were confident about the processes leading to the writing of the ANA	38.9	29.60	31.5
Feedback from students indicated that parents encouraged them to learn at home towards the assessment	29.7	22.20	48.1

Table 7: Descriptive statistics on the effect of ANA on teaching and learning

Response option (%)	1	2	3	4	5	6	7	8	9
Mean	2.59	2.27	2.38	2.28	2.17	3.16	2.91	2.92	3.30
Standard Deviation	1.22	1.03	1.00	0.99	1.12	1.50	1.15	1.13	1.14
Skewness	0.68	1.00	0.58	0.85	1.10	-0.19	1.13	0.18	-0.17
Kurtosis	-0.58	0.64	-0.36	0.53	0.65	-1.42	0.73	-0.74	-0.95

The factors outlined in Table 6 and the corresponding elements in Table 7 depict a distinct split concerning ANA's influence on teaching and learning. More precisely, items 6, 7, 8, and 9 underscore zones where teachers expressed differing viewpoints on ANA's impact in this context. This contrast is observable in the mean values assigned to these items: 3.16, 2.91, 2.92, and 3.30. Notably, these ratings notably surpass the midpoint of the 2.00 rating scale.

DISCUSSIONS

The study reveals disparities and issues in the administration of the Assessment of National Administration (ANA). In planning, careful consideration should be given to all aspects of the assessment process, including teacher involvement, student preparation, and accommodations for special needs students.

Planning should address concerns raised by teachers, such as the need for clarification of misunderstood concepts, flexibility in assessment administration, and support for students from low socio-economic backgrounds. The organization of the assessment process needs to be revisited, encompassing the role of teachers in invigilating their students, providing adequate explanations, and ensuring appropriate accommodations for students with special needs.

The study suggests that teachers lack sufficient time to analyze test guidelines before marking. Organizing should address this issue to ensure fair and effective assessments. Commanding involves providing leadership and direction. The study implies a need for clearer guidance on the role of teachers in the assessment process. Leadership should emphasize the importance of teacher involvement, accommodation for special needs students, and the proper alignment of assessments with the curriculum.

Coordination is essential to ensure that all elements of the assessment process work together seamlessly. The study indicates discrepancies in the perceptions of teachers and students about the assessment's importance and impact. Coordinating efforts should aim to align these perceptions and create a more cohesive approach to assessment.

Controlling involves monitoring and adjusting activities to ensure that goals are achieved. The study identifies several issues, such as misalignment with school curricula, lack of clarity for students, and insufficient parental involvement. Controlling measures should be implemented to address these issues, ensuring that the assessment process aligns with educational goals and involves key stakeholders, including students and parents. Applying Fayol's management functions to the study suggests a need for careful planning, effective organization, strong leadership, coordinated efforts, and monitoring and adjustments to address the identified issues in the administration and implementation of the ANA.⁷²

SUMMARY

ANA set forth laudable objectives, such as refining teachers' assessment techniques, pinpointing schools requiring resource assistance, cultivating school pride through improved results, and updating parents about their children's progress. While acknowledging the positive impact on schools, there were divergences among teachers concerning the evaluation of implementation procedures and their influence on teaching and learning. Furthermore, many educators perceived ANA as a distraction from the educational aspects of their vocational training. The partnership between policymakers and teachers in relation to ANA, particularly the top-down approach to implementation, emerges as a notable challenge evident from the administrative and implementation processes. While upholding the distinct roles in education delivery is essential, it remains critical to foster collaboration among support systems at different educational levels, including schools, circuits, districts, provinces, and the national level. Similarly, district education officials should thoughtfully consider the method of distributing standardized assessments to students' homes. Parents' socio-economic backgrounds can impact their ability to provide adequate home support. As a result, alternative avenues of collaboration, partnership, and aid should be explored by all relevant education stakeholders, particularly within circuits and districts, to amplify the administration and implementation outcomes of assessments.

