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Inside Education

APRIL 2023

QUARTERLY EDITION

INSPIRING MINDS

What makes a school excel

**The Best
and Worst
of Matric
2022**



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Education News

Inadequate infrastructure and lack of resources between good and bad schools show in the results



An incomplete science lab at City Life Christian School. Photos: Eddie Mtsweni

EDWIN NAIDU

An incomplete classroom next to the principal's office, meant to be a science laboratory, is a stark reminder of the challenges facing teachers and learners at the City of Life Christian School in Brits.

School principal and passionate educator Mam Ncalo says the small private school registered with the North West Department of Education, whose curriculum it follows, battles with having all the resources it needs to make teaching and learning seamless.

Formed seven years ago to provide education for children in the community, the school does not receive a government subsidy, meaning it relies on school fees for survival. Unlike the traditional private schools, City of Life subscribes to the government curriculum and seeks to offer education to children in and around Brits and nearby Letlhabile.

While private schools in the country belong to the Independent Schools Association of Southern Africa, the largest, oldest and most inclusive independent schools association, critics allege that while they have opened doors to Black pupils, the principals is white and so is the majority of staff. But their results ensure their high fees with excellent resources usually give their learners a superb springboard for success.

The main difference between public and private schools is that private schools are run independently of the government and are in charge of their curriculum, ethos and funding, often thriving through contributions of parents, students, alumni and donors.

The City of Life Christian

School is different from your typical private school. Set on the dusty ground opposite a filling station, the school operates in a church hall, with 168 pupils from grade R to matric, although it can accommodate 400 learners.

The school is staffed by 17 teachers. Four classes meet in the large church hall, while the remaining children are spread across four small classrooms on the church property. But when it comes to performing science experiments, funds ran out when building the laboratory, thwarting efforts to show children experiments about chemical reactions.

In 2022, 14 pupils wrote the matric exams. Half of the learners failed, while the remaining seven were allowed to rewrite papers during the supplementary examinations. One out of four candidates writing matric in 2021 passed, while in 2020, out of seven, only one passed. Last year 14 sat the examinations, and a single pupil passed. Seven matriculants were allowed to write supplementary examinations.

"We worked hard throughout

the year; it was disappointing when the results came out. I do feel that the parents did not play their part," says Ncalo, who has been teaching for 34 years, and is still passionate about her profession.

"If parents work with teachers, we can achieve more to ensure what is being taught in the classroom is reinforced by extra work and parental supervision at home," adds Ncalo.

She says that with five matric pupils enrolled in 2023, the school reorganised teaching staff and resolved to understand why they had not done well in the past three years and work towards ensuring learners and teachers are on the same page this year.

Asked what would help the school on the path to success, Ncalo, who drives daily from Pretoria to Brits, says more resources are needed. "We would like to appeal to businesses to support us by investing in education, finish the building so we can teach and conduct science experiments, for example," she pleads.

Ncalo says she loves teaching



A tale of

and engaging with pupils, especially in the classroom. However she has observed that teachers these days are less committed to their careers, with some leaving because they could earn more money elsewhere.

But she hopes that despite limited resources and with the support of businesses, the school can step up and do better with the five candidates in the matric class of 2023.

Regarding physical education, the school has a playground and children participate in volleyball, athletics and soccer.

Infrastructure, learning facilities such as laboratories and libraries, playgrounds and teaching resources continue to differ between public and township schools, and this shows disparities when results are announced.

But little seems to have changed in bringing about parity for learners, although all provinces had shown improvement in their overall Grade 12 final exam results.

About 80 kilometres from the Brits school is the Hoërskool Menlopark in Pretoria, the top performing public school in Gauteng. Last year they had 330 pupils who wrote matric with a 97% pass rate. Only three learners failed to obtain a bachelor's pass.

The school was founded in 1963 by reknown painter Bettie Cilliers-Barnard. Initially, it had 12 classrooms and 372 pupils. But they've grown substantially since and now have 1 650 pupils with an average class size of 22 and 25 learners.

The school is on an expansive property with lush green fields comprising three rugby fields, hockey courts, athletics fields, five tennis courts, five netball courts, a sports stand overlooking the ground and a gym. The school also has a golf academy.

They have well-equipped laboratories and multi-media library facilities, ensuring pupils have the best learning tools.

To cope with the growth in the number of learners, the school also built residences and is still considering the expansion of facilities as part of an ongoing process determined by budget and availability of resources.

"In everything we do, we instill in pupils the desire to have a strong work ethic to be the best when it comes to academic work," says Nico Erasmus, the deputy principal in his 33rd year at the school.

Erasmus was a former pupil

at the school, completed matric in the seventies and joined the school in 1992. "Our values are based on integrity, respect, diligence and loyalty," he adds.

"Our focus is to ensure that not only are they academically strong when they leave, but they are responsible adults," Erasmus says. Most of their matric pupils pursue further studies at universities with a high success rate of students who complete their degrees.

Their former pupils include André de Ruyter, the former Eskom boss, who matriculated in 1985. Founder of the Firstrand Group Laurie Dippenaar finished matric in 1966, actress Jana Cilliers was in the class the year before, while Springbok coach and player Rudolf Straeuli matriculated in 1981, soapy actress Amalia Uys in 2002, Olympics swimmer Gideon Louw in 2010, and three recent national cricket players Rassie van der Dussen (2007), Heinrich Klassen (2009) and Theunis de Bruyn (2010).

"If you want to be a successful school, there's nothing we do that is extraordinary. We have and continue to maintain a strong culture, ensuring learner buy-in, and get strong parental support to assist in our planning," notes Erasmus.

He says one of their proudest achievements was helping learners acclimate to online studies during the COVID-19 pandemic with no failure at the end of the year.

Erasmus says as a state school, half of the contribution from the government is used on salaries. At the same time, parents contribute to the purchase of sporting facilities so they can ensure their children are given the best.

National Pass Rate

The 80.1% pass rate in the 2022 National Senior Certificate exam pass rate was the second highest in South Africa since 2019.

But for the country's best and the worst performing schools, it remains a case of the "haves" continuing to stay ahead of the "have-nots" in almost three decades of democracy.

Inside Education visited four schools in Gauteng and the North-West to probe the conditions of the best and worst performing schools to provide a window into the disparities and how they affected their performance.

Hoërskool Menlopark was the top performing public school in Gauteng, followed by Hoërskool Waterkloof, Hoërskool Garsfontein

Education News

two schools

tein, Afrikaanse Hoër Meisies.

Gauteng's worst performing public schools were Simunye Secondary School, Sehopotso Secondary School, Dinoto Technical Secondary, Lefa-Ifa Secondary School and Dr BW Vilakazi Secondary School.

Gauteng Department of Education Spokesperson Steve Mabona says the department wants accountability for results, particularly in underperforming schools, with the purpose not to punish the management, teachers and learners but rather to provide the right combination of incentives, support and resources that will bring the changes to improve the quality of education in those schools.

Mabona says that the department will meet the public schools that performed below 65% to put into place interventions to improve the performance of these schools.

"We are accelerating interventions in underperforming schools to ensure the future success of all learners," he adds.

According to Mabona the Secondary Schools Improvement Programme (SSIP), a GDE supplementary tuition programme being implemented across the province, is a core programme focusing on poorly performing schools and schools that have experienced disruptions.

Overall, KwaZulu-Natal had



Hoër School Garsfontein

the most significant improvement at 6.2% from last year, which puts them at an 83% pass rate in the matric examination in 2022. But 20 schools in Zululand, Uthukela, Umzinyathi, Umgungundlovu, Pinetown, Umlazi and King Cetshwayo districts achieved pass rates of 10% to 37,8%.

The Mgwempisi Combined School in the Umzinyathi district achieved a 10% pass rate, with only one of the ten pupils who wrote matric passing the exams. The Mthaniya Combined School in the Uthukela District recorded a 14.9% pass rate and the Zithume High School in the King Cetshwayo District attained 18.2%. Mthaniya and Zithume have not achieved a pass rate of

more than 40% in the past three years.

In March, all schools that achieved a pass rate of less than 40% in the 2022 matric results were ordered to account to the MEC for Education Mbali Frazer and the head of the department Nkosinathi Ngcobo for their poor performance and outline plans to improve in 2023.

But while having top-class facilities and playgrounds are critical, Deputy head of Hoërskool Garsfontein, Maggie Holliday, says the staff at the school are incredibly hard working and caring towards the children. "They go the extra mile. We have many children who are academically weak, but for me, the biggest achievement is getting the average child to move up one symbol you don't see in the papers".

She adds that as a state school, it is sponsorship and support of businesses that has made it possible to upgrade facilities and sporting amenities without which they could not afford it.

The school governing body is integral as a partner with the school management in setting goals for learners and teachers. "Being in Pretoria East, we have many poorer pupils. When there's no money, parents - be they plumbers or whatever - try and get all things done for the good of the school," says Holliday.

Losing out to Hoërskool Menlopark was disappointing as the school finished Number 1 in 2021 as part of a hat-trick of top spots. "When they say you're number one or three or whatever because there were only 12 points between the top three schools. But you are excited and say yes, you are number one, but does that matter? My challenge is to get those children, your average child, to improve not only the top, but we cannot only focus on those children," adds Holliday.

From zero to hero North-West School for the Deaf turns to its sole success story to inspire learners.

About 289 kilometres outside Gauteng, the North West School for the Deaf in Leeudoringstad, near Wolmaransstad, produced a 0% pass rate in the 2022 matric exams as teachers struggled to teach through sign language.

Officials on behalf of the North West MEC for Education, Viola Motsumi, have contacted the school principal JJ Roberts to address the challenges in learning and teaching at the special needs school with 120 pupils.

According to Motsumi, learners must be given the same opportunities to succeed as their peers in ordinary schools."

"The department will continue to improve learning in special needs schools, particularly in the North West School for the Deaf. The school was presenting matric for the second year in 2022," she says.

Motsumi further says they would provide additional specialist resources to these schools as they fast-track the implementation of the three-stream model curriculum. Two sign language interpreters have been engaged at the school since the start of the year, she says.

Roberts, who is also the secretary of the Deaf Federation of SA, says pupils struggle because they are taught in English through sign language and have to write their exams in a language they're not used to. He believes there should be a provision for deaf learners to write in sign language to compete on an equal footing.

The school survives on government funding and the generosity of individuals, corporations and foundations to deliver high-quality educational programs for deaf and hard-of-hearing Children. "We hope that this year we can work harder and do better," he adds.

A year ago, the Pan South African Language Board (PANSALB) in North West raised concerns about teachers at the school not being skilled in sign language, thus violating the rights of the learners.

The North West Education Department notes that at least a dozen teachers required training which will be fulfilled as part of an agreement between the North West Provincial Government (NWPG) and North West University (NWU). The training began in February.

The school's only success in matric out of the six candidates who wrote in 2021 was Gaolatlhwe Motlagagomang, from Zeerust, whom Roberts has employed as a teaching assistant at the school.

"His success means he is a role model, and if he can do it, so can others," says Roberts.

Motlagagomang says he is proud to have passed matric at the school but wants more deaf learners to walk in his steps and is always encouraging pupils to go over their work again and keep preparing. "I'm here to help them and take pride in doing this, as they see me as their role model," he adds.

South Africa currently has 44 schools for deaf students. In January, Basic Education Minister Angie Motshekga praised the efforts of the top two learners from KwaThintwa School for the Deaf in Inxanga, KwaZulu-Natal, for their proficiency in sign language.

Over the past 12 years, the school, which follows the mainstream curriculum, meaning learners write the same National Senior Certificate exams as any other school, has had a 100% matric pass rate.

More than 600 000 people use the South African Sign Language to communicate.



Learners from Hoër School Menlo Park in Pretoria.



Education News

“We are committed to eradicate infrastructure backlog in SA schools”

From the DG's Desk

HUBERT MWELI

School infrastructure backlogs have been considerably reduced over the past ten years. But many school environments still need to be more conducive to learning. We are committed to eradicating the backlogs which continue to harm teaching and learning throughout parts of South Africa.

Infrastructure development is a vital responsibility of the Department of Basic Education. The Department is responsible for the planning and implementation of several infrastructure programmes. These include:

- ASIDI: Accelerated School Infrastructure Delivery Initiative, consisting of the following sub-programmes:
- Inappropriate structures: To provide replacement schools for schools made entirely of inappropriate materials
- Water: To provide water supply to schools with no water supply
- Sanitation: To provide appropriate toilets to schools with no toilets
- Electricity: To provide electricity supply to schools with no electricity supply, and,
- SAFE: Sanitation Appropriate For Education. The purpose is to provide appropriate toilets to schools dependent on basic pit toilets.

Both ASIDI & SAFE initiatives are funded by the School Infrastructure Backlog Grant (SIBG). The Education Infrastructure Grant (EIG) is implemented through Provincial Education Infrastructure line functions.

Both grants are premised on the commitment of the DBE to eradicate 496 inappropriate structures, supply essential water to 1257 schools, hand over basic sanitation to 868 schools and distribute electricity to 878 schools. These commitments were made in the 2012/13 financial year.

To meet these commitments, the department would have to: Find ways to deliver

infrastructure and services more efficiently and cost-effectively and also improve the quality of information used for planning. These necessities were first noted in the National Planning Commission: National Development Plan in November 2011.

While considerable progress has been made, there are still hurdles to overcome.

A desktop study of school sanitation conducted in 2018 revealed that 3 898 schools depended on basic pit toilets.

As a result, a budget of R2.8 billion was allocated for the SAFE Initiative over the Medium Term Expenditure Framework (MTEF) as follows:

- 2019/20: R700 000 000.00
- 2010/21: R800 000 000.00
- 2021/22: R1 300 000 000.00

The plan was to implement the SAFE programme through: Provincial EIG projects, partnerships/donation projects, and the DBE SAFE Initiative Allocation.

The original baseline as part of the total SAFE programme was 3 898 schools. There have been several changes to the list since the start of the programme. This was mostly due to the rationalisation of schools and site assessments that confirmed appropriate sanitation.

As a result, the current number of schools in this programme is 3 397.

So far, 2 489 of these schools have already progressed to practical completion, resulting in a gap of 908 outstanding projects.

Concerning ASIDI and inappropriate structures, the original baseline was 510 schools. There have been several changes to the list since the start of the programme.

This was mostly due to the rationalisation of schools and site assessments that confirmed appropriate structures. The current number of schools on this programme

is 331. Of these, 316 schools have already progressed to practical completion, resulting in a gap of 15 projects.

Regarding water supply, the original baseline was 1 117 schools. There have been several changes to the list since the start of the programme. This was mostly due to the rationalisation of schools and site assessments that confirmed appropriate water supply. The current number of schools in this programme is 1 271. A total of 1 159 of these schools have already progressed to practical completion, resulting in a gap of 12 outstanding projects.

Concerning the electricity supply, the original baseline was 902 schools. There were also several changes to the list since the start of the programme, primarily due

to the rationalisation of schools and site assessments that confirmed appropriate electricity supply. The current number of schools on this programme is 373. All the projects at the 373 schools have already progressed to practical completion.

On the sanitation challenge, the

original baseline was 701 schools, but there were several changes to the list since the start of the programme. This was mostly due to the rationalisation of schools and site assessments that confirmed appropriate sanitation. The current number of schools in this programme is 1053. A total of 1053 of these schools have already progressed to practical completion.

As a department, we ensured there was a strong emphasis on monitoring the implementation of work plans with targets and milestones.

Furthermore, through these projects as a department, we ensured that we were creating job opportunities for young people through the delivery of infrastructure projects.

It is pleasing to note that the delivery of projects has been accelerated towards meeting the Practical completion schedule (e.g. water, electricity, and inappropriate structures targets in the APP were met and even exceeded).

Where there has been a poor quality of work, this has been dealt with the service providers and implementing agents accordingly. A number of blockages which delayed the delivery of projects have been unblocked.

School principals, School Governing Bodies, Districts, Provincial officials, and Local Government Councillors were involved in the value chain of monitoring

the delivery of projects. As a department, we are satisfied with the progress, mindful that the journey is far from over.

As we seek to improve the infrastructure at schools, our goal remains: “By 2030, South Africans should have access to education and training of the highest quality, leading to significantly improved learning outcomes.”

■ *Hubert Mathanzima Mveli is the Director-General of the Department of Basic Education*



Basic Education Director General Hubert Mathanzima Mveli says the department is hard at work in eradicating pit latrine toilets in SA schools.

Education News

Education Lekgotla: Key priorities for the year

The 2023 and the 8th Basic Education Lekgotla, which laid out the priorities and challenges for the year ahead, was given the presidential seal of approval and attended by teacher unions, school governing bodies, academics and experts involved in the sector.

The three-day Lekgotla took place on 26 - 28 January 2023 in Sandton, Johannesburg, under the theme “Equipping learners with knowledge and skills for a changing world post Covid-19 pandemic”.

The Lekgotla was addressed by President Cyril Matamela Ramaphosa, joined by Basic Education Minister Angie Motshekga, Deputy Minister of Basic Education Dr Makgabo Reginah Mhaule, MECs for Education, leaders of teacher unions and school Governing Bodies, representatives of learner organisations, academics and experts in the education sector and representatives of non-governmental organisations.

While addressing unemployment was high on President Ramaphosa’s agenda, the effects of the pandemic, which led to a shutdown of the economy and disruption of schooling, was not lost on Motshekga.

The Minister said the devastating impact of Covid-19 has brought about new thinking around the world regarding the ability of education systems to respond with agility to the unpredictability of pandemics.

“South Africa protected learning to some extent compared to other countries but also experienced severe learning losses. We protected learning through the implementation of a framework for the recovery of learning, and the system began the process of rebuilding,” she said.

She added that key levers of the recovery framework were the emphasis on foundational and core skills that resulted in the curriculum trimming to ensure a focus on deeper learning.

