



Thandulwazi Trust

MATHS AND SCIENCE ACADEMY

REFLECTING ON THE RESULTS OF 2018

The start of 2019 allowed the Thandulwazi Maths and Science Academy Team to analyse the 2018 results in line with Mrs Angie Motshekga, Minister of Basic Education's announcement of the National Senior Certificate Examination Results on 03 January 2019, in order to gauge whether the support being provided within the basic education system through all four Thandulwazi programmes is in line with the performance that is being experienced nationally.

If we look back at the South African Basic Education from 1994, it started with nineteen (19) separate education departments for each racial and ethnic grouping prevalent during the pre-1994 era of the country. This meant that the whole education system was resourced differently and unequally. The geopolitical location of schools and the quality of school infrastructure, teacher provisioning (dominated by either unqualified or underqualified teachers, especially in township and rural schools), learning and teacher resources etc. were skewed towards the then white schools. The advent of a democratic South Africa in 1994 required the deconstruction and destruction of the apartheid education system, starting with the unification of the fragmented education system into a single, unified, democratic education system which was based on a human rights culture based on the social justice principles of *access, redress, equity, inclusivity and efficiency*.

Together with the Department of Basic Education, the Thandulwazi Maths and Science Academy recognizes that the education of the children in our community is the responsibility of all of us and through the generous support of our donors, partners and supporters we have been able to prove the potential we have as South Africans to mobilise and ensure that an efficient and quality education system is delivered through the public, private and NGO sector structures and programmes delivered throughout the country.



An Overview of the 2018 National Senior Certificate Examination Results

It is only since 2008 that a unified and standardized examination system, where all examination papers are set nationally, and quality assured by Umalusi, exists. Pre-1994, the examination system was administered by the nineteen (19) fragmented education departments, which evolved into one where each province set its own papers and gradually the examination system was shifted to the National Department of Basic Education.



Mrs Angie Mothsekga, MP
Minister of Basic Education

The Grade 12 National Senior Certificate examination results is but one of the indicators used to track trends in the Basic Education system. Although the primary purpose of these examination results is to provide learners with an exit national qualification, they also offer an opportunity to gather trends and progress that is being made regarding the provision of *access to an inclusive, equitable, quality and efficient basic education system*.

The class of 2018 was the eleventh (11th) cohort of learners to sit for the National Senior Certificate and the fifth (5th) cohort to be exposed to the CAPS curriculum (a curriculum which the Brookings Institute in Washington DC, USA, found to embed the skills and competencies required for a changing world). The total number of candidates that registered for the examinations comprised of 624,733 full-time candidates and 176,110 part-time candidates. 46.2% were 16 to 20-year-old girls and 34% were 16 to 20-year-old boys. 8.8% of the girls and 10.6% of the boys who too part in the examinations were between 21 and 26 years of age – an indication of the uptake in the *Multiple Examination Opportunity* to achieve a National Senior Certificate qualification. 147 question papers were set, 8 million question papers were printed, 7.6 million scripts were produced and delivered to 6,888 secure examination centres across the country; 65,000 invigilators and 41,000 markers were appointed in 141 secure marking centres.

It is also important to note that 61.7% and 84.6% of the class of 2018 were 5 and 6-year-olds respectively, who were exposed to Early Childhood Development programmes in 2006, proving the importance of laying quality foundations required for lifelong learning.

The 2018 National Senior Certificate examination results show that 84,700 Bachelor passes were achieved by learners in “no fee” schools. Quintile 1 to 3 schools produced 53% of the Bachelor passes and quintile 4 and 5 schools produced 47% of the Bachelor passes in the examinations. 88.4% of the candidates that wrote the examinations were social grant beneficiaries; 58.4% of the Bachelor passes, 74.3% of the Diploma passes and 80.1% of the Higher Certificate passes were attained by social grant beneficiaries; 94.9% of the National Senior Certificate passes were attained by social grant beneficiaries; and 20% of the distinctions, including critical subjects such as Accounting, Life Sciences, Physical Science and Mathematics were attained by social grant beneficiaries.

The Gauteng Department of Education's pass rate without progressed learners increased by 3% from 2017 to 89%; and with progressed learners the province's 2018 National Senior Certificate examinations pass rate increased by 2.8% from 2017 to 87.9%; ranking the Gauteng Province Grade 12 class of 2018 as the best in the country.

The overall national 2018 National Senior Certificate examinations pass rate without progressed learners saw a 2.9% improvement from 2017 to 79.4% and with the progressed learners there was a 3.1% improvement with the overall pass rate for 2018 being 78.2%.