RECOMMENDATIONS

In South Africa, the assessment landscape in education encompasses diverse methods. During the General Education and Training (GET) phase, informal assessments and teacher-created tests are prevalent, playing a crucial role in determining student promotion and progression by the end of the academic year. Another significant evaluation occurs at the Further Education and Training (FET) exit grade, specifically through the National Senior Certificate (NSC) examinations. The NSC holds particular importance, serving as a key indicator of the overall health of the South African education system. These assessments are rigorously planned, organized, and executed with adherence to established protocols in assessment administration, making them standardized.

Currently, the assessment scenario in South Africa has become intricate and interconnected, especially with the suspension of the Annual National Assessments (ANA). This has led to the prevalence of various forms of school-based, teacher-made tests. Unfortunately, these lack adherence to proper test construction principles and fall short of being considered sufficiently standardized for either criterion or norm referencing, as noted by Howie et al.⁷³

This section endeavors to outline a roadmap for establishing a robust, resilient, self-improving, and adaptive assessment system in South Africa. It takes into account the historical and contextual aspects of education in the country. Furthermore, it aims to propose an assessment system capable of yielding results that align with the current and future needs of South Africa, considering the evolving economic, social, political, and external circumstances.

CONCLUSION

The findings of this study indicate that teachers did not universally embrace ANA. The study's exploration of the implementation and impact of ANA on schools, teaching, and learning revealed varied perspectives, highlighting the necessity of reassessing any new assessment initiatives. The involvement of parents in the

⁷² V.V. Vliet, "Five Functions of Management (Fayol).", <https://www.toolshero.com/management/five-functions-of-management>, 2011.

⁷³ Howie et al., "Progress in International Reading Literacy Study (PIRLS)."

assessment implementation was limited, lacking effective channels for feedback and meaningful contributions to improve the assessment process. In summary, the responsibility for demonstrating the effectiveness and quality of inputs in the public school system, particularly for teachers in the GET phase, rests on them through educational outcomes. Standardized assessments are identified as the optimal means to achieve this objective. A potential reintroduction of a national assessment in the future is conceivable. However, its success depends on addressing the needs and concerns of the primary stakeholders. The assessment administration implementation model, delineated in this chapter, underscores the significance of a collaborative, participatory, and rewarding approach for any future assessments. This model provides a framework that stakeholders, especially education officials, teachers, and parents, can embrace to execute a smooth assessment process.