In 2022, the following decisions and recommendations emerged from the Lekgotla:

- A decision not to revert to the original, content-heavy ATPs and assessment plans in the CAPS post-Recovery, but to use the revised and reduced ATPs and assessment plans
- A shift towards more systematically and deliberately incorporating 21st Century competencies into the curriculum, assessment, teacher development, and the pedagogical core.

Given this mandate, Motshekga said the work began in earnest in 2022 to design an approach to strengthening teaching, learning, and assessment.

As a result, the initial focus of this work is Curriculum Strengthening, with the following goals:

- To enhance the relevance of the knowledge, skills, character, and values taught in the current curriculum so that learners are prepared for a changing world
- To contribute towards greater alignment across the sector, with the ultimate goal of improving learning outcomes and preparing learners for life beyond school.

This work has included consulting with local and international stakeholders to design a draft competency framework to guide the infusion of competencies into the In 2023, broader consultations will occur



President Cyril Matamela Ramaphosa addressed the 8th basic education lekgotla.



Delegates at the 2023 education sector lekgotla discussed variety of issues including early childhood development, teacher training and curriculum modernisation.

to refine and finalise the draft competency framework.

A detailed curriculum-strengthening blueprint and implementation roadmap will guide the sector-wide activities supporting curriculum strengthening.

“It is also intended to enhance alignment across the sector regarding pedagogical practices, assessment, LTSM, and learning environments that will support the development of desired knowledge, skills, attitudes, and values among South African learners,” she said.

According to Motshekga, to respond holistically and sustainably to these multifaceted challenges, the sector proposes deliberate action in five broad areas:

- Curriculum: Refers to strengthening the existing curriculum statement (CAPS)
- Assessment: Refers to updating and enhancing current assessment practices
- Teaching: Refers to effective classroom teaching, learning, and pedagogical practices
- Learning Environment: Enhancing the space (physical and non-physical/virtual)

in which learning takes place

- Learning and Teaching Support Material (LTSM): This refers to strengthening the primary compulsory learning resources per subject.

To this end, multiple avenues may be considered as part of Curriculum Strengthening: Subject modernisation entailing a review of the current subject offering and introducing new subjects to operationalise the Three Stream Model and ensure the relevance of the curriculum.

In addition, she said there would be content modernisation: entailing a review of content within existing subjects and updating it in line with the demands of the changing world. It could also entail streamlining content to focus on core concepts and important content in each discipline.

Another proposal related to infusing competencies and cross-cutting priorities into CAPS by deliberately and systematically incorporating social, emotional and cognitive competencies into teaching and learning through updates to the curriculum, pedagogy and assessment.

It also entails incorporating relevant across subjects, e.g., environmental literacy. “Our only objective is to ensure that learners leave school with a holistic breadth of knowledge, skills, character, attitudes, and values to succeed in a changing world,” Motshekga said.

President Ramaphosa said the Basic Education Sector Lekgotla is one of the most important events on the calendar. “It is here that officials, educators, teacher unions, policymakers, the private sector and civil society chart the course for basic education for the next twelve months and beyond.” He added that Basic education was the foundation of a nation’s development, progress and prosperity.

“Despite the impact of lockdowns, school closures, learning disruption, curriculum trimming, rotational timetables and numerous hurdles, our learners excelled.”

This year’s results, particularly in the performance of learners from poorer schools, show the broadening impact of education spending and the social wage.

“We congratulate all the learners.” President Ramaphosa said, “The biggest heroes are our educators”.

“Because of their dedication to their profession, our learners got the support they needed to sit these exams and to do well. I speak here about the extra hours spent tutoring, the personal time taken to help re-draft and amend timetables and curricula, the time spent being part of matric camps and many other initiatives.

“Many of our educators have their own families and children in school, and yet they provide an extended family to their learners. The improved matric results must encourage us as stakeholders in basic education to redouble our efforts to address the severe problem of learner dropout.”

The three-day Lekgotla was a platform for discussions for various stakeholders to address issues in the curriculum and technology, among others, while mapping out the way forward for success in 2023.

Africa

'My Favourite Teacher'

AMEENAH GURIB-FAKIM

The former president of Mauritius and the first woman to be elected to that position Ameenah Gurib-Fakim, is a biodiversity scientist and recipient of both a L'Oréal UNESCO For Women in Science Award for Laureates and the African Union Commission Award for Women in Science.

Gurib-Fakim says it thanks to her motivated teachers who made understanding science easier. As a result, she did well in the subject because of that demystification. But when she wanted to study science at school, her career guidance teacher asked why she wanted to do science because that

subject is for boys.

The former president, who was on the Forbes List for the 100 'Most Powerful Women in the World' and first among the Top 100 Women in Africa Forbes List 2017, has been recognised as one of the foremost voices on the Continent.

Last month she participated in a South African seminar on human rights in Africa. In a Q & A, Gurib-Fakim shares the story of her favourite teacher with Inside Education.

Q: What was her name?

A: Sister Anne

Q: Name of School attended and year/s?

A: Loreto Convent School (between 1977-1978), Quatre Bornes

Q: How did your favourite teacher endear herself to you?

A: She had a no-nonsense attitude to teaching and was highly disciplined... always insisting on punctuality. This has shaped my perspective in later life.

Q: What subjects did she teach you?

A: Mathematics

Q: Did you look forward to her subject?

A: Yes, I did, and what I liked best (now, with hindsight) is how she trained us mentally. She would start her class with mental arithmetic, firing quick questions and expecting instant answers!

Q: What did you like about your teacher?

A: Her humanity!

Q: What was your favourite subject at school?

A: Chemistry

Q: Has this influenced your choice of career?

A: I have always been fascinated by chemistry, especially the chemistry of Carbon, which is understanding the chemistry of life itself. It eventually underpinned my career.

Q: What was the one phrase from any



Ameenah Gurib-Fakim

teacher that stuck with you or inspired you?

A: Never leave for tomorrow what you can do today.

Q: Have you kept in touch with your favourite teacher? If so, what was the first meeting like beyond being a learner in the classroom?

A: Unfortunately, she returned to Ireland, and I lost touch with her. But before she left, she would engage in one-to-one conversation and engage in giving advice. She was also always available when one wanted her advice.

Q: Why are teachers so important to society?

A: Teachers provide you with the necessary instructions, and they help complement the education that we receive at home.

Ameenah Gurib-Fakim in class.



Ethiopia's severe drought forces kids to quit schools

SOLOMON YIMER

The severe and worsening drought in Ethiopia's Oromia region has impacted school retention as pupils are forced to drop out of school to support their parents in the search for food, pasture, and water.

More than 5,000 students from different zones of the region have been forced to drop out of school due to the devastating drought, the regional education office announced on 13 March.

The drought has affected schools in Bale, Arisi and West Hararge zones, resulting in the closure of 18 schools.

The Oromia Education Bureau has provided over USD 200 000 to help support damaged schools and bring the students who have dropped out back to school. An additional USD 26 000 was contributed by the bureau staff members from their salaries to help support the cause.

On top of that amount, USD 93 000 has been given to support the damaged schools while about USD 37 000 has been used to purchase a water tank.

Despite these efforts, the situation remains dire for many affected by the drought and this is not the first time the drought has caused students to drop out of schools in Ethiopia.



Drought forces children to leave school - Escalating crisis in Ethiopia

Two weeks ago, the Education Office of the drought-hit Borana Zone of the Oromia region in southern Ethiopia said more than 7,800 students had been forced out of school as the impact of the drought got severe.

According to the office, 174,000 students enrolled in 490 schools in the zone have been affected by the drought, resulting in a significant decline in their results.

This is despite the regional government's efforts to introduce dormitory and school feeding services to mitigate the impact of the drought by allocating over USD 800 000.

Meanwhile, children were forced to drop out of school due to the drought in



the Konso Zone of the southern region.

Out of the 73,000 students attending 119 schools in the area, 13,000 have dropped out since last January, Deutsche

Welle DW reports, citing the zone's education department.

The Department of Education also indicated that the admission process had been started in 85 schools to allow the students to continue their studies with financial support from Save the Children.

According to data, nearly three million people have entered the food aid framework due to the drought in the southern region.

Ethiopia's drought continues to worsen following five consecutive failed rainy seasons and the looming "lean season" (the period between harvests), with the southern and eastern parts of the country mainly affected.

According to the latest report from OCHA, 11 million people out of 24 million living in drought-affected areas are estimated to be food insecure, and about 6.85 million livestock deaths since late 2021. As of February, 379 schools across 71 woredas in the Somali Region were closed due to the prolonged drought, with 81,556 students dropping out of school.

In general, the recent drought has disrupted the education of 1.6 million children, including close to 500,000 forced out of learning, according to data from Education Cannot Wait (ECW).

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At Anglo American, we've long believed that the greatest investment we can make in our country's future is to give our children access to high-quality education. That's why we've invested heavily in education and skills development in South Africa over several decades as part of our Sustainable Mining Plan. In the past five years alone, we have invested more than R100 million per annum, largely on infrastructure, and teacher and learner support.

In 2018, in collaboration with the Department of Basic Education, we launched the Anglo American South Africa Education Programme to provide wide-ranging and quality education for an estimated 222,000 learners, and support for 2,300 teachers at 109 schools and 110 early childhood development sites (ECD) in communities around our mining operations.

In 2022, we launched Phase 2 of the Education Programme, with the ambition of reimagining education to improve learner outcomes even further. It will see us make an additional investment of R510 million to improve educational outcomes in 85 new schools and ~80 ECD centres in communities in the Limpopo, Northern Cape, and North West provinces. It was a bold commitment to fundamentally change the way children in our host communities learn and develop. The results exceeded expectations. Around 70% of our supported schools improved their physical sciences results. They delivered a 30% increase in the number of matriculants. Eight schools were in the top 30% nationally.

We also rolled out our ICT intervention to the 109 phase one schools, which included installing technology infrastructure and devices; providing ICT courses and training to improve digital literacy and skills; creating a student engagement platform to support primary and secondary learners; and providing ongoing support to ensure sustainability of the programme. For Anglo American's global head of education and community skills, Zaheera Soomar, the biggest impact of the programme has been the way that education has become a key building block in creating thriving communities. Thousands of learners weren't just given hope: they were given the skills and opportunities they need to get jobs and participate in the digital economy.

In 2023, we'll be putting a greater emphasis than ever on giving the youth in our communities the skills they need to leave school job-ready; focusing more than ever on learner support; and creating after-school programmes like career guidance, food gardens, and sporting activities.

Our children deserve no less.



Tech Talk

Telkom Foundation Trains Unemployed Youth To Help Teachers Use Tech

DINEO BENDILE

The Telkom Foundation has intensified its efforts of integrating the use of ICT in the education system, by training 120 unemployed young people who will provide technological support to schools.

The programme, which is being conducted in partnership with the Gauteng Department of Education, is expected to produce its first cohort of assistants in March 2023, who will be placed in schools across the province. Their role will be to aid teachers to manoeuvre various technologies to help them effectively integrate them into the teaching process.

Speaking to Inside Education, Telkom Foundation head Sarah Mthintso said the use of technology was not intended to replace the skill educators brought to the classroom, but rather

to supplement their teaching process. In a country where many schools have limited access to resources, Mthintso said technology made it easier to bring the practical aspects of lessons into the classroom, to enhance the experience for learners.

“We are dealing with very capable teachers in the system. Our role is not to make them unlearn what they know, but really to work with them to supplement their pre-existing knowledge so that the knowledge can be enriched,” she said.

“If a teacher, for example, is using technology but struggles with [knowing] where to press if they want to access a particular functionality, there will be those young people that are deployed in the schools to support the teachers,” she added.

Teacher training forms an integral part of the Telkom Foundation’s efforts towards improving South Africa’s matric pass rate, especially in the subjects of mathematics and science. At present the Foundation also holds after-school sessions with teachers, where they are trained on ways to best use ICT to enhance the experience of learning.

In 2017 the Foundation launched its Connected Schools Programme, through which it provided ICT infrastructure to selected schools in Gauteng and the Eastern Cape. In addition to this, the Foundation also provided supplementary academic support to learners from Grade eight to

Grade 12 in the form of Saturday classes and holiday camps.

Since the launch of the programme, the Foundation has gone on to support 25 top-achieving learners who are now at various universities across the country. These are learners who attended the Foundation’s Saturday school classes and were involved in its Digital Skills Programme, where they are exposed to fields such as



Telkom Foundation head Sarah Mthintso

coding and artificial intelligence. These learners achieved between four and seven distinctions in their final National Senior Certificate exams, in subjects such as maths and science.

The 25 students were currently enrolled for further study in fields such as Computer Science, Electrical Engineering and Fine Arts using digital technologies. Mthintso held the belief that, without the involvement of the Telkom Foundation in exposing learners to technologies, they likely would not have been influenced to consider career opportunities in STEM fields. “We check when we start with them. what they would like to be when they finish matric. Very often when we get to these spaces children say they want to be teachers, nurses and policemen. But once they get into the space and they are exposed to a variety of careers, then they start thinking about [fields such as] computer sciences,” she said.

Due to the success witnessed from this first cohort of learners, Mthintso said she

and her team would pursue the possibility of adding another cohort of learners to support through to the higher education system.

With South Africa facing persisting electricity challenges, schools and other learning institutions have not been spared. This has threatened to impede the optimal functioning of the Foundation’s learner support programmes. This is especially true for learners in less privileged areas where resources to counter the effects of load shedding are inaccessible.

“The energy crisis affects every facet of our society and I can’t say we have not been affected. We have been affected because the majority of the areas we are seeking to impact are areas that are lacking in the main,” Mthintso said.

“So you will find that we want to run a class in the afternoon and there is load shedding. And because the stages vary, you plan around stage four and suddenly they introduce stage six and you can’t necessarily be fully prepared,” she added.

To tackle this challenge, all lessons are recorded and uploaded on the Foundation’s learner management system, making it possible for learners affected by power cuts to refer back to them at a later stage without incurring any data costs.

The Telkom Foundation currently focuses its learner and school support initiatives on the secondary phase of education where it attempts to increase learner uptake of maths and science as subjects. However, several learning gaps are identified as developing at primary school level where declining levels of maths and science competency began to present themselves in learners.

According to Mthintso, once learners reached Grade nine, the Foundation conducted assessments to determine their levels of competency in mathematics. This included testing each learner’s maths comprehension at a Grade three complexity, at a Grade six complexity and again at a Grade nine complexity. Through these tests the Foundation found that many learners grasped concepts at a Grade three level, but began to lose their grasp between Grade four and Grade seven.

Asked whether the Telkom Foundation would consider focusing its efforts on learners in lower grades to target them before they lost interest in maths, Mthintso said what was more important was ensuring continued collaboration with the Education Department and other organisations that had already tasked themselves with providing support in the foundational phase of learning.

When the Telkom Foundation began recruiting learners into its Digital Skills programme, one area it was deliberate about was the recruitment of girl learners. Once the programme took off, the Foundation began to identify some worrisome patterns that it had to mitigate. One of these was an apparent limited interest from girl learners as compared to their male counterparts in areas such as coding. During the Covid-19 lockdown another worrying pattern presented itself in the gender disparities in online learning. In some instances, a girl learner would be absent from their online learning due to the obligation of household chores, while a boy learner from the same household was free to attend classes without the same domestic pressure.

“Our girl children would be expected, during lessons, to perform household chores. That for us was interesting to observe. We paid a lot of attention to this and had to engage the parents in order for them to understand the importance of allowing and enabling girl children to attend classes in a similar way that they would with boys,” Mthintso said.

Tech Talk



Dreaming of serving the greater good

SAMUEL MOSOMANE

Ntsako Cheride Maluleka, an 18 years old female from Soshanguve in Gauteng province is enrolled to study BSc in Chemistry at WITS University in Johannesburg.

A second and last born the family of four, she lived with both parents, her unemployed mother Annah Mamoraka Maluleka and father Michael Maluleka, who works at South African Defence force as an army.

She passed matric in 2022 with seven distinctions at Reitumetse Secondary School in Soshanguve Block L. She used a public transport (taxi) to get to school. At times, she said it was difficult to get to school on time especially for morning classes because the taxi would take time going around to pick up other people. But despite this, thanks to Telkom Foundation she defied all odds.

"The Telkom program helped me to close the content gap caused by the COVID-19 pandemic. We had an early start and went on a study camp on the 6th of January at Wild Waters with the purpose of covering the lost lessons which were not done in Grade 11. We were given multiple resources. We also attended Saturday classes which helped a lot with understanding the

Grade 12 syllabus in more illustrative way.

"Through the Telkom Foundation, we undertook a world of work sessions which helped with personal growth. On the 26th or 28th of October last, we attended a camp where we were helped to catch up on what we might have missed during the year and to make sure we were prepared very well for our final exams."

"The biggest assistance also came from the teachers who also provided resources, allow me to try things on my own and to be available all the time when I had clarity seeking questions". Although she received a 100% pass in Mathematics, and 98% in physical science, she feels that she could still have done much more.

"Mathematics result also serve as a confirmation that I have the ability to achieve greater good," she said, adding that, without the generosity of the Telkom Foundation, she would not have achieved quality results.

She says she did not expect to get seven distinctions: "I was expecting five and by the looks of my language percentages, I can say my results stress was justified."

"I would like to thank Telkom Foundation on the behalf of all learners who were chosen for the program for

the support and everything they have done for us. Continue doing the good deed. It will open more opportunities for other learner and it will also ensure academic success."

To the matric class of 2023, Maluleka said learners "must study hard and smart, use you time wisely, listen to your teacher, take advantage of the opportunities handed to you, and just enjoy matric."

