



Magazine

# EDUCATION

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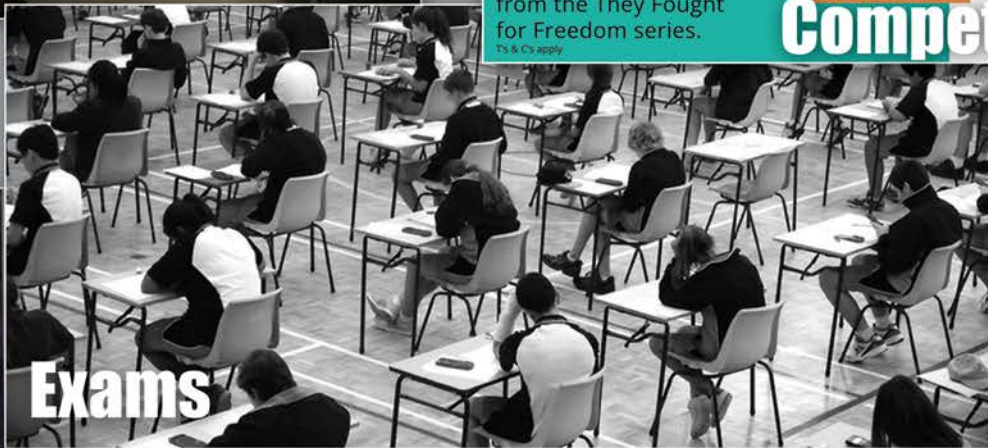


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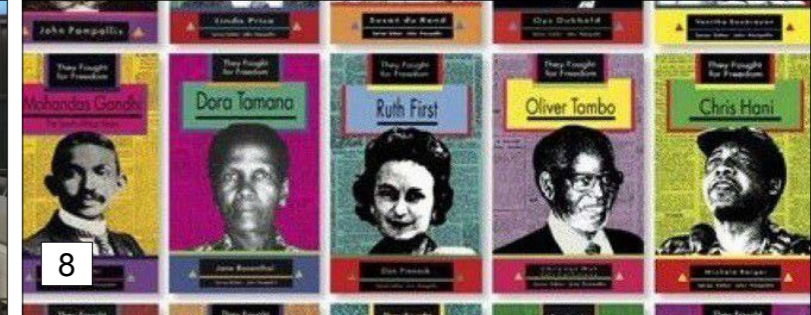
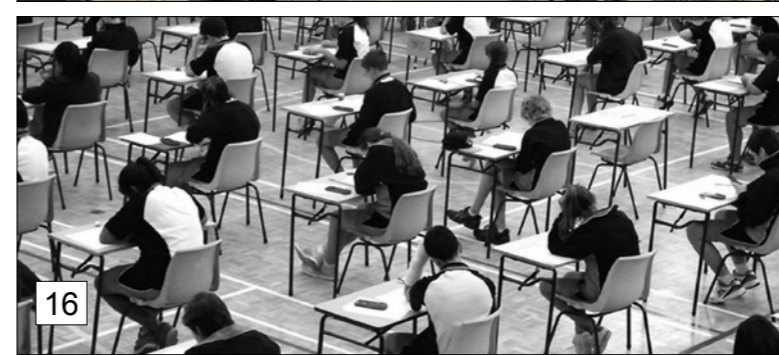
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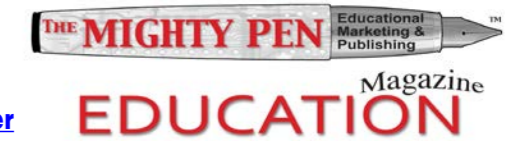
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**Editor**

Janos Bozsik

**Contributors**

- Mohamed Belhocine – Commissioner for Education, Science, Technology and Innovation of the African Union
- John Pampallis – editor of *They Fought for Freedom* series
- John Bowles – Co-Founder and Director of Turn Left Media
- Trevor Pols – CEO of the SAME Foundation
- Desiree Hugo – Academic Head: Schools Division at ADVTECH
- Neil Manson – Head of School: Engineering, Science and Health at the IIE
- Shafeeka Anthony – Marketing Manager of JustMoney.co.za
- Desiree Hugo – Academic Head: Schools Division at ADVTECH
- George Eadie – CEO of The Answer Series
- Adri Führi – e4 Chief Financial Officer

**Correspondence and enquiries**

themightypen@vodamail.co.za  
082 940 3771

**Advertising and publicity**

marketing@themightypen.co.za

**Production, design and layout**

VLC WorX

**Website**

www.themightypen.co.za

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## Editor's column

### New subjects and calendar for SA schools

The DoBE has also clarified plans to introduce several new school subjects to the curriculum in the coming year.