BIBLIOGRAPHY

- Anderson, Allan. "The Dubious Legacy of Charles Parham: Racism and Cultural Insensitivities among Pentecostals." *Pneuma* 27, no. 1 (2005): 51–64.
- Babbie, Earl R. *Introduction to Social Research*. Wadsworth Cengage learning, 2011.
- Bansilal, Sarah. "The Difficulty Level of a National Assessment of Grade 9 Mathematics: The Case of Five Schools." *South African Journal of Childhood Education* 7, no. 1 (2017): 1–8.
- Benjamin, Aaron S, and Hal Pashler. "The Value of Standardized Testing: A Perspective from Cognitive Psychology." *Policy Insights from the Behavioral and Brain Sciences* 2, no. 1 (2015): 13–23.
- Berg, S. Van der. "What the Annual National Assessment Can Tell Us about Learning Deficits over the Education System and the School Career Year," 2015.
- Boud, David, and Nancy Falchikov. "Aligning Assessment with Long-term Learning." *Assessment & Evaluation in Higher Education* 31, no. 4 (2006): 399–413.
- Brown, G., and J. Hattie. "The Benefits of Regular Standardized Assessment in Childhood Education: Guiding Improved Instruction and Learning. ." www.researchgate.net/publication/233871126, 2012.
- Chapman, K. J., and J. W. Mahoney. *Leadership for Assessment in Higher Education*. . Routledge., 2017.
- Chay, K.Y., J. Guryan, and B. Mazumber. "Early Life Environment and Racial Inequality in Education and Earnings in the United States," 2014.
- Chen, G. "When Teachers Cheat: The Standardized Test Controversies ." www.publicschoolreview.com/blog/when-teachers-cheat-standardised-test-controversies., 2018.
- Chetty, M. "Comparing School-Based Assessments with Standardised National Assessments in South Africa." University of Witwatersrand, 2016.
- Childs, Ruth A, and Linda Umezawa. "When the Teacher Is the Test Proctor." *Canadian Journal of Education* 32, no. 3 (2009): 618–51.
- Cizek, Gregory J, and Michael B Bunch. *Standard Setting: A Guide to Establishing and Evaluating Performance Standards on Tests*. SAGE Publications Ltd, 2007.
- Coleman, J.S., Q.R. Campbell, J.C. Hobson, J. McPartland, A.M. Mood, D.F. Weinfeld, and L.J. York. "Equality of Educational Opportunity." Washington. D.C: U.S. : Government Printing Office, 1967.
- Coleman, James S. *Parental Involvement in Education*. US Department of Education, Office of Educational Research and Improvement ..., 1991.
- Cranley. L. "An Investigation into the Impact of High Stakes Testing through the NAPLAN Assessment on Teaching on the Teaching and Learning of Mathematics in One Primary School." The University of Notre Dame, Australia., 2018.
- Department of Basic Education. "PIRLS 2021: South African Preliminary Highlights Report. ." Pretoria: Department of Basic Education, 2023.
- Department of Basic Education (DoE). "Report on the Annual National Assessment. Grade 1 to 6. ." 2011. Pretoria: Government Publishers, n.d.
- Dickinson, K. "Standardised Tests: Finland's Education System vs. the U.S. ." <https://bigthink.com/politics-current-affairs/standardized-testing>, 2019.
- Dunlosky, John, Katherine A Rawson, Elizabeth J Marsh, Mitchell J Nathan, and Daniel T Willingham. "Improving Students' Learning with Effective Learning Techniques: Promising Directions from Cognitive and Educational Psychology." *Psychological Science in the Public Interest* 14, no. 1 (2013): 4–58.
- Eckes, T. "Assessment Administration: Issues, Approaches, and Considerations. ." In *Encyclopedia of Language and Education*, 1–10. Springer, 2020.
- Flynn, John T, and Barbara E Anderson. "The Effects of Test Item Cue Sensitivity on IQ and Achievement Test Performance." *Educational Research Quarterly*, 1977.
- Graven, Mellony, and Hamsa Venkatakrishnan. "ANAs: Possibilities and Constraints for Mathematical Learning." *Learning and Teaching Mathematics* 2013, no. 14 (2013): 12–16.