Telkom assisted in bridging the digital divide

An 18-years old matric 2022 learner, Oratile Moitjiwa revealed that she would not have achieved seven distinctions if it was not due to the digital information-sharing platform sponsored by Telkom.

She says Telkom assisted in bridging the gap between information haves and have not.

Facing rampant load-shedding that impact on telecommunications networks, trimmed curriculum, and lack of access to modern digital tools, Moitjiwa said Telkom provided access to the Grade 12 curriculums at her fingertips.

Her mother Tshepiso Moitjiwa, is a nurse at Dr George Mukhari Academic

Hospital in Garankuwa. Her father Thabo Moitjiwa has been unemployed for over four years, although he gets temporary contract work from time to time, her mother is the breadwinner. Her 22 years old sister is doing 4th year in Radiography at TUT in Pretoria.

"I grew up in a family that values education. Because of my mother, we develop a special interest in everything health. We are a family that believes in the provision of healthcare."

She says there are two reasons why the family is into "everything health". The first reason she says it's because health is about helping people and less about money and greed. Secondly, she said, a focus on health guarantees job security: "It's been proven that those who graduate in health-related studies do not struggle to

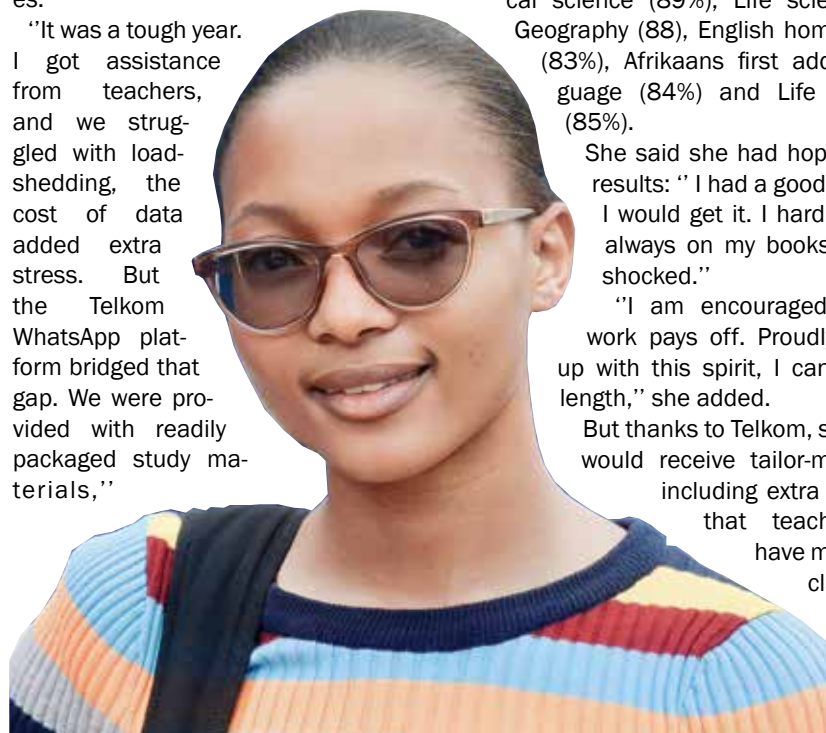
secure employment after graduating'.

She says, along the way, she figured that one can also create employment by establishing own pharmacy. For this, she has now enrolled for Bachelor in Pharmacy at the faculty of health science at the University Of Witwatersrand (WITS).

She attended Amandasig secondary school in Pretoria. She travelled to school with a hired vehicle at R1100.00 per month to also accommodate extra classes.

"It was a tough year.

I got assistance from teachers, and we struggled with load-shedding, the cost of data added extra stress. But the Telkom WhatsApp platform bridged that gap. We were provided with readily packaged study materials,"



she said.

The school does not have backup electricity. At times, learners need to use projectors, and there will be no electricity: "We did not have equipment like science labs to do experiments- so we had to rely on YouTube."

Every month, each learner had to put aside R300 worth of data.

In her matric results, she received seven distinctions in Mathematics (87%), Physical science (89%), Life science (87%), Geography (88), English home language (83%), Afrikaans first additional language (84%) and Life Orientation (85%).

She said she had hoped for such results: "I had a good feeling that I would get it. I hardly went out, always on my books. I was not shocked."

"I am encouraged that hard work pays off. Proudly- If I keep up with this spirit, I can reach any length," she added.

But thanks to Telkom, she said she would receive tailor-made notes, including extra information that teachers might have missed in the classrooms.

"The platform was very detailed and in-

formative. Information was shared through a dedicated WhatsApp group sent with notes on upcoming tests, including what to expect and tips on what to study".

"In the dedicated group chat, tutors would post PDF files of specific chapters with notes. It was impactful, made things easy and was more informative. The platform provided extra help on some concepts which we did not find in textbooks. We would receive aggregated information," she said

She said the matric knowledge hub Telkom created provided packaged information beyond the classroom syllabus.

"Telkom gave me an edge. I greatly appreciated the assistance and hope that this year the platform will be rolled out, at least this time around, with data provided," she added

To the matric class of 2023, "work hard because it pays off; dedicate 95% of your time on books because the workload is heavy. Reduce the time spent with friends.

Unfortunately, Oratile Moitjiwa does not have a bursary or sponsorship. For now, she depends on her mother, who took a student loan to take care of basics whilst waiting for the National Student Financial Aid Scheme (NSFAS) to respond to her application for funding.

She appealed to potential sponsors to assist her in taking care of tuition fees, accommodation for the rest of the years and ICT tools or devices to make further education a reality.

Editorial

Pit latrine promises must be fulfilled

Four-year-old Langalam Viki drowned in a pit latrine in Vaalbank in Eastern Cape early in March. The tragedy highlighted the failure of the Department of Basic Education to get rid of pit toilets, despite adopting the minimum uniform norms and standards for public school infrastructure, which banned them in 2013.

The norms and standards created a legal responsibility for the department and provincial departments to eradicate pit latrines at schools. However, 3,398 schools countrywide still have pit toilets. Over the past decade, there have been many horror stories involving pupils like that of Viki.

This is one tragedy too many.

The Minister of Basic Education, Angie Motshekga, pledged to tackle the problem within two years. While the Minister's commitment is welcomed, one wonders how the department, which has failed to tackle this problem over the past decade, will address it in two years. Basic Education has made a dent in the great number, fixing a paltry 117 toilets.

Credit for raising awareness of this problem must go to civil society organisations, like Equal Education and Amnesty International, both of which have consistently raised the issue, highlighting the tardiness of the department in swiftly eradicating pit latrine toilets.

In a year, South Africans will go to the polls. Politicians are mindful of the mood of the people. One can easily label the DA leader John Steenhuisen as opportunistic in visiting the dead child's parents. But Nelson Mandela did not own the trademark on compassion. Sadly, the leaders left behind have not adopted his caring nature.

Yet, one cannot disagree with his saying that schools should be safe spaces for our children, not gravesites. Steenhuisen argues Human Rights Day could only be commemorated once every child has access to safe and dignified sanitation at school. The parents of little Viki would agree.

"The drowning of our children in pit toilets goes far beyond a human rights violation; it is a horror that no South African should ever be forced to contemplate," Steenhuisen lamented.

While Motshekga told the media it would eradicate pit latrines by 2025, the DA went further, proposing a two-point plan to eliminate pit toilets at schools across the country.

In two years, Motshekga, one of the longest-serving education ministers in Africa, is unlikely to remain in her job. Who will be held accountable should the Department of Basic Education not deliver on its promise? It is not an option one would like to contemplate.

Therefore, one hopes that the DBE will pull out all the stops to eradicate at least half the pit latrines by the time democracy celebrates its 30th year in 2024. While the grieving parents of Langalam Viki mourn their little girl whose promising life was snuffed out, Motshekga must act with urgency. Failure is not an option.



Good advice for learners from a top academic, Prof Jonathan Jansen.

Sage advice for learners – and teachers from one of the country's eminent educators

EDWIN NAIDU

Getting through high school is a challenge in itself. Still, one of the country's foremost education experts, Professor Jonathan Jansen, the Distinguished Professor of Education at the University of Stellenbosch, South Africa, has several tips to help one navigate the schooling system.

Addressing Western Cape high school youth from Ocean View, Fish Hoek and Masiphumelele, organised by Southside Church, part of the Assemblies of God Group in South Africa, Jansen, who grew up on the Cape Flats, recently offered sage advice to learners.

The professor, currently President of the

South African Academy of Science, told pupils that they must learn early on study habits (it will change their future) and urged them to hang out with kids who are more intelligent and motivated than them.

Jansen, who began his career as a Biology teacher in the Cape after receiving his science degree from the University of the Western Cape, warned youth about the dangers of social media.

"What you put on your social media platform can come back to haunt you," he warned.

Furthermore, Jansen told pupils: "Failure is your friend - but only if you can learn from it."

Mindful that not all teachers will encourage one to succeed, he advised the youth

not to listen to their teacher "if his/her words put you down".

Taking it further, Jansen encouraged learners not to take mathematical literacy; that would be the end of most of their study options when they leave school.

In suggesting how to learn, Jansen urged learners to find a safe, secure and quiet place to study, even if that means doing it away from home.

In a country looking for role models, he suggested that youth find a mentor who can advise them about life and learning beyond school.

Jansen's mentor, who helped shape him as the first Black Dean of Education at the University of Pretoria, was respected psychologist Professor Chabani Manganyi,

Editorial



a writer and former Director-General in the Department of Education from 1994-1999.

"One day, he said: 'You know JJ, your problem is you get angry before you think'. Since that day, I will turn even the most grievous, upsetting problem into an intellectual puzzle."

One such example was his award-winning book, *Knowledge in the blood*, about how young white Afrikaans-speaking youth come to embrace a past they were never part of. He wrote it while serving as UFS rector.

"The day I stop writing is the day I stop breathing. The day I stop thinking is the day I stop existing," says this avid sports lover for whom writing for five to six hours a day is the best form of relaxation.

"Coming up with new problems to solve through thinking and writing doesn't feel like working."

"I hate Fridays, and I love Mondays. I have long given up working. I enjoy it and will do this to the day I die because I love the life of the mind."

No surprise, one of the most essential tips from the professor, a prolific writer and author, is that youth should read at least one good book a quarter. "It opens up your worlds and gives you a good command of language."

"Set an ambitious goal - and move

heaven and earth to get there," concluded Jansen, who obtained an MS degree from Cornell University and a PhD from Stanford. He holds honorary degrees from the University of Edinburgh, the University of Vermont, Cleveland State University and the University of Cape Town.

In 2013, he was awarded the Education Africa Lifetime Achiever Award in New York, the Spendlove Award from the University of California for his contributions to tolerance, democracy and human rights, and the largest book award from the British Academy for the Social Sciences and Humanities for his book, *Knowledge in the Blood* (Stanford University Press).

An A1-rated academic, the former vice-chancellor of the University of Free State, Jansen, certainly knows about success through work. And the endorsements of his work are legendary.

Among this former science teacher's many accolades are honorary degrees from universities in Scotland, the USA and South Africa, the Education Africa Lifetime Award and Stanford University's inaugural Alumni Excellence Award. He is an Elected Fellow of the International Academy of Education, and in 2021 received the Human Sciences Research Council and Universities South Africa's Gold Medal.

Jansen prides himself more on the popu-

lar and academic books and articles he has produced, on the young academics he has mentored, on connecting with his Twitter and Facebook followers, and for the past decade, engaging readers through his weekly opinion piece in *The Times* and other South African newspapers.

This motivating speaker, who cuts through fluff, reckons that he has visited more local schools than most politicians. In recent months he addressed actuarial graduates and a church group in Cape Town and spoke at the 200th-year celebrations of Muir College, the Eastern Cape and South Africa's oldest boys' school.

His recent message to attendees of the International Chemistry Education Conference was quite clear: "Teach with attitude, teach for meaning, and teach for change."

Asked to describe himself, Jansen keeps it simple: "I am absolutely passionate about teaching and making the world I live in better for others. That's it."

To support, prod and challenge others to grow is fundamental to his DNA. As with his two children, he enjoys seeing younger academics grow and helping them realise their personal and intellectual worth.

To this end, leading and teaching the first two cohorts of South Africa's Future Professors Programme, based at SU, provides great joy. It's built on a concept that Jansen launched as rector of UFS. It strengthens and prepares senior lecturer-equivalent scholars to take up their positions in the professorate.

"All we do is take very smart people towards the upper reaches of the academic ladder. And I get the thrill, the joy, of seeing senior lecturers in 26 public universities become associate professors, professors. Do you know what a feeling, what a rush that brings to one's life?"

Jansen, who recently welcomed his second grandchild, said one way that parents can know that they've raised their children well is "if they become better than you".

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TVET News

Walking in the TVET footsteps of enterprising Deputy Minister Manamela

Himself a product of TVET college education, Higher Education, Science and Innovation second-in-charge is passionate about equipping youth with skills to shape the Country.

EDWIN NAIDU

When it comes to Technical and Vocational Education and Training (TVET), for Deputy Minister of Higher Education, Science and Innovation, Buti Manamela, no subject arouses as much enthusiasm as the prospect of TVET colleges transforming the workplace and attacking the swathes of unemployment for the country's youth.

Manamela passionately describes the potential for shifting the dial for South African youth through these skills-based learning institutions geared towards contributing to the economy.

He reckons that graduates from TVET are more employable than university products.

If it is going to make a dent in the country's unemployment figures, Manamela's optimism must translate into positive results.

According to Statistics South Africa, (Stats SA), youth unemployment refers to the share of the labour force aged between

15-24 without work but available for and seeking employment.

This figure has gone up since 2017.

Of the 7.2 million unemployed people in the first quarter of 2021, 52.4 % had education levels below matric, followed by those with matric at 37.7 %.

This means there were 2.6 million matriculants in the unemployment queue, says Stats SA.

As a product of Mamelodi TVET College, Manamela knows what he's talking about.

His youthful face, not masked by the distinguished beard he now sports, lights up when TVET is discussed, particularly its impact on the future.

During a recent interview, Manamela rescheduled time in his busy diary to take Inside Education on a walkabout through the corridors of a TVET similar to one where he once walked.

Manamela completed matric at Phagangeng High School in Modimolle, then studied towards his N-Certificate in Electronics at Mamelodi College until 2001, completing his Post- Graduate Diploma (2014) and Master of Management in Public Policy at the University of the Witwatersrand (2017).

Taken through the TVET College in Pretoria East, Manamela was shown the broad extent of the offering to students.

Here students can obtain qualifications in tourism, business studies, civil engineering, electronics, economics and accounting, information technology and computer science, among other options.

Students can learn about industrial elec-



tronics, power machines, control systems, electro-technics and clothing industry career options.

TVET colleges throughout the country also offer coding, programming and robotics to broaden the skills for the 21st century.

The Tshwane North TVET Tshwane North Technical and Vocational Education and Training College (TNC) is situated in the Greater Tshwane Metropolis of Gauteng.

It consists of a corporate (Central) Office in the inner city of Pretoria and 6 Campuses: Mamelodi; Pretoria; Rosslyn; Soshanguve North; Soshanguve South, and Temba.

The College has a closed hostel at Soshanguve South Campus which could accommodate 300 students.

The College has about 327 lecturers with a student population of between 20 000 and 21 000.

Students spend half their time during their studies getting practical experience.

Sophisticated machinery, donated by the Indian government, has pride of place and gives students specialised skills in learning how to operate them.

A single CNC machine can cut, drill and mill replacing what was done manually in the past.

Manamela was impressed by what he had seen during the hour-and-a-half walkabout, recalling his days when studying electronics.



Manamela encourages parents to send their children to TVET colleges.

TVET News



Deputy minister Buti Manamela was impressed by what he saw. Photos: Eddie Mtsweni

“It’s important to focus on TVET colleges and our work there consistently.

Of course, there’s some of the challenges that we’re confronted with, policies that we’ve put in place to improve the quality of TVET colleges,” he says.

Manamela says apprenticeships have been reintroduced at TVET institutions.

“In the past, apprentices were mostly trained by Eskom, SAA, state-owned enterprises, and some of the private sector,

but most of them shut down.

So to re-introduce them, we’ve got about 80,000 students across the country who are spending some time in the workplace.

They spend some time in the classroom, too, which is similar to the jewel in Germany.” This initiative, says Manamela, has been received positively by the industry.

“People in the industry who are involved are very excited about this kind of project. We’ve collaborated with, some like the car

manufacturing company in India, we’ve collaborated with Chinese and German companies to help build infrastructure,” he adds.

Manamela says German car Manufacturing companies have shown an interest, particularly in TVET colleges in Pretoria and invested in the training of artisans and apprentices.

However, the



Deputy minister Manamela did a walkabout at Tshwane North college in Pretoria.

Deputy Minister notes that South Africa finds itself in an unfortunate situation where universities are deemed more privileged than other institutions.

“We’re trying to reverse that. If you look at countries such as Germany, Russia, and Brazil, even in the early days, some of the countries in the continent, Mozambique, did quite well, where they focused on giving young people a skill. So they could be a carpenter, a bricklayer, or an electrician.

“Most of those countries are focused on investing resources at TVET colleges, and their TVET sector is twice the number of students than those who go to universities. So we’re working on that. I mean, the TVET sector has significantly increased over the last year. But of course, a lot more money is required for it to happen.” Manamela says it’s about changing the mentality. “People don’t regard it as sexy. It is precisely because the kinds of professions that are posed, particularly in mainstream media, are the sexy ones. Someone wants a corner office, to wear a tie and all of that. But we try and consistently remind everyone that we still need cooks, plumbers, welders.” Along with the work done by Sector Education Training Authorities (SETAs), Manamela says, there is a growing change in the perception of young minds.

“We are now churning out 90 000 artisans a year. The NDP target is at 20000 per year by 2030. Before the COVID-19 pandemic, we had reached 22,000 artisans per year.