172,043 candidates qualified for admission to Bachelor studies, representing 33.6% of the total number of candidates; 141,700 (27.6%) passed with a Diploma; 86,790 (16.9%) of the candidates passed with Higher Certificates; 99 (0.02%) candidates passed with a National Senior Certificate; and 129 (0.03%) candidates passed with an Endorsed National Senior Certificate. 312,743 (78.3%) of the candidates that achieve Bachelor and Diploma passes are eligible for studies at Higher Education and Training Institutions. 86,790 (21.7%) of the candidates who obtained Certificate passes may register at TVET Colleges and other skills training institutions.

In 2018, a total of 156,885 distinctions were achieved with Gauteng contributing to 36,114 of these. In the 12 key subjects (including Accounting, Business Studies, Economics, Mathematics and Physical Science) the total number of distinctions have declined by 4.3% from 2017 to 58,806. 5,169 distinctions were achieved in Accounting (5,040 in 2017); 5,828 distinction were achieved in Mathematics (6,726 in 2017); and 8,135 distinctions were achieved in Physical Science (7,861 in 2017).

2018 Thandulwazi Maths and Science Academy Saturday School Grade 12 National Senior Certificate Examination Candidates Results

In support of the Department of Basic Education's mandate to improve *access, redress, equity, inclusivity, efficiency and quality* within the Basic Education sector, the Thandulwazi Maths and Science Academy provided curriculum enrichment and extra tuition in Mathematics, the Sciences, Accounting and English for 1303 Grade 9 to 12 learners from 160 High Schools across Gauteng Province during the 2018 school year.



Of the 150 Grade 12 Thandulwazi candidates who wrote the 2018 National Senior Certificate Examinations 73 (48%) achieved Bachelor Degree passes; 45 (29.6%) achieved Diploma passes; 17 (11.8%) achieved Higher Certificate passes and 15 (9.87%) failed. The 2018 Thandulwazi cohort achieved an overall pass rate of 88.78% in the 2018 National Senior Certificate Examinations, with the National overall pass rate being 78.2% and the Gauteng Province pass rate being 87.9%. The Thandulwazi Academy candidates achieved 23 distinctions in total – 3 in Accounting; 6 in English; 6

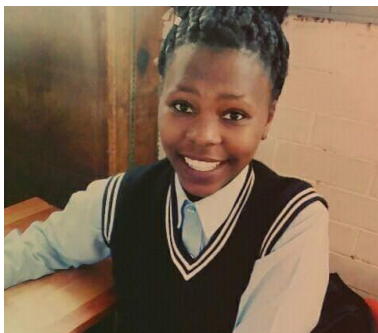
in Life Science; 2 in Mathematics and 6 in Physical Science. The Grade 12 Thandulwazi learners achieved a 84% pass rate in Accounting (Gauteng – 83.2%; National – 72,5%); 100% in English (English First Additional Language: Gauteng – 99.7%; National – 97.2%); 98% in Life Science (Gauteng – 85.9%; National – 76.3%); 79% in Mathematics (Gauteng – 74.7%; National 58%); and 79% in Physical Science (Gauteng – 83.5%; National – 74.2%).

Congratulations to the top 2018 Thandulwazi Maths and Science Academy Saturday School Grade 12 Learners:

1. Malakhiwe Mahlulo from Wendywood High School for being the top Thandulwazi Academy learner in Accounting, and for achieving three distinctions in English, Accounting and Physical Science;
2. Hitekani Mzimba from Vuwani Secondary School for being the shared top Thandulwazi Academy learner in English First Additional Language, and for achieving two distinctions in English First Additional Language and Life Science;
3. Tania More from Parktown Girls' High School for being the top Thandulwazi Academy learner in English Home Language;
4. Caroline Thinandavha from Cosmo City Secondary School for being the top Thandulwazi Academy learner in Physical Science, and for achieving three distinctions in Mathematics, Life Science and Physical Science;
5. Zwelakhe Mfundisi from Ivory Park Secondary School for being the top Thandulwazi Academy learner in Mathematics;
6. Silindile Sithole from Hoërskool Birchleigh for achieving two distinctions in Life Science and Physical Science;
7. Namhla Hermans from Ibhongo Secondary School for being the top Thandulwazi Academy Learner in Life Science; and for achieving two distinctions in Life Science and Physical Science; and
8. Romeo Ndimande from Vuwani Secondary School for being the shared top Thandulwazi Academy Learner in English First Additional Language; and for achieving two distinctions in English and Physical Science.