- Gustafsson, Martin. "Standardised Testing and Examinations at the Primary Level Current Thinking and Practices." Stellenbosch: Stellenbosch University, 2018.
- Hanushek, Eric A. "Assessing the Effects of School Resources on Student Performance: An Update." *Educational Evaluation and Policy Analysis* 19, no. 2 (1997): 141–64.
- Hanushek, Eric A, Ludger Woessmann, and Stephen J Machin. *Handbook of the Economics of Education*. Elsevier, 2023.
- Heissel, J.A., K.E. Adam, J.L. Doleac, D.N Figlio, and J. Meer. "Testing, Stress and Performance: How Students Respond Physiologically to High Stakes Testing." www.people.tamu.edu/jmeer/HADFM-testingstress.pdf, 2018.
- Helal, M. "School Resources Autonomy and Student Achievement: Evidence from a Regression Discontinuity Design. ." *Melbourne Institute of Applied Economics and Social Research*. . University of Melbourne., 2012.
- Howie, S.J., C. Combrinck, K. Roux, M. Tshele, G.M. Mokoena, and Mcleod Palane N. "Progress in International Reading Literacy Study (PIRLS)," 2016.
- Kanjee, Anil, and Qetelo Moloi. "South African Teachers' Use of National Assessment Data." *South African Journal of Childhood Education* 4, no. 2 (2014): 90–113.
- Kutame, A.P. "Researching Sensitive Issues in Education in the Limpopo Province of South Africa." Stellenbosch University, 2004.
- Llie, S., and P. Lietz. "School Quality and Student Achievement in 21 European Countries. The Heyneman-Loxley Effect Revisited," 2003.
- Machen, Sandra M, Janell D Wilson, and Charles E Notar. "Parental Involvement in the Classroom." *Journal of Instructional Psychology* 32, no. 1 (2005): 13–17.
- Maphalala, M C, and J J Dhlamini. "Standardized Testing: A Case of Annual National Assessments in South African Primary Schools." *Gender and Behaviour* 15, no. 4 (2017): 10334–46.
- Maree, Kobus. *First Steps in Research*. Van Schaik Publishers, 2007.
- McNeal Jr, Ralph B. "Parent Involvement, Academic Achievement and the Role of Student Attitudes and Behaviors as Mediators." *Universal Journal of Educational Research* 2, no. 8 (2014): 564–76.
- Mensah, Frank Joseph, Pravina Pillay, and Patrick Themba Sibaya. "The Experiences of Primary School Educators with the National Reading Strategy (NRS) in Mbabane Circuit, Ingwavuma." *Gender and Behaviour* 15, no. 2 (2017): 8738–49.
- Mestry, Raj, and Raymond Ndhlovu. "The Implications of the National Norms and Standards for School Funding Policy on Equity in South African Public Schools." *South African Journal of Education* 34, no. 3 (2014).
- Mulligan, Neil W. "Total Retrieval Time and Hypermnnesia: Investigating the Benefits of Multiple Recall Tests." *Psychological Research* 69 (2005): 272–84.
- Newman, W. *Automotive Supply Chain Leaders: Winning in Supply Chain during a Time of Industry Disruption*. . Los Angeles: Digitalist, 2018.
- Newmann, Fred, M Bruce King, and Mark Rigdon. "Accountability and School Performance: Implications from Restructuring Schools." *Harvard Educational Review* 67, no. 1 (1997): 41–75.
- Phala, Thembi A., and Anna Hugo. "Difficulties in Teaching Grade 3 Learners with Reading Problems in Full-Service Schools in South Africa." *African Journal of Disability* 11 (February 10, 2022). <https://doi.org/10.4102/ajod.v11i10.906>.
- Roberts, D. "The Role of Assessment in a Learning Culture." In *The Routledge International Handbook of Sandplay Therapy*, 98–100. Routledge., 2018.
- Rodriguez, M. C., and E. H. Haertel. "On the Design and Analysis of Educational Assessments." *Educational Measurement: Issues and Practice* 27, no. 3 (2008): 20–31.
- Roediger, Henry L., and Jeffrey D. Karpicke. "Test-Enhanced Learning." *Psychological Science* 17, no. 3 (March 6, 2006): 249–55. <https://doi.org/10.1111/j.1467-9280.2006.01693.x>.
- Saeki, Elina, Natasha Segool, Laura Pendergast, and Nathaniel von der Embse. "The Influence of Test-based Accountability Policies on Early Elementary Teachers: School Climate, Environmental Stress, and Teacher Stress." *Psychology in the Schools* 55, no. 4 (April 7, 2018): 391–403. <https://doi.org/10.1002/pits.22112>.
- Savasci, Havva Sebile, and Ekber Tomul. "The Relationship between Educational Resources of School and Academic Achievement." *International Education Studies* 6, no. 4 (2013): 114–23.
- Scogin, Stephen C., Christopher J. Kruger, Regan E. Jekkals, and Chelsea Steinfeldt. "Learning by Experience in a Standardized Testing Culture." *Journal of Experiential Education* 40, no. 1 (March 12, 2017): 39–57. <https://doi.org/10.1177/1053825916685737>.