“We need to remind parents, teachers and students themselves that if they believe that their child should go to an institution of training so that they go and immediately find work, TVET colleges are the solution.

“You get experiential training; you get 90% of students who go to TVET colleges, you know, NSFAS funded, you get exposed to industry-based standards facilities in the 26 centres of specialisation.

“TVET colleges are essential, and I believe that one must encourage parents, teachers and students themselves, those who are in grade nine and those who are doing their grade 12, to look at some of the programs being offered at TVET colleges.

“Some students who go to university, studying mechanical engineering, probably would not see an engineer in their life because that’s not how universities are designed in terms of the curriculum.

“So if you want to be a mechanical engineer who fixes cars, go to a TVET college, at best, go to a university of technology,” he adds.

Manamela insists all 50 TVET institutions are good colleges, offering a diverse range of programmes on 256 campuses, with many embarking on expansive infrastructure development.

“It’s about looking at the kind of program that you want to do and look at how that college has performed in terms of that particular program.” He says the career opportunities from studying at a TVET are varied and can be enriching, whether one wants to become a welder or work in the hotel or tourism industries.

The former Mamelodi College student has come a long way since his student days.

Now, he’s particularly keen for TVET colleges to start getting a good rap so that South Africans start to see how it can benefit the nation.

University News

CHARLES MOLELE

“I am not here to fill anyone’s shoes. I am bringing my own shoes,” says newly appointed Vice Chancellor of the University of Johannesburg, Professor Letlhokwa Mpedi, in response to a question about walking into the big shoes left by his predecessor Professor Tshilidzi Marwala.

Speaking exclusively to Inside Education from his West Wing office in Kingsway, Auckland Park, Mpedi makes it clear he will bring a different leadership style from that of his predecessor, who elevated the university into one of the most respected on the African continent.

“There is only one Professor Tshilidzi Marwala...and the factory is closed. There’s only one Professor Mpedi, and I can only excel at being myself more than somebody else. Prof Marwala is a scientist. I am a lawyer,” says soft-spoken Mpedi.

He sat down with Inside Education shortly after his inauguration as the Vice-Chancellor and Principal of the University of Johannesburg at a ceremony held on Friday, 10 March 2023.

Mpedi replaces Marwala, who stepped down last year to take on a new appointment as rector of the United Nations University in Tokyo, Japan, and becomes the third vice-chancellor since the institution’s opening 18 years ago.

Dressed in a grey Nehru suit, Mpedi outlined his key priorities, including establishing the first ever medical school of its kind at UJ.

“What we want to do at the university is to combine medicine and technology. We are waiting for the green light [from the Department of Higher Education] and are hoping that we will have the first cohort of students in 2025,” says Mpedi.

“As UJ, we are ready to launch a medical school. If the national departments of health and higher education can support and trust us, we would bring a medical school like no other in South Africa; we would combine medicine and technology and be leaders in that regard. If we get the go-ahead today, we are prepared even to put in our own limited resources,” says the Hammanskraal-born academic.

He expressed delight and profound honour in accepting the position of vice-chancellor, succeeding Marwala and his predecessor, Professor Ihron Rensburg, who have both played significant roles in building a solid university.

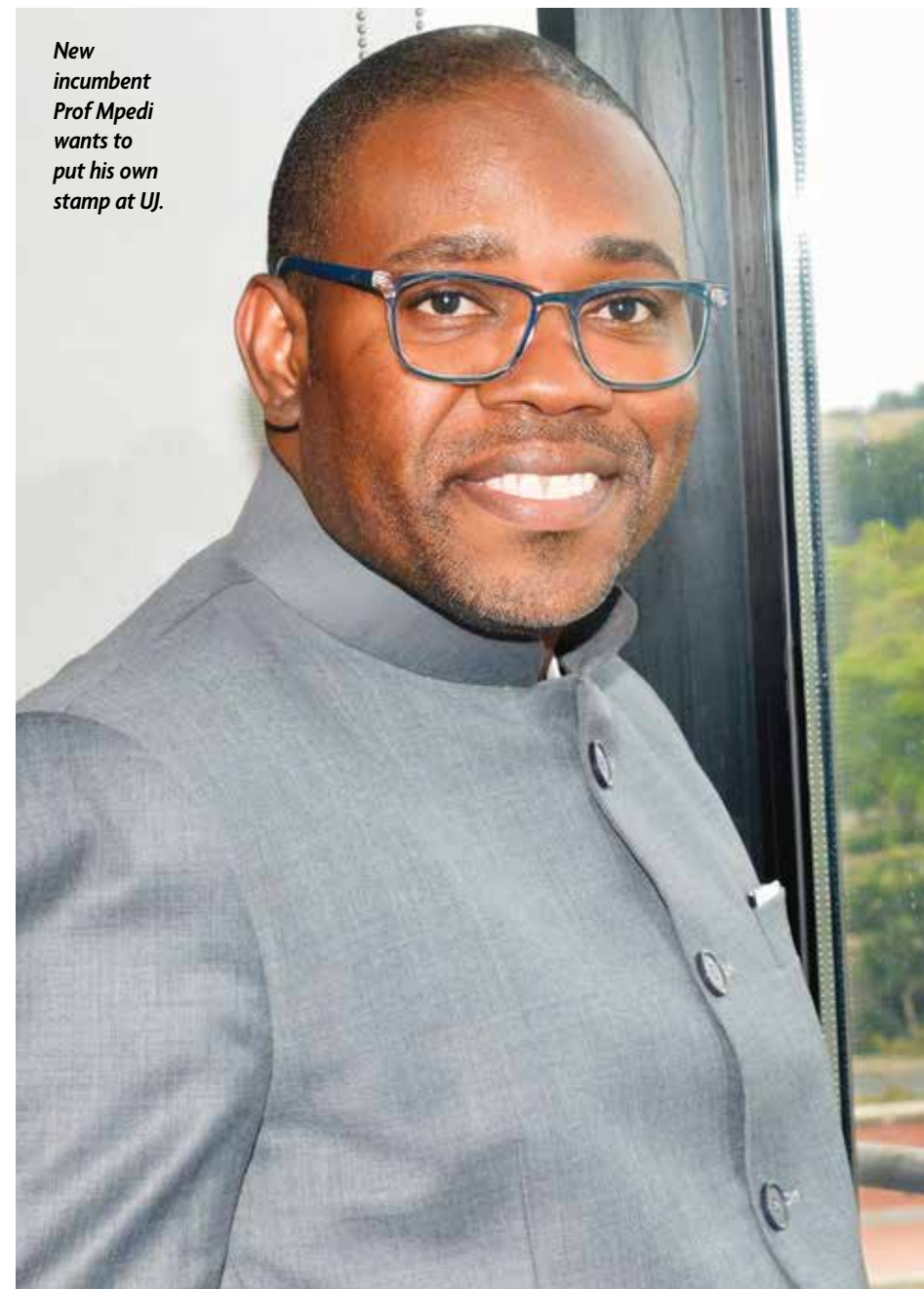
Mpedi had nothing but praises for his predecessors, saying they left a strong University behind, with UJ now ranked second in South Africa and on the African continent.

UJ was previously ranked in third place by the QS World University Rankings.

“I’m delighted and deeply honoured to be taking up the role of vice-chancellor of this great university. Prof Marwala and Prof Rensburg have built a strong university, and I see many opportunities to take the institution’s ambitious strategy forward. I am particularly looking forward to working with staff and students to build a truly inspirational and transformative institution where all are included and supported to thrive,” said Mpedi.

Mpedi says that under his leadership, UJ will remain committed to innovation, Pan-Africanism and the Fourth industrial revolution (4IR), which have become part

Mpedi is ‘walking in his own shoes’ at UJ



New incumbent Prof Mpedi wants to put his own stamp at UJ.

of the university’s DNA.

“The commitment to innovation, Pan-Africanism and the emergence as a fourth industrial revolution (4IR) university has become part of our DNA. This will continue to remain our focus and ethos in the future. However, we cannot ignore the context of the world around us. Steep rises in inequality, growing divisions, pandemics, climate change and leadership crises are but a few descriptors of our current era.”

Another key priority for Mpedi will be to focus on social security laws in dealing with challenges such as unemployment and other social ills in South Africa using 4IR technologies.

“We will also intensify our 3D printing project in collaboration with the Department of Science and Innovation to continue to leverage the technology of the 4IR and find sustainable solutions that benefit local communities, including the provision of housing,” says Mpedi.

He cites the university’s project in Gwak-

wani, Limpopo, as an example. Gwakwani, a small village in northern Limpopo, had no running water, electricity, cell phone reception or internet access. But since the university started introducing innovative Internet of Things (IoT) systems there, much has changed in the remote village.

“We are also proud of our colleagues in the School of Electronic and Engineering Department for setting up the first smart village in South Africa using solar technology; today the village has among others, mobile connectivity and this has impacted on the lives of ordinary people in Gwakwani,” says Mpedi.

The new vice chancellor will also be working towards bringing down the dropout rate at UJ and raising the completion rate in record time.

“That’s one of my biggest priorities; to achieve a lower dropout rate from 32% and, most importantly, to a single digit. It would be amazing if I achieved that at the end of my term,” said Mpedi.

One of Mpedi’s goals in the next 100 days

is to oversee the development of the UJ Island at the Vaal River.

“We will turn it into an academic project, training courses, conference centre and food garden project.”

Mpedi says he also wants the university to offer more online courses by the end of the year, some of them free of charge.

“We have about four online courses at the moment. But by the end of the year, we should have at least ten of these online courses.”

His focus will also involve turning UJ into a research-intensive university. In the past few years, UJ has seen a surge in its accredited academic research output. The University, which has set a goal to increase its certified research output, has achieved this and is ranked among South Africa’s top 2 universities.

“We want to build a research-intensive institution. Research is important to teaching and learning. The research contributes to a new body of knowledge and is a pillar to community engagement,” said Mpedi, who is a National Research Foundation (NRF) rated scholar and is placed in the B category at level B3 (a researcher who enjoys considerable international recognition by peers).

Turning to student issues, Mpedi says he wants to raise more money to cover student fees and registration costs, particularly the missing middle group.

“We have the SRC Trust Fund to help students to register and raise funds for the missing middle. I have also contributed R50 000 to the fund. We also appreciate the role played by the Motsepe Foundation in contributing R30 million. Are we where we need to be? No,” says the Syferkuil-born academic.

Amongst his academic achievements, Mpedi holds an Advanced Management and Leadership qualification from the Saïd Business School, University of Oxford (2022), as well as in ‘Leading in Artificial Intelligence: Exploring Technology and Policy Programme, from the John F. Kennedy School of Government at Harvard University, Executive Education (July 2022).

He completed his B Juris degree in 1996 and LLB degree in 1998 at Vista University. He holds an LLM in Labour Law from the Rand Afrikaans University (now UJ) and an LLD in Mercantile Law from UJ. He publishes labour law and social security.

Mpedi holds a B3 rating (Internationally Acclaimed Researcher) issued by the National Research Foundation. He is a recipient of several awards, including the Continental Award for Education and Training: Academic and the South African and Southern African Development Community Regional Awards for Education & Training: Academic.

INSIDE EDUCATION

University News

Focus on sexual consent can create safer university spaces



Siyanda Magayana puts the focus on creating safe spaces at universities.

SIYANDA MAGAYANA

Sexual violence in the form of sexual assault is a severe problem on South African university campuses, and it can be argued that it is sanctioned and embedded within institutional cultures.

Sexual assault on university campuses is a serious issue that affects many students and can have a devastating impact on the survivors, their families, and the wider community. Unfortunately, this is also a widespread problem, with many universities and colleges worldwide reporting incidents of sexual assault and harassment.

Statistics from recent studies and reports show alarming rates of sexual violence. In a 2019 survey conducted by the Higher Education and Training HIV/AIDS Programme (HEAIDS), 19% of students reported experiencing sexual assault on campus. The same study found that 27% of students reported experiencing unwanted sexual advances, and 18% reported experiencing sexual harassment.

Furthermore, in a 2016 South African Union of Students survey, more than 70% of respondents reported knowing someone who had experienced sexual violence on campus.

These statistics highlight the urgent need for institutions of higher learning to take action to address sexual violence, especially sexual assault and harassment within their institutions, which can be achieved through awareness campaigns

such as Sexual Assault Awareness Month (SAAM).

April is Sexual Assault Awareness Month (SAAM) – a necessary time to raise awareness and educate people about the importance of consent in all forms of sexual activity. Consent is a fundamental aspect of healthy sexual relationships, and it is essential to understand what it means and how to ask for it. Education on consent in higher education institutions (HEIs) can help prevent sexual assault and ensure everyone is comfortable and safe during sexual activity.

During SAAM, it is essential to educate ourselves and others on the importance of consent, how to recognise and address situations where it is not given, and how to create a culture of respect and understanding around sexual consent. This education can help promote a safer and more positive sexual culture, free of sexual assault and harassment on university campuses.

The prevalence of rape culture at South African universities is a serious and concerning issue. Rape culture refers to the normalisation of sexual violence in our society and a culture where sexual violence is often excused, normalised, and even glorified; it manifests, for example, through victim blaming, protection of perpetrators, objectification of women, and jokes about rape, etc. This culture perpetuates harmful attitudes and behaviours that contribute to sexual harassment, assault, and rape. These perceptions are learned from how society is socialised, i.e., gender roles and

cultural beliefs and attitudes that maintain that men are active agents and receivers of consent. At the same time, women are merely passive agents and receivers of consent. This profoundly problematic notion severely affects gender equality and how society perceives and treats women. For example, it reinforces gender stereotypes, perpetuates rape culture, ignores the complexity of consent, leads to victim-blaming, and re-enforces gender imbalances.

It is essential to address rape culture at universities because sexual violence and harassment devastate survivors and can affect their physical, emotional, and psychological well-being. Survivors of sexual violence may experience a range of adverse outcomes, including anxiety, depression, post-traumatic stress disorder (PTSD), and substance abuse. Additionally, sexual violence can negatively impact academic performance and lead to students dropping out. Addressing rape culture at universities is also essential because it promotes a safe and supportive environment for all students.

Furthermore, by addressing rape culture, universities can help to prevent sexual violence and harassment from occurring in the first place. Promoting a culture of consent and respect, educating students about healthy relationships and boundaries, and holding perpetrators accountable for their actions can all contribute to creating a safer campus environment. By taking a proactive stance on these issues, universities can help to change attitudes and

behaviours that contribute to a culture of violence and promote a culture of respect and equality.

Resocialisation is the only hope to eradicate sexual violence through consent education. Cultural and traditional beliefs and attitudes can significantly impact how consent is understood and practised in a society. As it stands, there are problematic views of it. Hence, it is crucial to re-socialise our community to eliminate these complex attitudes. For example, some cultures and traditions have strict rules around gender roles and sexual behaviour, which can make it difficult for individuals to assert their boundaries and preferences in sexual encounters.

Additionally, some cultures still view sexual activity, especially for women, as taboo or shameful, which makes it difficult for them to communicate openly about their desires and needs. Again, some believe that men are entitled to sex and that women should be passive and submissive in sexual encounters, which leads to situations where women are coerced or pressured into sexual activity without giving their full and enthusiastic consent. On the other hand, some cultures still view sex as a duty or obligation within marriage or a relationship, which can make it difficult for individuals to say no to their partners. Thus, a focus on re-teaching consent can help change perceptions, prevent sexual violence, and change the rape culture in university communities.

Moreover, because they are a direct reflection of our larger society, all the beliefs and attitudes have been assimilated into university cultures and institutions. Therefore, HEIs must identify and refute cultural and traditional attitudes and beliefs that support violent or non-consensual sexual conduct.

Creating safer university spaces must happen through consent education. Consent speaks to the enthusiastic and ongoing agreement between all parties involved in a sexual or romantic encounter. It means that all parties involved have given explicit permission and are fully aware of what is happening. Therefore, consent education is critical in HEIs, because it helps to create a culture of respect, safety, and a sense of comfort in relationships for its student and staff community. Consent education helps to teach that it is not just about saying 'no' but also about actively seeking and obtaining consent in a respectful, clear, and mutually understood way.

A focus on consent education through awareness campaigns on and around campus can help create safer spaces for staff and students because it empowers them to make informed decisions about their bodies, boundaries, and relationships. It can further help to prevent sexual assault and harassment, as well as to promote healthy relationships and positive sexual experiences for all. By educating university staff and students about consent, we can help to create a university community where sexual violence is not tolerated, where people are empowered to make informed decisions about their bodies, and where healthy and respectful relationships are the norm. Lastly, by educating students on what constitutes consent and the importance of seeking it, higher education institutions can help create a culture of respect, autonomy, and safety for all.

Provinces: Matric 2022

Minister commends the

The class of 2022 has obtained the highest number of bachelor passes attained in the entire history of the National Senior Certificate examinations. More than 38%

of the 2022 matric cohort qualified to study further at university.

KwaZulu-Natal and Gauteng have contributed the most. The matric results showed a 3.7% increase in the pass rate to 80.1%.

This is the second-highest national pass rate since 2019.

Minister Motshekga said that the 2022 cohort was the most resilient yet, facing pandemic challenges and load shedding

and had made the nation proud and improved.

The minister said that this indicates a deliberate effort to improve the quality of education.

FREE STATE

Against all odds

BY CHARLES MOLELE

LATE Free State Education MEC Tate Makgoe



FREE State Education MEC Tate Makgoe says the Class of 2022 has gone the extra mile to ensure the province's dominance of the matric results yet again.

The Free State remains the leading province again this year with a pass rate of 88.5%, an increase of 2.8% from 2021; Makgoe said this was despite the challenges of Eskom's load shedding, disruption of schooling due to community protests, some schools being torched and other socio-economic challenges.