In its 2022 and 2023 annual performance plan published in March this year, the department said this will include full-scale implementation of coding and robotics for Grade R to 3 and 7 in the 2023 academic year.

A pilot curriculum for these subjects was initially introduced at some schools in the third term of 2021 and the coding and robotics pilot for Grades 4 to 6 and for Grades 8 was implemented this year. This will be followed by a Grade 9 pilot in 2023. The full-scale implementation for Grades 4 to 6 and Grade 8 is planned for 2024, and Grade 9 in 2025, this according to an online article in *BusinesTech.co.za*, on 4 August 2022

As coding and robotics are new initiatives, the focus will be on the upskilling of teachers to be trained to teach these new subjects, in collaboration with higher education institutions.

The department said that the new subjects form part of a broader push to better prepare South African learners for the working world. Future careers require people with digital skills that will enable them to function effectively in a digital era. The continued implementation of the teaching of coding and robotics will expose learners to digital literacy, virtual reality, augmented reality, machine learning, artificial intelligence, and the Internet of Things.

Sector experts note that the future requires individuals who will be able to build robots and other sophisticated machines and to develop algorithms to code these machines.

The Department of Basic Education (DoBE) has also gazetted the confirmed school calendar for 2024, adding to the calendar for 2023 – published earlier this year. The 2024 public school calendar starts on 17 January 2024 and ends on 11 December, delivering a total of 203 school days – four more than in 2022 and 2023.

There will also be fewer school holidays in 2024, with the calendar making provision for just 25 days off, compared to 32 days in 2023, and 33 in 2022.

The 2024 calendar is structured in such a way that the school terms are not interrupted by as many public holidays, with schools only losing one day each in term two and three to public holidays.

The DoBE estimated that learners (in disadvantaged communities especially) lost as much as a year's worth of learning due to a lack of teaching contact time and a rotational learning system during the COVID-19 restrictions.

Studies revealed that the losses were felt particularly heavily in the fields of mathematics and science, as well as in basic language in the foundational phases.

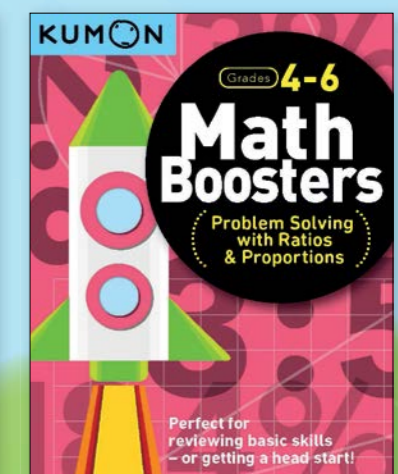
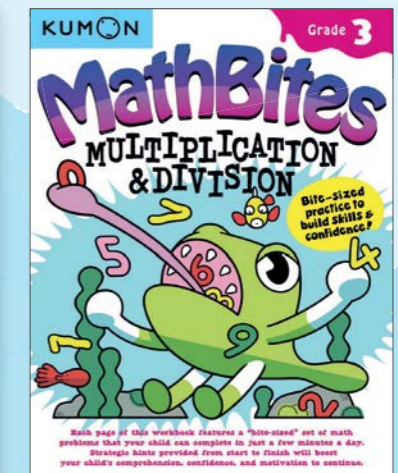
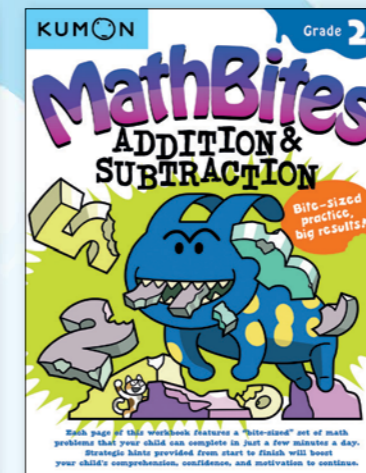
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**Janos Bozsik**  
Editor