- Sillitoe, Paul. "Indigenous Knowledge in Development." *Anthropology in Action* 13, no. 3 (2006): 1–12.
- Simzar, Rahila M., Marcela Martinez, Teomara Rutherford, Thurston Domina, and AnneMarie M. Conley. "Raising the Stakes: How Students' Motivation for Mathematics Associates with High- and Low-Stakes Test Achievement." *Learning and Individual Differences* 39 (April 2015): 49–63. <https://doi.org/10.1016/j.lindif.2015.03.002>.
- Sireci, Stephen G., Stanley E. Scarpati, and Shuhong Li. "Test Accommodations for Students With Disabilities: An Analysis of the Interaction Hypothesis." *Review of Educational Research* 75, no. 4 (December 30, 2005): 457–90. <https://doi.org/10.3102/00346543075004457>.
- Smith, M. K., and N. Razzouk. "The Differential Effects of Teacher Training in Assessment on Student Learning: An Assessment Culture Perspective." *Assessing Writing* 14, no. 3 (2009): 170–90.
- South African Democratic Teachers Union. *Perspective on ANA*. Executive Summary, 2015.
- Spaull, N. *Accountability and Capacity in South African Education. Education as Change*. Vol. 19. Sage Publications, 2015.
- Styron, J L, and R A Styron. "Teaching to the Test: A Controversial Issue in Quantitative Measurement." *Systemics, Cybernetics and Informatics* 10, no. 5 (2012): 22–25.
- Taylor, Stephen. "Uncovering Indicators of Effective School Management in South Africa Using the National School Effectiveness Study." *Stellenbosch Economic Papers*, no. 10/11 (2011).
- Thulare, Tshogofatso D. "A Policy Analysis of the Annual National Assessments in South Africa." In *Cross-Nationally Comparative, Evidence-Based Educational Policymaking and Reform*, 35:71–100. Emerald Publishing Limited, 2018.
- Tobin, Mollie, Petra Lietz, Dita Nugroho, Ramya Vivekanandan, and Tserennadmid Nyamkhuu. *Using Large-Scale Assessments of Students' Learning to Inform Education Policy: Insights from the Asia-Pacific Region*. Insights from the Asia-Pacific region, Australian Council for Educational Research (ACER), 2015.
- Topor, David R, Susan P Keane, Terri L Shelton, and Susan D Calkins. "Parent Involvement and Student Academic Performance: A Multiple Mediation Analysis." *Journal of Prevention & Intervention in the Community* 38, no. 3 (2010): 183–97.
- Trentham, Landa L. "Anxiety and Instruction Effects on Sixth-grade Students in a Testing Situation." *Psychology in the Schools* 16, no. 3 (1979): 439–43.
- Vliet, V.V. "Five Functions of Management (Fayol)." <https://www.toolshero.com/management/five-functions-of-management> , 2011.
- Vuban, Joyce Afuh, and Elizabeth Agbor Eta. "Negotiating Access to Research Sites and Participants within an African Context: The Case of Cameroon." *Research Ethics* 15, no. 1 (January 24, 2019): 1–23. <https://doi.org/10.1177/1747016118798874>.
- Wolhuter, B., and T. Magubane. "Hated ANAs Said to Make a Comeback Every Three Years. ." *Independent Online News*. , 2016. www.iol.co.za.
- Yin, Y., and H. Zhang. "Coordinating Healthcare Operations with Competing Providers and Patients: A Survey." *European Journal of Operational Research* 259, no. 2 (2017): 461–70.
- Zaromb, Franklin M, and Henry L Roediger. "The Testing Effect in Free Recall Is Associated with Enhanced Organizational Processes." *Memory & Cognition* 38, no. 8 (2010): 995–1008.
- Zoch, A. "The Effects of Neighbourhoods and School Quality on Education and Labour Market Outcomes in South Africa." 2017. www.econ.sun.ac.za/wpapers.

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