"Even though Intuthuko- Katleho Secondary School in Vrede was burnt down, the school obtained an impressive 87.6% pass rate and 35.8% bachelor passes," said Makgoe.

"We're encouraged by the notable resilience of our basic education system. The performance of the Class of 2022 in the face of the challenges mentioned above is a consequence of systemic interventions for strengthening and raising performance at all system levels."

He said, among others, that the provincial strategy for improving literacy and numeracy has assisted in improving education quality in the Free State, adding that it has also strengthened the teachers' capacity to teach, particularly the literacy and numeracy curriculum.

These sorts of interventions, said Makgoe, included but were not limited to five days of December camp in Grade 12, weekend classes, a vacation support program, a community radio broadcast revision program and the provision of learning support materials in addition to textbooks.

"All the efforts we have made have positioned and empowered the class of 2022 to raise the bar and obtain the number one spot in the 2022 NSC results."

Makgoe said the education department was pleased to announce that all districts in the Free State achieved more than 85% in 2022.

MEC Tate Makgoe and his protector died in a car accident on 5 March 2023.

GAUTENG

Interventions in township schools bear fruit

BY EDWIN NAIDU

Gauteng MEC for Education, Matome Chiloane



Not wishing to rest on its laurels, having achieved a pass rate of 84.47%, Gauteng MEC for Education, Matome Chiloane, wants the schools which failed to perform in 2022 to pull up their socks.

Gauteng showed a 1.7% improvement from the 2021 rate of 82.8%, but Chiloane wants to raise the bar.

"As a province, we must also attend schools that consistently perform below par. Under-performing schools must also be resolved as 53 public and independent schools achieved less than 65% compared to 69 public and independent schools in 2021," he said.

The MEC added that the department would meet with the school management teams of all public schools that performed below 65% and kickstart a process to address poor performance. This will include a review of management and teaching personnel. A rapid school evaluation will be undertaken, and an academic improvement plan will be designed and implemented.

However, an upbeat Chiloane said that 15 districts in Gauteng had performed above 80%, with four among the top 10 performing districts in the country, having achieved pass rates of more than 85% each.

"What is also worth noting is the positive trend of more schools in Gauteng achieving a 100% pass rate. In 2021, 131 schools aced the exams with a 100% pass rate. The figure has risen to 149 schools for the 2022 matric exams. Similarly, more schools achieved a pass rate above 95% in 2022 than in the previous year. In 2022, 290 schools achieved above 95%, compared to 265 in 2021.

Provinces: Matric 2022

Basic Education Minister Angie Motshekga has commended matriculants for their resilience.

resilience of the Class of 2022

EASTERN CAPE

MEC aims for an 80% Matric Pass rate in 2023
BY PHUTI MOSOMANE

Eastern Cape Education MEC Fundile Gade



The Eastern Cape province Class of 2022, the third most improved in the country, achieved a 77.3% pass percentage, a 4.3% improvement to the 73% pass of the Class of 2021.

Eastern Cape Education MEC Fundile Gade tells Inside Education that he is happy with the 2022 matric performance but aims for 80% in 2023.

“We are quite delighted as a province. We have achieved the target that we wanted. We are consistent with the 5% for the past three consecutive years.”

“We want to target 80% on the last leg [2023] of the last sitting of this administration. We will achieve that by looking at the systems we have put together in the last few years. I promised that I would leave this job with the province on an 80% pass rate,” Gade said.

He said the province does not have any district that received below 70% of the pass rate, thanks to the collective effort of principals and teachers working with the communities.

“I am happy that Alfred Nzo has improved as a rural district despite a huge infrastructure backlog and being confronted with huge poverty- it has surpassed its expectations. We will have to find a way to engage so ensure that we sustain the growth,” Gade added.

The Alfred Nzo district is number 1 in the province out of 12 districts and 29 in the country out of 75 communities.

Given the high enrolments in the class of 2022, the total number of children that passed the National Senior Certificate stands at 73 386, making it 6616 more learners passing in 2022 compared to 2021.

The top achiever in the Eastern Cape is from East London-based Hudson Park High School, Laaiqah Bedford, who obtained seven distinctions in Afrikaans first additional language, English home language, Mathematics, Accounting, Physical Sciences, Business Studies and Life Orientation.

WESTERN CAPE

The largest number of successful candidates in history
BY EDWIN NAIDU

Minister of Education for the Western Cape, David Maynier



Kelly Grace Prowse (Rustenberg Girls’ High School) The Western Cape matric Class of 2022 has beaten the odds and increased its provincial matric pass rate to 81.4%, with 49 102 candidates passing their exams – the most significant number of successful candidates in its history.

Minister of Education for the Western Cape, David Maynier, said every successful candidate received a matric pass that makes them eligible to apply to universities or colleges. “This means that we have extended opportunity to nearly 50 000 young people who are now ready to take the next step into higher education and skills development, which is great news,” he said.

In addition, five candidates were recognised by national minister Angie Motshekga as the best of the best – including the top candidate in South Africa.

“In matric, they have struggled with the ongoing challenge of load-shedding. While we were able to conduct all of our exams successfully despite the power cuts, they left many learners in the dark in the evenings when they needed to study,” Maynier said.

Maynier thanked principal Mike Mavovana and the matric teachers of Hector Peterson Secondary School for the support they have given their learners. “They have shown incredible grit and determination and should be very proud of their achievement.”

“They have shown incredible grit and determination and should be very proud of their achievement.”

Provinces: Matric 2022

KWAZULU NATAL

The most improved province
BY EDWIN NAIDU

KwaZulu-Natal Education MEC Mbali Frazer



KwaZulu-Natal Education MEC Mbali Frazer was all smiles when the province was acknowledged for showing the best improvement in its 2022 final grade 12 exam results.

Although the Free State was the top-performing matric class, with an 88.5% pass rate, the former teacher and trade union leader was thrilled that KwaZulu-Natal made good on her demand for better following her appointment after a reshuffle in August 2022.

KwaZulu-Natal had the biggest improvement at 6.2% from last year, which puts them at 83%. The Western Cape comes next with 81.4%, again with an increase of 0.2% from last year."

Frazer told the media that she was expecting at least 80% and wanted a 100% pass rate. In addition to learners dealing with the impact of the COVID-19 pandemic and the national load-shedding crisis, KwaZulu-Natal experienced unrest in July 2021 and floods in April 2022.

After the launch of the results, Frazer said a "quality education is the minimum necessary to prepare individuals to participate in the economy and society.

In 2022, the department accelerated its drive to make schools ICT innovative hubs with the rollout of coding and robotics.

Frazer added that the quality of our results is indicative of the sterling work of district teams and educators, as well as the dedication of our learners to their academic careers. Bachelor passes have increased from 61 856 in 2021 to 69 849 in 2022. There's also been an increase in the number of diploma passes from 42 128 in 2021 to 43 908 in 2022. Higher certificates decreased from 23 945 in 2021 to 22 560 in 2022.

"A quality education is the minimum necessary to prepare individuals to participate in the economy and society."

LIMPOPO

Resilience and hard work behind Improved Matric results
BY CHARLES MOLELE

Limpopo MEC of Education, Mavhungu Lerule-Ramakhanya



Limpopo MEC of Education, Mavhungu Lerule-Ramakhanya, says it is only resilience and hard work that lifted the province from below 70 percent and propelled it to dizzy heights.

Limpopo achieved a matric pass rate of 72.1%, making it the second best-improved province, with a 5.3% increase from the previous year's results.

The primarily rural province has achieved a matric pass rate of between 60% and 80% in the past five years.

She said she was proud of the learners' achievements amid challenges such as the COVID-19 pandemic and load shedding. She said all the schools in the province had extra classes for Grade 12 on weekends.

"They were either taught by expert teachers or a continuation of what they were taught during the week," they said.

"Our Grade 12 learners from Sekhukhune East were taken to camps at Tivumbeni College in Mopani for two weeks on a catch-up programme, and that has brought a huge difference," she said.

"Learners who were enrolled in Gateway subjects from various schools in the Capricorn North District had on-site camps. Learners clubbed under one roof had sufficient time with expert teachers."

She said her department's intervention strategy was also to target the poor-performing districts that contributed to the low percentage obtained by the previous cohort.

According to Lerule-Ramakhanya, 111 618 learners had registered for the academic year, making them the highest number of Grade 12 learners administered by the province.

However, only 110 295 learners managed to write all their subjects.

The matriculants managed to produce 32 878 bachelor passes, an increase of 4803 compared to the 28 075 bachelor passes attained in 2021.

They also produced 19 733 distinctions, 1982 more than 2021's 17 751 distinctions.

The top three learners in the province - Tladi Moeletsi Lehumo, Makwela Tshepo and Maduwa Godiso - came from the Capricorn South, Mopani East and Vhembe East districts.

Provinces: Matric 2022

MPUMALANGA

Making its mark BY EDWIN NAIDU

Provincial MEC for education in Mpumalanga, Bonakele Majuba Provincial MEC for education in Mpumalanga, Bonakele Majuba, welcomed the improvement in results in the province.

Mpumalanga achieved a 76.8% matric pass rate, an improvement of 3.2% compared to 2021.

"Some 22 576 of these learners qualified to further their bachelor's study programmes, while 18 068 of them qualified to pursue diploma-related courses. The province has four districts, and all four improved their results," he said.

Bohlabela District obtained a 79.3% pass rate, an improvement of 5.1% compared to the 74.2% obtained in 2021. It was the overall best-performing district in the province in 2022.

Of the 17 municipalities in the province, Steve Tshwete Local Municipality obtained the top place with 2 150 learners passing, which is an 86.7% pass rate. This was the second time in a row they achieved this feat.

On 20 January, the Mpumalanga Department of Education announced the 2022 National Senior Certificate (NSC) examination results at the University of Mpumalanga.

The top 10 learners in the province attended, as well as the top learners in mathematics, physical sciences, technical mathematics, technical sciences and accounting.

The overall best learner was Penelope Bathobile Nkambule (17) of Highveld Secondary in Elukwatini. Penelope achieved distinctions in all her subjects.

She was second in quintile one schools in the country and planned to study accounting at the University of Pretoria.

In second place was Naledi Ramashu of Hoërskool Bergvlam, third was Jomarié du Toit of Hoërskool Nelspruit, in fourth place was Jacques Klopper of Hoërskool Bergvlam and fifth was Paul Harley of Hoërskool Nelspruit.

Of the Class of 2022, 71 369 full-time learners registered to write, the most significant number ever recorded in the history of the writing of NSC exams in this province.

NORTHERN CAPE

MEC Monakeli wants to be among the top three provinces BY CHARLES MOLELE

Despite challenges, Northern Cape Education MEC for Education Zolile Monakali says he was looking towards the future to improve matric results in his province.

Monakali said this year's matric results have shown that the province has improved and was on the right track after finishing second last with 74.2%, an improvement of 2,8% from 2021.

Monakali said the aim now was to be part of the top three provinces in 2023.

"Despite challenges and some budget constraints in our province, we must concentrate on 2023 and our targets and how we can improve our matric results in the Northern Cape," said Monakali.

"We must ensure that all necessary interventions are made despite the shortage of resources and infrastructure. We are going to do better this year. We are going to perform at the level of all other provinces."

Monakali said budgetary constraints and a shortage of resources were primarily responsible for the Northern Cape being placed second last on the leaderboard of the NSC exams for 2022.

"The Class of 2022 has been at the epicentre of the Covid-19 pandemic that has wreaked

havoc on the education system since they were in Grade 10," said Monakali.

"The marks are stabilising and showing an improvement, although it is still 6% below the national average. We would like to see the Northern Cape back in the top three provinces. However, much work needs to be done by Northern Cape Education MEC for Education Zolile Monakali."

Monakali said, however, that he was satisfied with the achievements of the Class of 2022.

"Last year, the national average was 76.4%, so the target is continually shifting," he said.

"We have done better in the past, and we hope that the Class of 2023 will exceed our expectations."

Northern Cape premier Zamani Saul said the province's National Senior Certificate matric pass rate had been upward for the past two years.

"Our education system in the Province is stabilising, and we are witnessing a gradual improvement in our Matric results over the past three years; in 2020, we stood at 66%, in 2021 at 71.4%, and in 2022 at 74.2%," Saul said.

Saul added that the Class of 2022 has done remarkably well and excelled academically against all odds.

The Northern Cape registered 13 831 full-time candidates for the 2022 NSC exams.

This is the most significant cohort of candidates who have registered for the NSC exams compared to the previous years. A total of 13 574 candidates wrote all subjects in the 2022 NSC examination, and 10 072 candidates completed their final examination, bringing the overall pass rate of the Northern Cape to 74.2%.

NORTH-WEST

The darkest nights produced the brightest stars BY PHUTI MOSOMANE

North West Education MEC Viola Motsumi says the class of 2022 and the teachers displayed resolute character, tenacity and resilience.

"You are a special cohort, my boys and girls. Thank you for not allowing any external force to derail you. The darkest nights indeed produce the brightest stars," she said.

She said the learners prevailed over the stark realities stemming from the impact of Covid-19 and lockdown restrictions, Eskom load-shedding, inclement weather, floods, and community service delivery protests that "could have easily taken you off the rails of achieving your academic goals. Indeed, you stood the test, and for that, we salute you."

The Class of 2022, the largest enrolment since 2017, is the ninth cohort of learners to write the Curriculum and Assessment Policy Statement (CAPS) aligned to the National Seniors Certificate (NSC) Examinations. They enrolled for Grade 1 in 2011, when the NSC was written for the third time in Grade 12.

She said that the Class of 2022 was the hardest hit by the impact of the Covid-19 pandemic and its related lockdown restrictions. Due to this, they were subjected to trimming content in the annual teaching plans.

In 2017, North West obtained 79.44% and maintained (position 4); in 2018, it improved to 81.11% (position 4); in 2019, it again enhanced and obtained 86.80% (position 4), then in 2020, dropped to 76.19% (position 3). In 2021, the province rose again and received 78.2% (position 4).

The North West Class of 2022 obtained a pass rate of 79.8% (an increase of 1.6 % from 78.2% in 2021).

The pass rate is still below the province's annual performance plan target for the 2022 matric pass rate was 85%.

Out of 444 schools that presented Grade 12 in 2022, 338 (76,1 % of the schools) performed at 70% and above.

In total, the number of candidates who achieved Bachelor passes is 14 733 (33.62%) compared to 13 872 of the Class of 2021.

Minister Congratulates provinces on Matric 2022 results

INSIDE EDUCATION REPORTER

Minister Angie Motshekga congratulated provinces on their improved academic performance during 2022 in the National Senior Certificate (NSC) examination during her first meeting with district directors and senior DBE and Provincial Education Department (PED) officials earlier this month.

The Minister expressed gratitude to all district directors for their resilience during this challenging period as the first line of defence.

"Along with our circuit managers, you remain the heartbeat of the sector. We must now shift our focus towards quality. To this end, I am pleased to announce that the National Assessments and Public Examinations analysis is moving away

from league tables towards the inclusive basket.

As we celebrate the anniversary of the function migration, there is a lot to do with ECD, our new baby in the house.

"We have embarked on many projects to ensure better and more effective resourcing of early childhood education," she said.

These include the ECD Census, which is helping the Department establish more robust planning systems

tems, and the Thrive by Five Index, which is assisting the Department in strategically targeting its support. We are also driving the process of redrafting the Children's Second Amendment Bill to make registration and access to funding more easily accessible to all ECD programmes.

"Guided by our anticipated Integrated ECD Service Deliv-

ery Model and Framework, based on the Five Pillars of Early Learning to bring all stakeholders on board, we need to prioritise access and quality," the Minister said.

"We must continue with the Learning Recovery Plan and pay attention to Home Languages, emphasising languages in the Foundation Phase.

The National School Nutrition Programme, which has successfully offered meals and created jobs for the local communities, should be expanded to fight malnutrition and stunting.

"I am confident that this will be another great year for education, and I wish you all the best in today's deliberations and the year ahead," the Minister concluded.

Read in your mother tongue – an initiative by AVBOB Road to Literacy campaign with Oxford University Press.



Science and Technology

New Sci-Bono CEO has a great vision for the future

EDWIN NAIDU

Reaching for the stars, the new CEO of Sci-Bono, Professor Mfanelo Pat Ntsobi has great plans for Africa's largest world-class science centre in Newton, Johannesburg.

Ntsobi wants Sci-Bono to become the most-visited and talked about science centre on the Continent, a learning hub that also becomes a research home.

Passionate about the sciences, Ntsobi wants Sci-Bono to build on its solid foundation by attracting learners beyond Gauteng, ensuring the institution's sustainability, bringing on board more programs and bolstering its service offerings by integrating ICTs.

He wants to expand on the plans for Sci-Bono, which supports maths, science and technology education and offers innovative and dynamic learning experiences.

As part of our vision and primary objective, Sci-Bono seeks to promote a society capable of competing in the global world

of science and technology and equally equipped with the requisite skills, attitudes and values needed to improve the lives of all South Africans.

Ntsobi said Sci-Bono carried out this mandate in collaboration with schools as viable platforms and further supported learners and educators in Science, Technology, Engineering, Arts and Mathematics (STEAM), thus ensuring mastery of these subjects as well as harnessing the capability for global competitiveness.

This also means being creative and looking at other skills, for instance, introducing training in elementary civil engineering skills in partnership with the Department of Education.

"We are champions in digital literacy, as well as pedagogical integration of ICTs in teaching and learning, not just to improve learning outcomes, education outcomes, as well as learner attainment, so it is incumbent upon us to ensure that we use all available resources to reach these objectives," he told Inside Education in an interview.

"This is where I see Sci-Bono

Sci-Bono
CEO
Professor
Mfanelo Pat
Ntsobi.