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# New computer lab for disadvantaged school

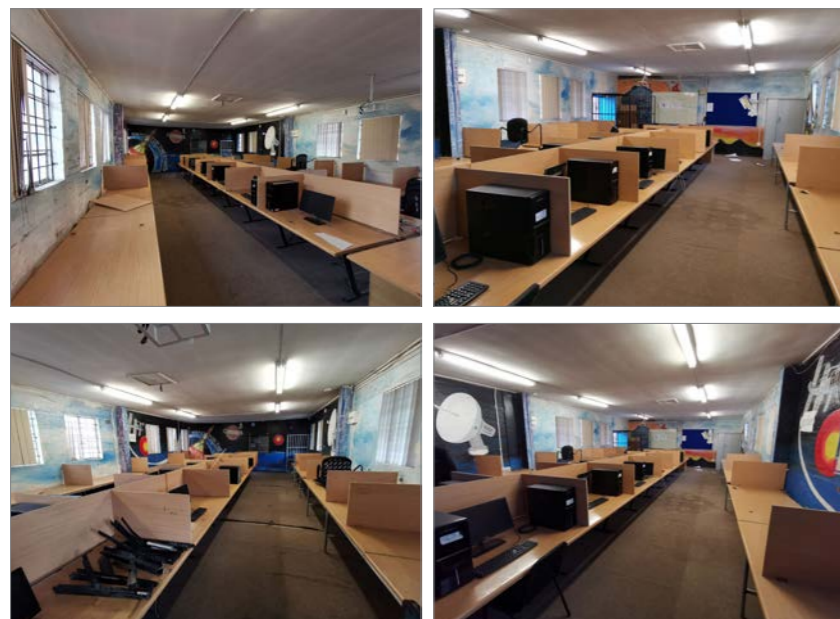
“Science, technology and innovation are key drivers for the economic development of any continent,” noted Mohamed Belhocine, Commissioner for Education, Science, Technology and Innovation of the African Union in his opening address to Science and Innovation: Tackling the Unemployment Dilemma on Africa Day, earlier this year.

He was discussing the importance of investing in human capital development to ensure that higher education and training institutions can produce the next cohort of African scientists and engineers. But in Africa, more specifically South Africa, the majority of our young learners are not encouraged, guided or set up to embrace these key subjects. Many schools lack the basic foundations to set up our future workforce with critical skills. These skills require a commitment in maths, science and computer literacy from our learners.

“South Africans need to come together to build our future – and it starts with the schools,” says Co-Founder and Director of Turn Left Media John Bowles. “It can be done. It IS being done. We need to set up our kids with real knowledge that they can take into the future. There are many disadvantaged schools crammed with kids that need our help. It just takes a collaboration between business and the entities that know how to set them up, and of course the support from local government.”

He points to the SAME Foundation, which focuses on improving maths, science and computer skills in disadvantaged communities by equipping high-tech classrooms as well as computer and science labs.

## Before



## Equipping the future at Fezeka High School

One example of SAME’s high-impact approach is their programme at Fezeka High School in Gugulethu, Cape Town. It is a no-fee school, striving to offer quality teaching and learning to 1 363 pupils from grade 8 to 12.