Meet two of the Grade 12 Thandulwazi stars:

Namhla Hermans is the youngest of five siblings living in Pimville, Soweto. She matriculated from Ibhongo High School in Soweto at the end of 2018. Namhla is raised by her dad who is a single



parent for her and her older brother. She has always worked hard at school and enjoyed all her subjects. Amongst several academic achievements, in her Grade 10 year she entered the Mathematics Olympiad and was placed second overall in her school. It was her love of Physics books and movies that sparked her interest in Astronomy when she was in Grade 9. She found out about the Thandulwazi Saturday School Programme through her cousin who resides in Alexandra and she decided to join the programme.

She found that the teachers were patient and allowed her to ask the questions she needed to when she did not understand. The programme also reinforced the concepts she covered in the week at her school and gained deeper understanding of the content. In 2018, Namhla matriculated with distinctions in IsiXhosa, Life Orientation, Geography, Life Sciences and Physical Sciences. She has been accepted at Wits University to study a BSc degree in Astronomy Astrophysics.

Malakhiwe (Mala) Mahlulo has a passion for Science and Art - she considers herself a lover of things that are polar opposites. Mala is the youngest of three children who are raised by Xolisa Mahlulo, their single mother. When she was in primary school, Xolisa lost her job so finances were tight but Mala says she never went without because her mom tried her best. A friend of Malakhiwe started attending Thandulwazi Saturday School classes in Grade 9 and introduced Mala to the programme. She had always wanted



to attend extra classes but knew this would put financial strain on her mom as extra lessons are expensive. Mala could not believe that at the Thandulwazi Maths and Science Academy she would be able to get assistance in the critical subjects of Physical Science, Mathematics and Accounting for free. Her school, Wendywood High School, did not offer extra classes so she was very grateful for the opportunity offered by the Thandulwazi Saturday School. She found the programme to be beneficial to her as she was given an opportunity to practice the content she covered at school during the week. She is particularly grateful for the exercises she got in the Accounting classes. Malakhiwe matriculated in 2018 with distinctions in English Home Language, IsiZulu, Life Orientation, Accounting, Physical Science and Visual Arts. One of the highlights for Malakhiwe was being selected for the Moshal Scholarship Selection camps at the Thandulwazi Academy in 2018. During the camp she completed thinking tests and personality tests and those results affirmed that her sights are set on the right career field. Malakhiwe will be pursuing a degree in Graphic Design at Stellenbosch University.

2018 Thandulwazi Maths and Science Academy Intern-Teacher Programme Results

The Thandulwazi Maths and Science Academy Intern-Teacher Programme trained 43 young Teachers in 2018, 12 of whom graduated in December 2018. This programme grew from 37 Intern-Teachers in 2017. Of the 12 Graduate Teachers, 8.3% are teaching in Government Schools; 41.67% are based in low-fee paying Independent Schools; 33.3% are at high-fee paying Schools; two were employed at St Stithians Junior Preparatory and Girls College respectively and two are still seeking permanent employment. Of the overall total of 94 Thandulwazi Academy Graduate Teachers, 78 (82.98%) are teaching in a range of schools across South Africa, with only one teaching abroad and two still searching for teaching employment.



The 2018 Intern-Teachers have increased their first semester performance of an overall pass rate of 86.3% to a second semester overall pass rate of 96.7%. There was also an 11.48% increase in the distinction rate between the first and second semesters. Congratulations to the Thandulwazi Academy's top performing Intern-Teachers:

1. Senior and FET Phase: Netshedzo Mavhungu (80%)
2. Intermediate and Senior Phase: Avela Nanti (82%)
3. ECD and Foundation Phase: Anamika Reddi (83%)

Meet Thandulwazi's top ECD and Foundation Phase Intern-Teacher:

Anamika Reddi grew up in Durban where she attended Durban Girls' College from Grade 1 to Matric. Anamika matriculated in 2006 with an "A aggregate" and 4 distinctions in Mathematics, English, History and Art. She studied at the University of Cape Town (UCT) from 2007 to 2010 and obtained a Bachelor of Business Science Finance Honours degree in 2010. Prior to joining the Thandulwazi Academy Intern-Teacher Programme, she worked in the corporate world for 7 years.



After graduating from UCT, she joined Unilever South Africa on their graduate recruitment programme and spent time in both marketing and category operations working on major global brands. In August 2014, she joined Deloitte South Africa's Strategy & Operations department, a division of Deloitte Consulting. At Deloitte, she worked on various business strategy and operating model design projects across industries such as Insurance, Consumer Business, Telecommunications as well as with South African State-Owned Enterprises (SOE's) and National Departments.