Photos:
Eddie
Mtsweni



moving to in the next few years. I am lucky because I found a powerful organisation.

My predecessors, David Kramer and Dr More Chakane, have laid a solid foundation.

So for me, it's about improving the institution's sustainability, building on the work of my predecessors, both of whom I hold in high esteem," Ntsobi added.

Seated in the boardroom adjoining his office, Ntsobi, who assumed the CEO role on 1 November 2022, said he was determined to ensure that Sci-Bono, continues to contribute to building South Africa's science, engineering, and technology capacity.

"When I joined, I got my cue and mandate from the board to strengthen certain areas in the science, technology, mathematics and engineering spaces," he said.

Ntsobi says the strategic goals for Sci-Bono are to create a difference in society.

The organisation, founded by the Gauteng Department of Education (GDE) and private sector representatives, has several core goals.

These include building a competent society in the world of science; improving and strengthening financial viability and sustainability; improving organisational sustainability; enhancing operational efficiency and optimising agility of service delivery, and building a solid research and

development capacity.

As a policy analyst, management scientist and communication strategist, Ntsobi's scholarship is characterised by his association with research organisations and his contribution to numerous publications, including book chapters, articles and presentations at conferences.

He is continually developing pedagogies for education and its integration with ICT and web-based strategies for optimum educational system functioning.

Ntsobi's PhD, entitled "Pedagogical Integration of Technology as an enhancement to Teaching and Learning in Gauteng Public Schools", is a manifestation of his interest in the use of digital applications and scientific approaches for the provision of pragmatic solutions.

This explains the passion he brings to his role at Sci-Bono.

But he is keen to ensure that the team he leads are given the tools they need as experts.

"These are professionals, scientists, the best educators assembled to broadcast these lessons, and we want these lessons to be shared with the rest of the schools, especially the quintile one to quintile three schools, but it's not limited to Gauteng," he adds.

"We should be able to provide this support to learners outside Gauteng.

During COVID-19, learners from other provinces had access

to our content platform, just like Gauteng.

So we must get support not only from Gauteng but also from other provinces and national departments."

"As champions in digital literacy, as well as ensuring pedagogical integration of ICTs in teaching and learning, not just to improve learning outcomes, but education outcomes as well as learner attainment, so it is incumbent upon us to ensure that we use all available resources to reach these objectives.

This is where I see Sci-Bono moving in the next few years," said Ntsobi.

While the emphasis is on science, stimulating interest in the subject and, through the careers centre, encouraging learners to embark on careers in the subject, Ntsobi does not want Sci-Bono to sit on its laurels.

"We are also tapping into the manufacturing sector as there are learners across the value chain.

We are negotiating with Sector Education Training Authorities (SETAs) and industry players to groom learners on furniture manufacture.

Another program we will be looking at is interior design, so many other skills fall within our scope," he said.

Science is not just about being in a laboratory.

It is the simple skills that one can use in various ways.



Sci-Bono wants to be the best centre for science in Africa.

Science and Technology



“We are even thinking about food security, using artificial intelligence to make meaningful agricultural interventions and contributing positively to food security.

“We want to prepare learners to start thinking about solutions for complex challenges facing society.

Now energy is one of our key challenges. Water is another.

If you walk around, we have some of these exhibits relating to energy and water.

But we want them to be current.

We want cutting-edge solutions, ideally coming from learners,” he said.

Sci-Bono hosts competitions to tap into the potential of learners, paying for transportation of those from outside the province – and the country – to ensure inclusivity.

Welcoming Prof Ntsohi to Sci-Bono, the chairperson of the board, Mr Witbooi, Abbe, acknowledged the impeccable role and contribution of former Chief Executive Officer Dr More Chakane.

“A special welcome to the newly appointed Chief Executive Officer, Prof Mfanelo P. Ntsohi.

“We are honoured to have you lead this institution; we welcome in advance the inestimable value, insights, and leadership fortitude you will be investing in the Company in the coming years.

“I look forward to us collectively continuing to break barriers in 2023 as well as attaining unprecedented heights of excellence and the apex of exponential growth.”

Sci-Bono's Intervention In Gauteng's Underperforming Schools Bears Fruits

EDWIN NAIDU

Aground-breaking Secondary School Improvement Programme (SSIP) to help matric learners improve their performance which began in 2011, is starting to reap dividends in Gauteng, according to Vincent Zulu, the Senior Manager for Learner Support at the Sci-Bono Discovery Centre in Newtown, Johannesburg.

“What began as a project reaching 275 underperforming schools in 2011 is now benefitting over 440 schools throughout Gauteng impacting about 101 715 learners,” says Zulu, adding that the emphasis on providing expert tuition from the best teachers was starting to pay off.

In fact, he says that since 2012, the Gauteng Province has been in the top two provinces annually when matric results are announced, with a rise in performance, particularly among learners in townships whose parents could not afford to send their children for extra lessons.

Sci-Bono manages various supplementary tuition programmes on behalf of the Gauteng Department of Education (GDE), including SSIP through a Saturday Programme, at which a meal is provided for attendees, Residential and Walk-in camps during vacation classes and Broadcasting.

In the past five (5) years, the SSIP programme has seen a tremendous increase in the number of Grade 12 learners participating. The numbers have grown substantially from 67 063 learners in 2018 to 101 715 in 2022 at 309 sites throughout Gauteng.

Under former Gauteng MEC for Education Barbara Creecy, now the Minister of Environment, Forestry and Fisheries, the Gauteng Department of Education reviewed the 2011 matric results and launched the SSIP to change the narrative. The department looked at why learners were failing in Grade 12 and held additional classes on Saturday for Grade 12 learners struggling in Maths, Physical Science, Accounting, Economics and Geography.

Another important element of SSIP was a support programme for Grade 8 and 9 learners, who also participated in a programme during the April holidays. Principals were encouraged to ensure their learners took part in these lessons, with the former MEC demanding 100% attendance.

Principals need to manage their schools' participation in SSIP. Each principal is responsible for ensuring that every learner and each selected teacher participates and that appropriate action is taken where attendance is less than 100 percent.

And the results, according to Zulu, are evident, even though it is not scientifically proven; an assessment study is underway, and performance is noticeable, with the majority of learners since inception getting 80 percent, which was not happening before 2012, while the Bachelor's pass had gone up 40 percent bachelors in the past six years.

In January 2022, former MEC for Education

Panyaza Lesufi said SSIP targeted over 65 734 grade 12 learners in 436 priority schools from January. The SSIP offers extra classes in the mornings, afternoons and Saturdays, and some years offered study camps. Over the past years, classes were also extended to Sundays to make up for lost time due to the lockdown.

“More than 78,7% of SSIP learners passed [in 2021] compared to 78,5% of learners in 2019,” said Lesufi, adding that 79 SSIP schools achieved above 90% pass rate. Four SSIP schools gained 100%. “The SSIP programme once again proved its value,” Lesufi says. He notes that the sustained improvement in results over the last four years shows that the SSIP system improves teaching and learning in the prioritised schools.

Zulu says the SSIP programme is based on a centralised and standardised approach to managing and delivering additional tuition. It seeks to establish existing best practices in and out of the province and to ensure that these are replicated consistently across all the schools that are part of the programme. The SSIP programme uses a transversal management approach that relies on all the stakeholders for input and depends on all stakeholders to achieve success.

This programme runs parallel to the regular school programme. According to the agreed-upon GDE Work Schedule, what is taught during the week will be consolidated during what is considered ‘the sixth school day’. The programme focuses on tackling examination questions and on how to achieve maximum results in key areas of the curriculum. There is also a strong focus on homework to support the curriculum being dealt with weekly in the classroom.

Emasondosondo, the name given to the outreach programme, comes from an isiZulu word, ‘amasondo’ meaning ‘for wheels’. This is the name of a learner support programme as part of SSSIP consisting of a team of specially-trained teachers in Mathematics and Physical Sciences. The team reaches out to priority secondary schools throughout the province.

Teachers who teach these subjects also benefit from the team's intervention as some of the topics dealt with by the team are those found problematic by the teachers at the various beneficiary schools. The teachers are expected to learn how to handle the sessions from the team's presentations and, after that, be able to deliver them confidently—12 expert teachers from Sci-Bono co-teach with teachers from selected schools.

Lately, SSIP has been taught through a Multimedia Broadcasting Platform (MBP) studio has been built to stream lessons live in all the 440 SSIP schools in the province. Broadcasting assists in standardising the presentation of the content by having one expert tutor presenting to all the schools.

Tremendous progress has been made in supporting teachers and learners in supplementary teaching in 12 gateway subjects on behalf of the GDE through the innovative and much-needed SSIP, says Anele Davids, the Acting Chief Operations Officer.

“We do thorough planning for the SSIP programme because of the scale of delivery required; the team works tirelessly to keep the ball in the air, but it does not go without challenges we progressively learn from. The SSIP initiative strives to ensure access to tuition for the “poorest of the poor”, he adds.

Skills Development

EWSETA and Power Africa skills training put women and TVET students at the heart of the Just Energy Transition

An innovative programme supporting 100 unemployed, young women learners, as well as 15 Technical Vocational Education and Training (TVET) college lecturers, in Mpumalanga, aims to put women at the centre of the Just Economy Transition.

The electrical engineering Renewable Energy (RE) Specialisation Skills Development Programme was launched in Standerton, giving opportunities to learners from Gert Sibande, Nkangala and Ehlanzeni to undergo training towards a National Certificate: Electrical Engineering: Renewable Energy, NQF Level 3.

The Just Energy Transition means greening the economy fairly and inclusively, creating decent work opportunities.

The programme is the result of a partnership between the Energy and Water Sector Education and Training Authority (EWSETA), and Power Africa, a U.S. Government initiative coordinated by USAID.

EWSETA is a skills development authority serving the energy and water sectors. It is one of 21 Sector Education and Training Authorities (SETAs) established in South Africa in terms of the Skills Development Act of 1998 – amended. It plays a crucial function in ensuring that the National Skills and Development Strategy is executed within the energy and water sectors.

To create a more productive, competitive, and sustainable economy, EWSETA focuses on equipping the country's workforce with the necessary skills and knowledge to thrive in the new economic landscape where decarbonisation is a significant driver to upskill the workforce.

On completion, the participating women will have valuable RE skills and greater access to employment and career opportu-



nities in the renewable energy sector. The inclusion of TVET college lecturers is a crucial component to the programme's sustainability as these lecturers will be capacitated not only on the course curriculum so that they, in turn, may train future cohorts but also on the new renewable technologies that young learners today need to be exposed to.

"As part of our strategy to implement learning programmes and initiatives that benefit the sector in the long run, strategic partnerships remain our key delivery mechanism for impactful skills development," says EWSETA CEO Mpho Mookapele.

"Our response to the JET is centred on three pillars, namely, upskilling/reskilling the current workforce, strengthening and capacitating the Post School Education and Training (PSET) system and ensuring inclusive economic participation is realised for the most vulnerable members of communities being youth and women. This programme is a testament to how col-

laboration between committed partners can ensure that no one is left behind in the energy transition roadmap of the country."

South Africa is initiating several mitigation measures to reduce its Greenhouse Gas emissions and achieve its low-carbon development imperatives. Access to electricity is a primary concern for South Africa, with President Ramaphosa announcing a new Ministry for Electricity at this year's State of the Nation Address (SONA). This programme aligns well with efforts by the Minister of Electricity Kgosientsho Ramokgopa to transform the electricity sector to achieve long-term energy security.

Acting Coordinator for Power Africa, David Thompson, says: "The scale of South Africa's Just Energy Transition (JET) involves the opportunity to significantly redistribute resources and opportunities, opening the potential for better pathways for women. I want to recognise the women here today for being at the forefront of this transition."

Power Africa is a U.S. Government-led partnership coordinated by USAID, bringing together 200 public and private sector partners to double access to electricity in sub-Saharan Africa. Power Africa wants to add at least 30,000 megawatts (MW) of cleaner and more reliable electricity generation capacity and 60 million connections by 2030.

The RE sector offers more than just upskilling and reskilling – it provides opportunities for investors, financiers, developers, component manufacturers, and suppliers. TVET colleges in Mpumalanga must not be left behind as the province embarks on decarbonisation initiatives, including reskilling and upskilling coal-fired power plant employees. Doing so would be at the detriment of a comprehensive and inclusive response to the energy transition as TVET colleges are in the main structure to respond to the surrounding economic activities through relevant and quality training for local communities who, in essence, will be the future workforce needed for clean energy generation and the opportunities it brings.

These opportunities require semi-skilled and skilled workers to take on occupations and entrepreneurial opportunities in the RE sector – making TVET colleges the ideal providers of such training, given their focus on vocational and occupational education and training, to produce skilled artisans.

"EWSETA is responsive to the changing skills development needs for communities that must transition as the world around us evolves," concludes Mookapele. "This partnership and programme will forge an optimistic future for Mpumalanga's women in the RE sector."

WELCOME TO THE TEAM



The MDDA welcomes Ms Nomkhosi Peter as the new Acting Chief Executive Officer



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Skills Development

Opening the world to a better future for learners in Sekhukhune.



Minister Blade Nzimande connects Sekhukhune learners to the internet

INSIDE EDUCATION REPORTER

Minister of Higher Education, Science and Innovation Dr Blade Nzimande opened a computer lab at Moloke Primary School in Sekhukhune, connecting learners and young people to the Internet.

The computer lab consists of two connected 12-meter upcycled storage containers, with computers powered by solar energy, to bridge the digital divide for learners in disadvantaged communities.

Limpopo MEC of Education, Mavhungu-Lerule Ramakhanya, and the Fetakgomo Tubatse Mayor, Eddie Edwin Maila, joined Nzimande in handing over the computer lab to the community of Sekhukhune.

This off-grid media lab project is initiated and funded through the department of science and Innovation's Renewable and Sustainable Energy Research Hub and Spokes Programme.

Apart from assisting in teaching and learning, the National Youth Development Agency also used the lab to train 30 young people in business development. This demonstrates that government departments and entities can work closely to deliver services to the nation.

The media lab project is the culmination of a long-standing investment by the Department of Science and Innovation in the development and application of scientific

knowledge domains.

"These media labs are also meant to advance publicly funded Intellectual property to enable technology localisation, job creation and service delivery to our people," he said.

Through this project, Stellenbosch University will train interns from the Technical and Vocational Education and Training (TVET) colleges.

The University has already recruited and trained one TVET College Graduate on so-

lar PV and monitoring of the media labs.

This project will enable interns to secure Diplomas as part of their internship training for 18 months before getting their qualification from TVET college.

"What is also important is that our interns will get their qualification equipped with the scarce skills in the renewable energy sector where most people in rural areas do not normally participate," the Minister said.

With the media laboratory at Moloke school, Sekhukhune TVET College is also involved. This partnership will unlock the training of TVET college graduates in the scarce skills area of renewable energy. The media lab is off-grid, which was done to relieve the school from the pressure of buying electricity to power the computers.

EWSETA sponsors top-performing students with a Learning Journey

Twenty high-achieving grade eleven maths and science learners got a little taste of the working world when they recently

visited the Atlantis Special Economic Zone.

Sponsored by Energy & Water Sector Education Training Authority (EWSETA) and in partnership with FutureMe, learners explored careers in the Energy and Water sector, with a critical focus on the Renewable Energy and Water sectors.

Key speakers EWSETA chief executive officer Mpho Mookapele, AtlantisSEZ Community Integration Officer Michael Webster, and BE AfriBusiness Founder and CEO Bradley Chetty introduced available current and future careers in these sectors. They also looked at how these careers can play a vital role in the growth of the South African economy.

Mookapele inspired learners to aim high and do better. "You will solve the problems of the future. Many people are leaving South Africa amid all the challenges, but this provides a fertile opportunity to get involved – be bold in whatever you do and don't be scared to take risks," she said.

The learners got a first-hand work-life experience during their visit to Everflo, a world-class industrial refrigeration company that ensures its operations minimise an environmental impact.

A visit to the Witzands Aquifer in Atlantis saw learners learn about the importance of protecting the country's water resources and the Aquifer's role in providing communities with clean water.

With boundless energy, they hiked up the dunes in Witzands.


Afterwards, EWSETA shared the excellent news with learners – to inspire more young people to pursue critical careers in the sector, the SETA offered bursaries to learners who plan to study degrees linked to water and energy.

The Learning Journey was the last in a series of events delivered as part of the 2022 World of Work partnership between EWSETA and FutureMe.

Minister Blade Nzimande wants learners to be part of a connected world.



Mathematics



basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

MATHEMATICS P2
NOVEMBER 2022

MARKS: 150
TIME: 3 hours

This question paper consists of 13 pages and 1 information sheet.

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INSTRUCTIONS AND INFORMATION

Read the following instructions carefully before answering the questions.

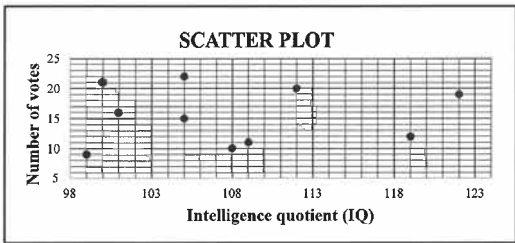
1. This question paper consists of 10 questions.
2. Answer ALL the questions in the SPECIAL ANSWER BOOK provided.
3. Clearly show ALL calculations, diagrams, graphs, etc. which you have used in determining your answers.
4. Answers only will NOT necessarily be awarded full marks.
5. You may use an approved scientific calculator (non-programmable and non-graphical), unless stated otherwise.
6. If necessary, round off answers correct to TWO decimal places, unless stated otherwise.
7. Diagrams are NOT necessarily drawn to scale.
8. An information sheet with formulae is included at the end of the question paper.
9. Write neatly and legibly.