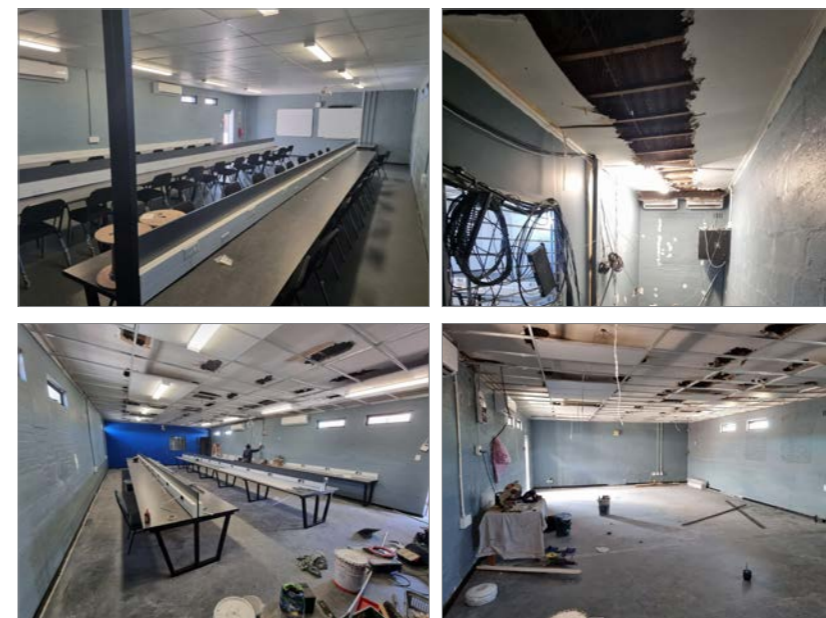
“SAME Foundation saw an opportunity to create a massive impact in the lives of these learners. With our partners, we hope to help the children and upskill their teachers so that they can all reach their full potential in a safe, learning-conducive environment,” says the Foundation’s CEO Trevor Pols.

The project commenced in February 2022 and all renovation work was successfully completed in April 2022. The classroom with its interactive teacher boards opened on the 22nd of June 2022, and gives educators and learners access to a multitude of resources. (All teachers received training in how to use the technology provided.)

SAME Foundation provides the school with one calendar year of maintenance and support for the classroom; thereafter, the Western Cape Education Department takes full responsibility for the upkeep of the classroom and technology.

“The project has already shown positive results,” says Pols. “The computer room is used daily by excited learners who are growing in self-belief and confidence. It has been observed that

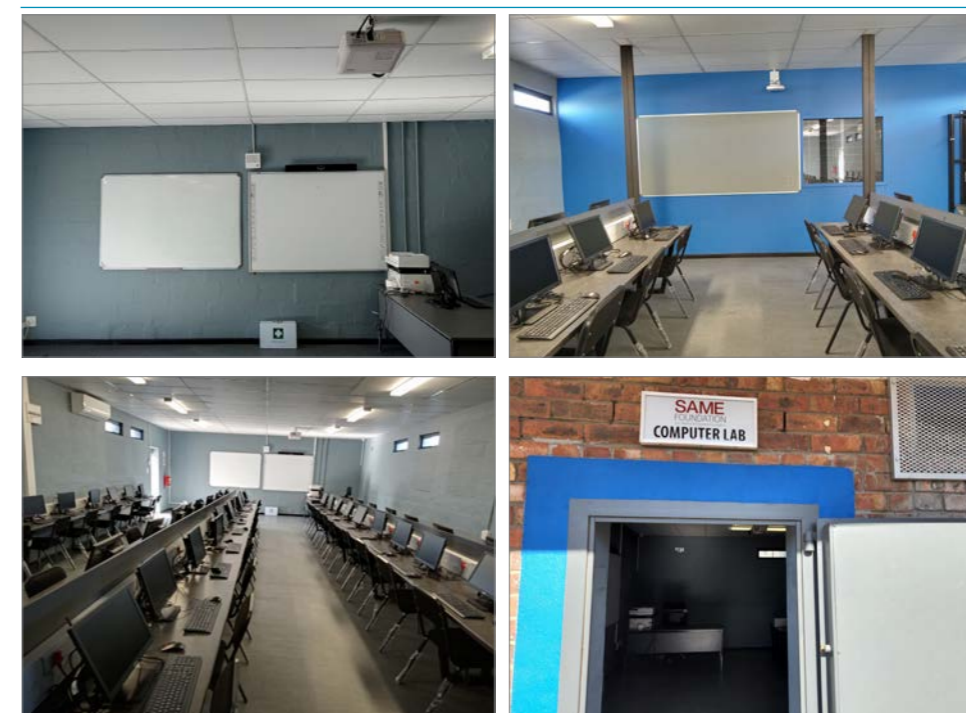
## During



the educators at Fezeka are extremely passionate about their school and about providing their learners with quality education. SAME will therefore also be adding Fezeka to its list of schools that will receive a new science lab this year.”