"My 7 years work experience in corporate taught me invaluable lessons about business and the world around me. More importantly, it taught me about myself – what drives and motivates me and what I want out of life. I have always had a passion for education and especially development of young children originating from my mother's profession as a pre-primary school teacher. Hence, my

career change was prompted on by my own quest for a “job” which I truly love (and that doesn’t feel like a job) and inspired by my mother as well other teachers that I know who are happy, fulfilled individuals who love what they do!”

Anamika joined the Thandulwazi Maths and Science Academy Intern-Teacher Programme in January 2018 whilst completing her Postgraduate Certificate in Education (PGCE) - Foundation Phase and Early Childhood Development, through UNISA. She is very grateful for the amazing opportunity she has been afforded as an intern at St Stithians College through the Thandulwazi Academy and believes that the practical experience in a world-class teaching environment will be highly beneficial to her prospects as a teacher. “I look forward to a future of helping mould, shape and inspire young minds and hearts.” Anamika completed her PGCE in December 2018 with distinctions in all nine of her modules.

2018 Thandulwazi Maths and Science Academy UNISA ECD Pilot, Year 2 Results

The South African Government reminds us that, if we as a country are to improve the outputs of the schooling system, we will have to continue to improve the *fundamental quality of learning and teaching*, well before Grade 12. The success of the Basic Education schooling system relies on the hard work put in by teachers, learners, parents and communities of trust, not only during the Grade 12 National Senior Certificate Examinations, but also throughout the twelve years of schooling. Research has shown that the early years of learning to read, write and compute directly translates into positive results and outcomes in later schooling years. In solidarity with the Government’s priority to improve the *foundational skills of learners’ early Grade literacy and numeracy skills* the Thandulwazi Maths and Science Academy facilitated a Thandulwazi/UNISA-accredited professional development course for 58 selected, Gauteng-based, pre-Grade R and Grade R Teachers in 2018, in order to provide the right foundational training required by teachers in this phase of education to ensure that the necessary quality of learning and teaching is provided in early childhood development and Grade R centres of learning.



Demand for places on this pilot was high but many applicants for this course did not have a Level 4 qualification, which is a UNISA requirement. This short course runs over a year. The UNISA course material is complemented by targeted, module-related teacher workshops at the Thandulwazi Academy on selected Saturdays during the year. Of the 58 beneficiaries, 7 (12%) are still awaiting their results, 4 (6.9%) discontinued their course

without informing the Thandulwazi Academy, 1 (1.7%) is deceased, 4 (6.9%) did not submit their final portfolios. Of the remaining 42 educators a group average of 71.2% was achieved. For many of the selected cohort, this pilot has offered teachers their first opportunity to study at the higher education level, to improve their teaching, management skills and content knowledge.

See the Thandulwazi Academy's UNISA ECD Teachers implementing what they learnt:



Rainah Dube from Reitumetse Primary School says that being part of the Thandulwazi Maths and Science Academy's UNISA ECD Teacher Development Programme has made a huge impact on her Early Childhood and Development Centre by assisting her with the correct training that she needs to change the little ones in her class' wellbeing. She says that the programme has taught her about all the different areas of learner development, different optimal classroom layouts etc. Rainah started with the Thandulwazi Academy's UNISA ECD Teacher Development Programme when she was employed at a preschool, but with the additional training she has received she now teaches at a Primary School where she has implemented everything she has learnt and calls them her Thandulwazi class activities. In the picture Rainah is teaching her learners about numbers, colours and shapes.

Conclusion

It is clear that slow gains are being made within the Basic Education sector in order to ensure that quality learning and teaching during the 12 years of formal schooling, and the foundational learning being laid in the pre-Grade R phase, is delivered within South Africa. However, there is still some way to go to ensure that efficiency and quality within the education system is also improved. Therefore the Thandulwazi Maths and Science Academy, with the generous support of donors, partners and supporters, will continue to support the *National Development Plan: Vision for 2030*, the *Department of Basic Education's Action Plan to 2019: Towards the Realisation of Schooling 2030* and the *Millenium Development Goals* for Education; through the Saturday School Programme, the Intern-Teacher Development Programme, the Teacher Development Programme and the Scholarship Programme.

However, as we look forward to taking on the challenges that still remain we must also celebrate the victories and achievements of those changing the face of the basic education sector from within – congratulations to the Thandulwazi Class of 2018! Your hard work and dedication has paid off; and your achievements make the Thandulwazi Academy, donors, partners, supporters and St Stithians Family proud.

Mr Velaphi Gumbi
Head: Thandulwazi Maths and
Science Academy

Ms Charné Haak
Fundraising Manager: Thandulwazi
Maths and Science Academy

18 January 2019