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QUESTION 1

The matric class of a certain high school had to vote for the chairperson of the RCL (representative council of learners). The scatter plot below shows the IQ (intelligence quotient) of the 10 learners who received the most votes and the number of votes that they received.



Before the election, the popularity of each of these ten learners was established and a popularity score (out of a 100) was assigned to each. The popularity scores and the number of votes of the same 10 learners who received the most votes are shown in the table below.

Popularity score (x)	32	89	35	82	50	59	81	40	79	65
Number of votes (y)	9	22	10	21	11	15	20	12	19	16

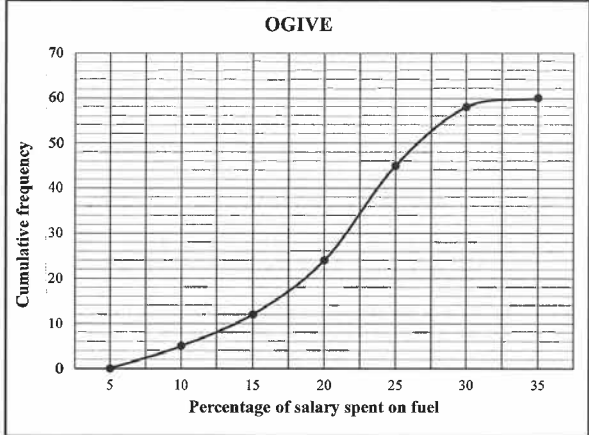
- 1.1 Calculate the:
 - 1.1.1 Mean number of votes that these 10 learners received (2)
 - 1.1.2 Standard deviation of the number of votes that these 10 learners received (1)
- 1.2 The learners who received fewer votes than one standard deviation below the mean were not invited for an interview. How many learners were invited? (2)
- 1.3 Determine the equation of the least squares regression line for the data given in the table. (3)
- 1.4 Predict the number of votes that a learner with a popularity score of 72 will receive. (2)
- 1.5 Using the scatter plot and table above, provide a reason why:
 - 1.5.1 IQ is not a good indicator of the number of votes that a learner could receive (1)
 - 1.5.2 The prediction in QUESTION 1.4 is reliable (1)**[12]**

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QUESTION 2

A company conducted research among all its employees on what percentage of their monthly salary was spent on fuel in a particular month. The data is represented in the ogive (cumulative frequency graph) below.



- 2.1 How many people are employed at this company? (1)
- 2.2 Write down the modal class of the data. (1)
- 2.3 How many employees spent more than 22,5% of their monthly salary on fuel? (2)
- 2.4 An employee spent R2 400 of his salary on fuel in that particular month. Determine the monthly salary of this employee if he spends 7% of his salary on fuel. (2)
- 2.5 The monthly salaries of these employees remains constant and the number of litres of fuel used in each month also remains constant. If the fuel price increases from R21,43 per litre to R22,79 per litre at the beginning of the next month, how will the above ogive change? (2)

[8]

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QUESTION 3

In the diagram, $A(4; 2)$, $B(6; -4)$ and $C(-2; -3)$ are vertices of $\triangle ABC$. T is the midpoint of CB . The equation of line AC is $5x - 6y = 8$. The angle of inclination of AB is α . $\triangle DCT$ is drawn such that $CD \parallel BA$. The lines AC and DT intersect at S , the y -intercept of AC . P , F and R are the x -intercepts of DC , AC and AB respectively.

3.1 Calculate the:

3.1.1 Gradient of AB (2)

3.1.2 Size of α (2)

3.1.3 Coordinates of T (2)

3.1.4 Coordinates of S (2)

3.2 Determine the equation of CD in the form $y = mx + c$. (3)

3.3 Calculate the:

3.3.1 Size of \hat{DCA} (4)

3.3.2 Area of $\triangle POS$ (5) [20]

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QUESTION 4

In the diagram, $M(3; -5)$ is the centre of the circle having PN as its diameter. KL is a tangent to the circle at $N(7; -2)$.

4.1 Calculate the coordinates of P . (2)

4.2 Determine the equation of:

4.2.1 The circle in the form $(x - a)^2 + (y - b)^2 = r^2$ (3)

4.2.2 KL in the form $y = mx + c$ (5)

4.3 For which values of k will $y = -\frac{4}{3}x + k$ be a secant to the circle? (4)

4.4 Points $A(t; t)$ and B are not shown on the diagram. From point A , another tangent is drawn to touch the circle with centre M at B .

4.4.1 Show that the length of tangent AB is given by $\sqrt{2t^2 + 4t + 9}$. (2)

4.4.2 Determine the minimum length of AB . (4) [20]

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QUESTION 5

5.1 Given that $\sqrt{13} \sin x + 3 = 0$, where $x \in (90^\circ; 270^\circ)$. Without using a calculator, determine the value of:

5.1.1 $\sin(360^\circ + x)$ (2)

5.1.2 $\tan x$ (3)

5.1.3 $\cos(180^\circ + x)$ (2)

5.2 Determine the value of the following expression, without using a calculator:

$$\frac{\cos(90^\circ + \theta)}{\sin(\theta - 180^\circ) + 3 \sin(-\theta)}$$
 (5)

5.3 Determine the general solution of the following equation:

$$(\cos x + 2 \sin x)(3 \sin 2x - 1) = 0$$
 (6)

5.4 Given the identity: $\cos(x + y) \cdot \cos(x - y) = 1 - \sin^2 x - \sin^2 y$

5.4.1 Prove the identity. (4)

5.4.2 Hence, determine the value of $1 - \sin^2 45^\circ - \sin^2 15^\circ$, without using a calculator. (3)

5.5 Consider the trigonometric expression: $16 \sin x \cdot \cos^3 x - 8 \sin x \cdot \cos x$

5.5.1 Rewrite the expression as a single trigonometric ratio. (4)

5.5.2 For which value of x in the interval $x \in [0^\circ; 90^\circ]$ will $16 \sin x \cdot \cos^3 x - 8 \sin x \cdot \cos x$ have its minimum value? (1) [30]

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QUESTION 6

In the diagram below, the graphs of $f(x) = \tan x$ and $g(x) = 2 \sin 2x$ are drawn for the interval $x \in [-180^\circ; 180^\circ]$. $A(60^\circ; k)$ and B are two points of intersection of f and g .

6.1 Write down the period of g . (1)

6.2 Calculate the:

6.2.1 Value of k (1)

6.2.2 Coordinates of B (1)

6.3 Write down the range of $2g(x)$. (2)

6.4 For which values of x will $g(x + 5^\circ) - f(x + 5^\circ) \leq 0$ in the interval $x \in [-90^\circ; 0^\circ]$? (2)

6.5 Determine the values of p for which $\sin x \cdot \cos x = p$ will have exactly two real roots in the interval $x \in [-180^\circ; 180^\circ]$. (3) [10]

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QUESTION 7

AB is a vertical flagpole that is $\sqrt{5}p$ metres long. AC and AD are two cables anchoring the flagpole. B, C and D are in the same horizontal plane. $BD = 2p$ metres, $\hat{ACD} = x$ and $\hat{ADC} = 45^\circ$.

7.1 Determine the length of AD in terms of p . (2)

7.2 Show that the length of $CD = \frac{3p(\sin x + \cos x)}{\sqrt{2} \sin x}$. (5)

7.3 If it is further given that $p = 10$ and $x = 110^\circ$, calculate the area of $\triangle ADC$. (3)

[10]

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QUESTION 8

8.1 In the diagram, O is the centre of the circle. MNPR is a cyclic quadrilateral and SN is a diameter of the circle. Chord MS and radius OR are drawn. $\hat{M}_2 = 64^\circ$.

Determine, giving reasons, the size of the following angles:

8.1.1 \hat{P} (2)

8.1.2 \hat{M}_1 (2)

8.1.3 \hat{O}_1 (2)

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8.2 In the diagram, $\triangle ABG$ is drawn. D and E are midpoints of AB and AG respectively. AG and BG are produced to C and H respectively. F is a point on BC such that $FG \parallel CH$.

8.2.1 Give a reason why $DE \parallel BH$. (1)

8.2.2 If it is further given that $\frac{FC}{BF} = \frac{1}{4}$, $DE = 3x - 1$ and $GH = x + 1$, calculate, giving reasons, the value of x . (6)

[13]

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QUESTION 9

9.1 In the diagram, O is the centre of a circle. OD bisects chord AB.

Prove the theorem that states that the line from the centre of a circle that bisects a chord is perpendicular to the chord, i.e. $OD \perp AB$. (5)

9.2 In the diagram, E, B, F, S and P are points on the circle centred at O. GB is a tangent to the circle at B. FE is produced to meet the tangent at G. OT is drawn such that T is the midpoint of EF. GO and BO are drawn. BS is drawn through T. $PS \parallel GF$.

Prove, giving reasons, that:

9.2.1 OTBG is a cyclic quadrilateral (5)

9.2.2 $\hat{GOB} = \hat{S}$ (4)

[14]

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QUESTION 10

In the diagram, PQRS is a cyclic quadrilateral. KP is a tangent to the circle at P. C and D are points on chords PQ and PS respectively and CD produced meets RS produced at A. CA || QS. RC is drawn. $\hat{P}_1 = \hat{R}_2$.

Prove, giving reasons, that:

10.1 $\hat{S}_1 = \hat{T}_2$ (4)

10.2 $\frac{AD}{AR} = \frac{AS}{AC}$ (5)

10.3 $AC \times SD = AR \times TC$ (4)

TOTAL: 150

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INFORMATION SHEET

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$A = P(1 + ni) \quad A = P(1 - ni) \quad A = P(1 - i)^n \quad A = P(1 + i)^n$$

$$T_n = a + (n-1)d \quad S_n = \frac{n}{2}[2a + (n-1)d]$$

$$T_n = ar^{n-1} \quad S_n = \frac{a(r^n - 1)}{r - 1}; r \neq 1 \quad S_\infty = \frac{a}{1 - r}; -1 < r < 1$$

$$F = \frac{x[(1+i)^n - 1]}{i} \quad P = \frac{x[1 - (1+i)^{-n}]}{i}$$

$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \quad M\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$

$$y = mx + c \quad y - y_1 = m(x - x_1) \quad m = \frac{y_2 - y_1}{x_2 - x_1} \quad m = \tan \theta$$

$$(x - a)^2 + (y - b)^2 = r^2$$

In ΔABC : $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$\text{area } \Delta ABC = \frac{1}{2} ab \sin C$$

$$\sin(\alpha + \beta) = \sin \alpha \cos \beta + \cos \alpha \sin \beta \quad \sin(\alpha - \beta) = \sin \alpha \cos \beta - \cos \alpha \sin \beta$$

$$\cos(\alpha + \beta) = \cos \alpha \cos \beta - \sin \alpha \sin \beta \quad \cos(\alpha - \beta) = \cos \alpha \cos \beta + \sin \alpha \sin \beta$$

$$\cos 2\alpha = \begin{cases} \cos^2 \alpha - \sin^2 \alpha \\ 1 - 2\sin^2 \alpha \\ 2\cos^2 \alpha - 1 \end{cases} \quad \sin 2\alpha = 2\sin \alpha \cos \alpha$$

$$\bar{x} = \frac{\sum x}{n} \quad \sigma^2 = \frac{\sum (x_i - \bar{x})^2}{n}$$

$$P(A) = \frac{n(A)}{n(S)} \quad P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$

$$\hat{y} = a + bx \quad b = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sum (x - \bar{x})^2}$$

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NATIONAL SENIOR CERTIFICATE

GRADE 12

ELECTRICAL TECHNOLOGY: ELECTRONICS
NOVEMBER 2022

MARKS: 200
TIME: 3 hours

This question paper consists of 25 pages, a 1-page formula sheet and a 4-page answer sheet.

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INSTRUCTIONS AND INFORMATION

- This question paper consists of SIX questions.
- Answer ALL the questions.
- Answer the following questions on the attached ANSWER SHEETS:
QUESTIONS 4.2.2 and 4.7.3
QUESTIONS 5.2.4 and 5.3.4
QUESTIONS 6.2.3 and 6.6.2
- Write your centre number and examination number on every ANSWER SHEET and hand them in with your ANSWER BOOK, whether you have used them or not.
- Sketches and diagrams must be large, neat and FULLY LABELLED.
- Show ALL calculations and round off answers correctly to TWO decimal places.
- Number the answers correctly according to the numbering system used in this question paper.
- You may use a non-programmable calculator.
- Calculations must include:
 - 9.1 Formulae and manipulations where needed
 - 9.2 Correct replacement of values
 - 9.3 Correct answer and relevant units where applicable
- A formula sheet is attached at the end of this question paper.
- Write neatly and legibly.

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QUESTION 1: MULTIPLE-CHOICE QUESTIONS

Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question numbers (1.1 to 1.15) in the ANSWER BOOK, e.g. 1.16 D.

1.1 A/An ... is an occurrence when a serious or unexpected dangerous situation occurs that requires immediate attention.

A evacuation procedure
B non-critical incident
C critical incident
D unsafe condition (1)

1.2 The total opposition against the flow of alternating current in an RLC circuit is the ...

A inductive reactance.
B impedance.
C capacitive reactance.
D inductance. (1)

1.3 When decreasing frequency to below resonance in a series RLC resonance circuit, the ...

A impedance increases and the circuit becomes inductive.
B voltage drop across the inductor and capacitor increases.
C impedance decreases and the circuit becomes capacitive.
D impedance increases and the circuit becomes capacitive. (1)

1.4 The opposition to AC current flow caused by a capacitor will increase when the ...

A capacitance is decreased.
B frequency is increased.
C voltage is decreased.
D current is increased. (1)

1.5 If the emitter of the UJT is supplied with sufficient current, its operating point will continue falling until the ... is reached.

A cut-off voltage
B pinch-off voltage
C valley point voltage
D breakdown voltage (1)

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1.6 A Darlington transistor amplifier develops a very low output impedance when used as common ...

A base.
B emitter.
C collector.
D drain. (1)

1.7 An op-amp circuit without any feedback has ... gain.

A closed-loop
B forward-loop
C reverse-loop
D open-loop (1)

1.8 The pin that sets the voltage at which the 555 will trigger is known as ...

A output.
B discharge.
C threshold.
D reset. (1)

1.9 A ... is used to eliminate switch bounce in electronics circuits.

A monostable multivibrator
B audio amplifier
C astable multivibrator
D oscillator (1)

1.10 A circuit used in an audio mixer to individually amplify or attenuate each input signal is the ...

A comparator
B Schmitt trigger
C summing amplifier
D inverting op amp (1)

1.11 A basic op-amp comparator circuit uses ...

A feedback.
B positive feedback.
C negative feedback.
D no feedback. (1)

1.12 A ... produces an output which is directly proportional to the rate of change of the input signal.

A passive RC integrator
B comparator
C passive RC differentiator
D non-inverting amplifier (1)

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1.13 A circuit that passes a chosen range of frequencies and blocks frequencies higher and lower than that range is called a ...

A high pass filter.
B low pass filter.
C medium pass filter.
D band-pass filter. (1)

1.14 When a circuit experiences a loss of signal power between its input and output, it is called ...

A amplification.
B noise.
C attenuation.
D oscillation. (1)

1.15 The bandwidth of a common emitter RC amplifier falls between the ...

A upper frequencies.
B midrange frequencies at the -3 dB roll-off points.
C critical frequencies.
D input capacitance of the transistor. (1) [15]

QUESTION 2: OCCUPATIONAL HEALTH AND SAFETY

2.1 State TWO human rights in the workplace that ensure that the dignity of the employer is not infringed. (2)

2.2 State TWO evacuation steps to be followed when an emergency alarm is sounded in a workshop. (2)

2.3 Explain why the misuse of equipment in a workshop could cause a health or safety threat. (2)

2.4 Refer to victimisation at the workplace and state TWO actions that are forbidden by the employer. (2)

2.5 State TWO types of risk analysis reports done by the health and safety representative. (2) [10]

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QUESTION 3: RLC CIRCUITS

3.1 Explain the term *inductance* with reference to RLC circuits connected to an AC supply. (2)

3.2 Draw the phasor diagrams for FIGURES 3.2.1 and 3.2.2 in the ANSWER BOOK.

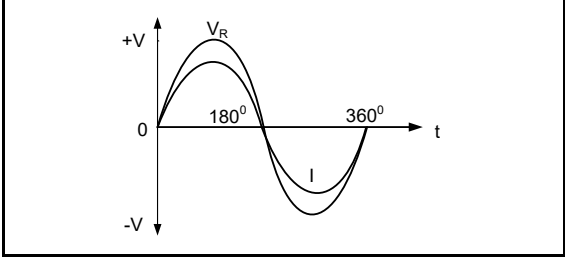
3.2.1 

FIGURE 3.2.1: VOLTAGE AND CURRENT WAVEFORMS (2)

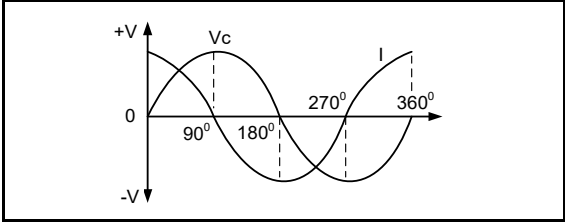
3.2.2 

FIGURE 3.2.2: VOLTAGE AND CURRENT WAVEFORMS (2)

3.3 A series RLC circuit with a resistance of 25Ω , an inductive reactance of 94Ω and a capacitive reactance of 13Ω is connected across a $150 \text{ V}/60 \text{ Hz}$ AC supply. Answer the questions that follow.