Pols confirms that Turn Left Media’s ongoing donations have helped SAME to completely renovate and equip the state-of-the-art computer room and wireless connected classroom at Fezeka High School as well as other schools across the country, and Bowles is looking forward to seeing future maths whizzes, computer scientists and engineers graduating from Fezeka High School: “There is absolutely no reason why the next LinkedIn, Billion USD tech start up or

## Completed



Musk can’t be re-created in Africa,” he says. “But business needs to take an active role in creating impact.”

## Picking a partner

Bowles understands the concerns around investing large sums of money in corporate social responsibility initiatives: “As a business owner, you want to be sure that your contribution will be invested properly and with success,” he says. To those wishing to make a difference and looking for a partner to support, he recommends the following:

“Find an entity that is making a real difference and creating economic opportunity in a space that you believe in,

Investigate and research their track record and model, and talk to previous donors about their reliability,

Then, when you’ve made your decision, stick with them for the long run, visit the projects and ask the questions – we’ve partnered with SAME Foundation for over five years. Continuity and knowing that we will support them allows them to focus on what they do best – creating a successful long-term future for our kids and our country.”



# Investment from corporates

## for women in STEM education

The Fourth Industrial Revolution is fuelling the global economy and creating new employment opportunities as advances in technology rapidly transform how we live, work and communicate. As South Africa rides this wave of innovation and looks at how to future-proof the workforce and ready our youth for a new world, a critical issue is being overlooked: we are leaving girls behind.

Here are some sobering numbers from Statistics SA: women account for a mere 23% of science, technology, engineering and maths (STEM) professionals in South Africa. Of those, only 17% are in leadership roles, and these numbers are significantly less for women of colour.

In 2021, to help address the massive gender gap in STEM, fintech specialist e4 launched the Girls in STEM programme, in partnership with Melisizwe Computer Lab Project, offering girls in underprivileged areas the support they need to pursue careers in STEM post matric.

Adri Führi, e4's Chief Financial Officer and passionate advocate for female-led initiatives in the IT sector, says there are many reasons for girls being overlooked and, in some cases, actively choosing to steer clear of careers in STEM. "There is a general lack of support from parents and teachers, minimal exposure to the different careers women can enter with STEM subjects, a lack of female role models in these spheres and an unawareness of the ability of technology to transform systems and lives."

With youth unemployment a crisis in South Africa – currently at almost 64% according to Statistics SA – and the STEM sector where most jobs lie, this is a real problem for young women in the job market, many of whom are leaving school unable to type out a CV on a computer or send it via email.

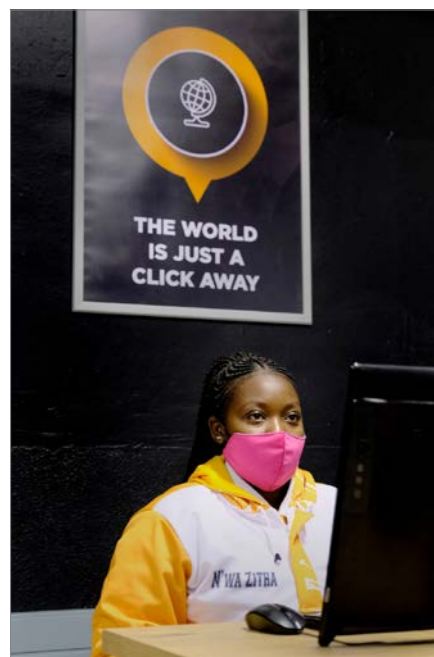


Adri Führi – e4's Chief Financial Officer

girls to be certified at each level throughout programme, so if they have to exit school early for whatever reason, they have a certificate to assist them in future job searches.

Führi says the response to the programme has been amazing and they have seen a definite increase in the girls' mathematics and science marks since its launch. "We are facing some challenges, though, such as internet connectivity and getting the girls up to date with their school curriculum due to COVID-19 lockdowns interrupting their schoolwork. We would also obviously love to reach more girls in the future."

More funding is needed in girls' education in STEM, with a focus on technology, according to Führi. "To effect meaningful change, we need forward-thinking and impactful investment from corporates. We are calling on corporates across South Africa to get on board and help us scale this project so we can roll it out nationally. By working together, we can ensure a brighter future for girls in STEM and create a sustainable pipeline of future IT-qualified employees and leaders. If done right, I believe the impact could be extremely effective." ▲



Girls in STEM student at Diepdale Secondary School

The Girls in STEM programme is changing the narrative. Launched in Gauteng with a total of 30 girls from two schools, it is providing tutoring and mentorship sessions, and offering activities such as boot camps, excursions and site visits, where the girls learn about coding and robotics as well as life skills like teamwork and problem-solving. It starts in Grade 9, the crucial year when subject choices are made, and continues for five years, introducing learners to science, software development, engineering and robotics in an interactive and engaging way to keep them invested and interested.