Given:

$R = 25 \Omega$
 $X_C = 13 \Omega$
 $X_L = 94 \Omega$
 $V_T = 150 \text{ V}$
 $f = 60 \text{ Hz}$

3.3.1 Calculate the impedance of the circuit. (3)

3.3.2 Calculate the phase angle of the circuit. (3)

3.3.3 Calculate the value of the inductor. (3)

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3.3.4 Explain what is meant by a *lagging power factor*. (1)

3.3.5 Explain why the current and the voltage waveforms are in phase in a series RLC resonance circuit. (2)

3.4 Refer to FIGURE 3.4 and answer the questions that follow.

FIGURE 3.4: PARALLEL RLC PHASOR DIAGRAM

Given:

- $I_L = 9 \text{ A}$
- $I_C = 7 \text{ A}$
- $I_R = 11 \text{ A}$
- $V_T = 110 \text{ V}$

3.4.1 Calculate the total current. (3)

3.4.2 Calculate the power factor. (3)

3.4.3 Calculate the total power. (3)

3.4.4 State, with a reason, whether the circuit has a leading or lagging power factor. (2)

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3.5 Refer to FIGURE 3.5 and answer the questions that follow.

FIGURE 3.5: IMPEDANCE AND CURRENT RESPONSE CURVES

3.5.1 Name the circuit that produces the response at **A** and **B** in FIGURE 3.5. (2)

3.5.2 Discuss the difference between the *impedance* and *current* at resonant frequency. (2)

3.5.3 Describe what happens to impedance when the frequency increases in FIGURE 3.5 **A**. (2)

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QUESTION 4: SEMICONDUCTOR DEVICES

4.1 Refer to FIGURE 4.1 and answer the questions that follow.

FIGURE 4.1: MOSFET AS A SWITCH

4.1.1 Identify the type of MOSFET used in this circuit. (1)

4.1.2 Explain how an increase in V_{GS} would affect the MOSFET in the circuit. (3)

4.2 Refer to FIGURE 4.2 and answer the questions that follow.

FIGURE 4.2: CHARACTERISTIC CURVE

4.2.1 Identify the characteristic curve in FIGURE 4.2. (1)

4.2.2 Draw the output waveform on the ANSWER SHEET for QUESTION 4.2.2. (3)

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4.3 Refer to FIGURE 4.3 and answer the questions that follow.

FIGURE 4.3: OPERATIONAL REPRESENTATION OF THE UJT

4.3.1 State ONE application of the UJT. (1)

4.3.2 Explain what happens when the external voltage (V_{BB}) is applied to the base terminals of the UJT. (2)

4.3.3 A UJT characteristic curve shows three main regions of operation, namely cut-off, negative resistance and saturation. Describe the operation of the UJT in the negative resistance region. (3)

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4.4 Refer to FIGURE 4.4 and answer the questions that follow.

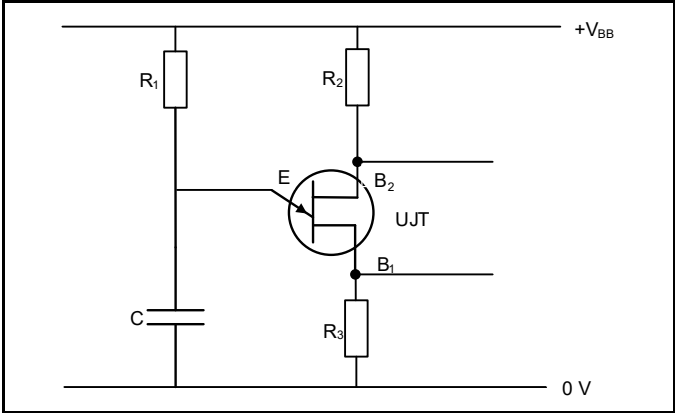


FIGURE 4.4

4.4.1 Identify the circuit diagram in FIGURE 4.4. (1)

4.4.2 Discuss the operation of the circuit in FIGURE 4.4. (4)

4.5 Refer to FIGURE 4.5 and answer the questions that follow.

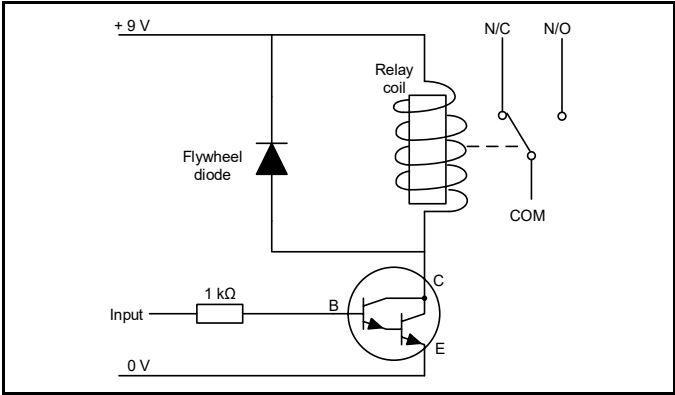


FIGURE 4.5: DARLINGTON TRANSISTOR CIRCUIT

4.5.1 State the application of the circuit in FIGURE 4.5. (1)

4.5.2 State the function of the flywheel diode in the circuit diagram. (1)

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4.5.3 Describe why the N/O contact will close when a supply is connected to the circuit. (3)

4.6 Refer to FIGURE 4.6 and answer the questions that follow.

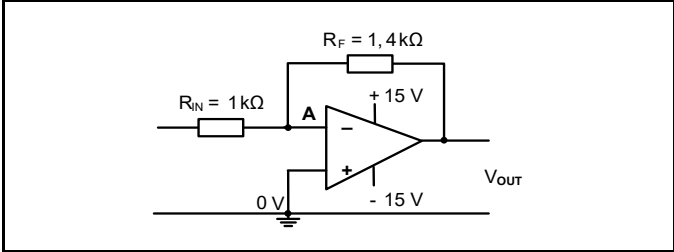


FIGURE 4.6: INVERTING OPERATIONAL AMPLIFIER

4.6.1 State the voltage at point A. (1)

4.6.2 Calculate the gain of the op amp. (3)

4.6.3 State the phase relationship between the input and the output signal when an AC signal is applied to the input. (1)

4.7 Refer to FIGURE 4.7 and answer the questions that follow.

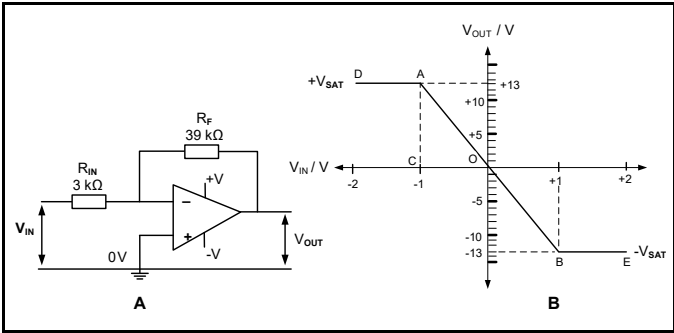


FIGURE 4.7: INVERTING OPERATIONAL AMPLIFIER

4.7.1 Identify the saturation regions in FIGURE 4.7 B. (2)

4.7.2 Calculate the gain by using the voltage values on FIGURE 4.7 B. (3)

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4.7.3 Draw the output waveform on the ANSWER SHEET for QUESTION 4.7.3 when the op amp is saturated.

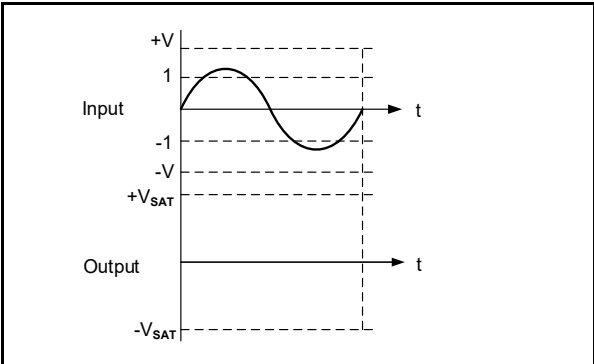


FIGURE 4.7.3

4.7.4 State THREE advantages of increasing the value of R_F . (3)

4.8 Refer to FIGURE 4.8 and answer the questions that follow.

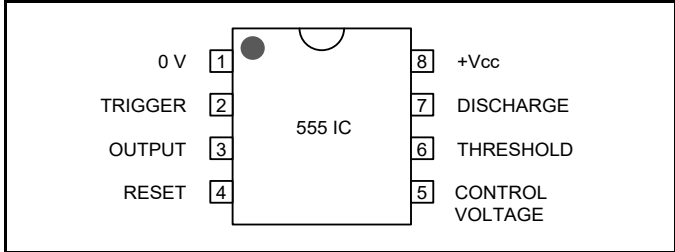


FIGURE 4.8: 555 IC PIN LAYOUT

4.8.1 State the function of pin 7. (1)

4.8.2 Describe how the 555 IC is triggered with reference to pin 2. (4)

[45]

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QUESTION 5: SWITCHING CIRCUITS

5.1 State the difference between a *monostable multivibrator* and an *astable multivibrator* with reference to their output states. (2)

5.2 FIGURE 5.2 shows a bistable multivibrator using a 555 IC. Answer the questions that follow.

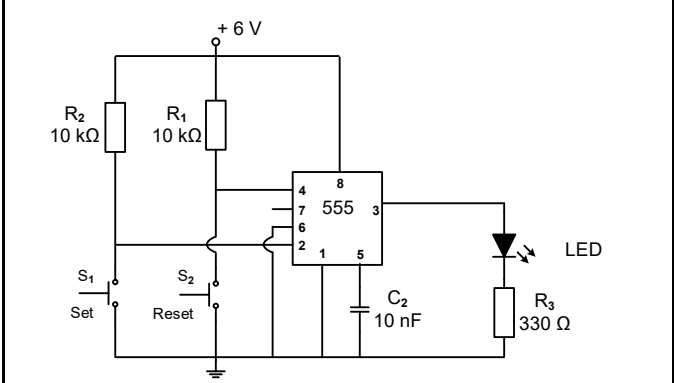
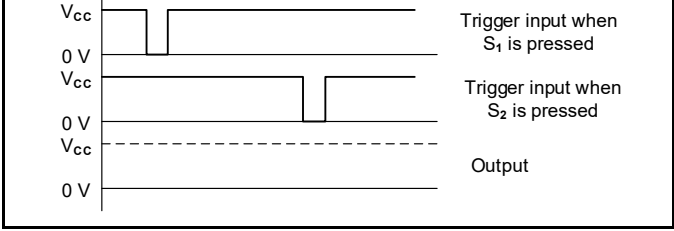



FIGURE 5.2: BISTABLE MULTIVIBRATOR

5.2.1 State ONE application of a bistable multivibrator. (1)

5.2.2 Explain why threshold pin 6 is connected directly to ground. (3)

5.2.3 Explain what will happen to the input voltage on pin 2 if resistor R_2 is disconnected from the supply leaving it as an open circuit. (2)

5.2.4 Draw the output waveform on the ANSWER SHEET for QUESTION 5.2.4. (3)

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5.3 FIGURE 5.3 shows a 741 monostable multivibrator circuit in its natural resting condition. Answer the questions that follow.

FIGURE 5.3: 741 IC MONOSTABLE MULTIVIBRATOR

5.3.1 State the purpose of C_2 and R_3 . (2)

5.3.2 Determine the voltage at the non-inverting input (V_B) when capacitor C_2 is fully charged to the saturation voltage of 9 V and no current flows through R_3 . (1)

5.3.3 Explain what happens to the output voltage the moment a positive input pulse is applied to the inverting input. (3)

5.3.4 Draw the output waveform on the ANSWER SHEET for QUESTION 5.3.4. (4)

5.4 Refer to FIGURE 5.4 below and answer the questions that follow.

FIGURE 5.4: 741 IC ASTABLE MULTIVIBRATOR

5.4.1 Determine the polarity of V_B when the output is positive. (1)

5.4.2 Refer to V_A and V_B and state when the output changes from +9 V to -9 V. (1)

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5.4.3 Describe how an increase in the value of R_F affects the operation of the circuit. (3)

5.5 Refer to FIGURE 5.5 and answer the questions that follow.

FIGURE 5.5: SCHMITT TRIGGER

5.5.1 Determine the saturation voltages of the Schmitt trigger. (1)

5.5.2 Explain the purpose of R_F and R_1 in the circuit. (2)

5.5.3 State when the output changes from high to low. (2)

5.6 Explain the operation of the circuit in FIGURE 5.6.

FIGURE 5.6: OP-AMP COMPARATOR

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5.7 Refer to FIGURE 5.7 and answer the questions that follow.

FIGURE 5.7: OP-AMP CIRCUIT

Given:

$R_1 = R_2 = R_3 = R_F = 22 \text{ k}\Omega$
 $V_s = +12 \text{ V}/-12 \text{ V}$
 $V_1 = 0,9 \text{ V}$
 $V_2 = 1,2 \text{ V}$
 $V_3 = 2,1 \text{ V}$

5.7.1 Identify the op-amp circuit in FIGURE 5.7. (1)

5.7.2 Determine the gain of the amplifier. Motivate your answer. (2)

5.7.3 Calculate the output voltage. (3)

5.7.4 Explain the effects of increasing the value of the feedback resistor. (2)

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5.8 Refer to FIGURE 5.8 and answer the questions that follow.

FIGURE 5.8: OP-AMP INTEGRATOR

5.8.1 State TWO factors that determine the output voltage of the circuit at any time. (2)

5.8.2 Explain why capacitor C_F charges at a fixed linear rate towards -V when a positive square wave is fed to the input. (4)

5.8.3 Explain the effect of a long RC time constant on the output. (2)

[50]

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Sports

SA Gunning for Netball World Cup Glory in Cape Town

The Netball World Cup 2023 will be held in Cape Town, South Africa, from 28th July – 6th August 2023 at the Cape Town International Convention Centre (CTICC), with 16 of the world's top netball nations, including the hosts South Africa, competing.

Renowned sports administrator, Sumayya Khan, the Director-General of Sport and Recreation, says it's an honour for the country to play host to the tournament.

"It is the first time the Netball World Cup will be staged in Africa. This massive gain for Women's Sports is destined to leave a major legacy of infrastructure and skills development and hopefully exponentially grow the sport in the country and the continent. This legacy won us the bid to host the event," she adds.

Khan, a former physical education teacher for 17 years in Phoenix, a township north of Durban, is passionate about empowering women in sports. She says the Ministry is committed to contributing meaningfully to the sector.

"As a teacher, my involvement in the school's sports and other structures provided a great opportunity for me to develop my capacity in Sport Management and Administration."

As DDG, Khan's department, supports the provision of mass participation opportunities, the development of elite athletes, and the regulation and maintenance of facilities.

Khan says one of her most gratifying experiences has been witnessing the transformation of women's cricket. "I qualified as a Bakers Mini Cricket Coach in 1989 and went on to complete the Level 1 and 2 Coaching courses. At the time, there was no automatic transition for girls to move from Mini Cricket to hard ball as young boys could. Hence my quest and engagement with the Cricket Union to ensure that young girls continue to play cricket.

Thankfully, I wasn't a lone voice; the then UCB started a cricket development programme for girls and women."

She says it was an honour being a founding member of the provincial Women's Cricket Association. "It was not easy challenging the stereotypes and getting resources for young girls and women. Many of us would use our resources and work tirelessly to get sponsors to take players to tournaments. But we soldiered on. To see where women's cricket now makes me very proud that the commitment and dedication of so many women paved the way for women cricketers to play at a professional level."

But Khan's eye is on the big prize – the Netball World Cup.



Sumayya Khan



Minister Zizi Kodwa has a grand vision for sports.

Unlocking the talent pipeline from schools to the national stage, the vision of Zizi Kodwa

EDWIN NAIDU

Minister of Sport Arts and Culture Zizi Kodwa is determined to ensure that school sports remain the bedrock for development, cascading into a solid pipeline for the future for national teams in various sporting codes building on work which began a decade ago.

The Department of Sport Arts and Culture (DSAC) and the Department of Basic Education (DBE) have partnered in spearheading the National School Sports Championships since its inception in 2012.

Soon after his appointment, Kodwa made clear his intention to ensure that the country returns to basics in unearthing the missing gems in the sports, arts and culture sectors.

School sport is pivotal to his vision, with Kodwa telling the media that he wants to "catch them young" and lay a stronger foundation for the future.

As such, the National School Sports Championships (NSSC), the foundation of

sport development, is the premier event in the South African school sports calendar.

Kodwa and Basic Education Minister Angie Motshekga have agreed on a partnership agreement endorsing schools' sports as the incubators for sports development and talent identification.

"The primary aim of the school sports programme is to ensure that every one of South Africa's schools, primary and high schools, are allowed to participate in at least one sporting code," he said.

According to Kodwa, the National School Sport Championships remains the natural stimulant of the rollout of the school sports league programme, where children are provided with access to participate in an organised sports programme as endorsed at the 2011 Sports Indaba.

School sports operational structures were established in March 2012 at the National and Provincial levels to coordinate and roll out the schools' sports program.

The programme further seeks to address all the barriers of entry currently inhibiting broad-based participation in school

sports by providing the necessary support material, personnel, and competition opportunities.

Kodwa believes that children must be given the tools to learn and play within a conducive environment.

Although early in his tenure, Kodwa has been visible, visiting Kgamanyane High School in Moruleng, Rustenburg in the Northwest Province in March, as part of the buildup programme to the annual South African Sports Awards.

Accompanied by the Northwest Provincial Department of Arts, Culture, Sports, and Recreation, MEC Kenetswe Mosenogi, Kodwa, handed over the netball and football equipment and attire to local schools and clubs as part of the ministerial outreach programme.

Kodwa is committed to ensuring that the partnership between his Ministry and the DBE makes tracks of developing of sporting talents in public schools.

The future Bafana Bafana or Banyana Banyana stars may not be too far – if Kodwa has his way and his vision is realised.