Melisizwe developed a multiple certification approach, enabling the



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# Celebrate your freedom and remember your past

## A review feature on the They Fought for Freedom book series

The annual South African calendar has many important commemorative days, such as the upcoming Women's Day and Heritage Day, that provide us with the opportunity to promote cultural diversity, social cohesion, reconciliation and peace. As we get ready to celebrate these significant milestones in South African history, we speak to John Pampallis, editor of our series, They Fought for Freedom, where he shares his insights on why it is important to create relevant and local history resources for schools.

### Q: We'd like to learn more about the editor behind the series. John, can you tell us a little about yourself?

**A:** I have taught in South Africa, Botswana, Canada and Tanzania. This includes eight years at the Solomon Mahlangu Freedom College (Somafo) in Tanzania, a school for young South African exiles. From 1989 to 2015, I was involved in education policy development and later as an Advisor to the Minister of Higher Education and Training. In addition to being the Series Editor for the They Fought for Freedom series, I wrote the volume on Sol Plaatje for that series. I have also published several books, including Foundations of the New South Africa and A Brief History of South Africa: From the Earliest Times to the Mandela Presidency.

### Q: What inspired you to create the series, They Fought for Freedom?

**A:** While teaching at Somafo, I came across a series of short biographies of leaders of the anti-colonial movements for independence in Africa. Included in that series were people like Patrice Lumumba (Congo), Julius Nyerere (Tanzania), Jomo Kenyatta (Kenya) and Kwame Nkrumah (Ghana). I immediately realised how valuable that kind of publication could be for young South Africans and began to visualise what such a series might look like.

### Q: Can you discuss the insights and experiences that went into the approach and writing of the series, from your own and other authors' experiences?

**A:** Since I was a history teacher, I realised the importance of understanding one's history. The young people in my classes were, as a group, committed to overcoming apartheid; however, while they understood the immediate problem, they knew little of the country's history or of the history of those who had fought against injustice for decades. They needed to know about the freedom fighters of the past, people who could be role models and inspire them.

At the same time, I was aware of the need for new approaches to teaching history – both at Somafo and for South Africa after liberation. The old method of rote memorisation was not a suitable way to learn about one's past. It was vital to begin thinking about what material could and should be developed.



As for the Plaatje book particularly – the one that I authored for the series – I had read a lot about Sol Plaatje and had developed an admiration for his achievements as an author, an editor and a politician. Despite his accomplishments, he wasn't well known, and I wanted people to learn about him and his life. The same could be said for the authors of the other biographies.

### Q: In your opinion, what are the unique components or features that make this publication special for a young reader?

**A:** In working towards the series' goal of uncovering the past, it was important that whatever material was developed

was pitched at the right level for young people but written in a non-patronising way. They Fought for Freedom was pitched at students in secondary school and was also suitable for other readers who wanted a short overview of the lives of leaders of the past, including those who were still feeling their way through the intricacies of the English language.

Another objective of the series was to present accurate history, reality, not hagiography. I believe we were successful in that.

### Q: What would you like young readers to take away once they have read the books in the series?

**A:** We hope that people who read these books will come away with an understanding not only of the individuals the books portray, but a better understanding of their country and the world. We also hope that one of the lessons of the series is that leaders are not only the famous individuals, but all those who played a role in the struggle for freedom. In addition, the lives of the women and men portrayed in the series show that service to one's people is more important than self-aggrandisement – a lesson that many in the public eye today could take to heart.

### Q: The series was published about 25 years ago. In your opinion, what makes the books as relevant now as they were when first published?

**A:** We face many of the same problems now as we did 25 years ago. Children and young adults, even the population at large, have similar needs and face similar challenges. And there is still a dearth of knowledge about South Africa's past and about the sacrifices that were made to enable today's democracy.

Many of the individuals in the series were not famous at the time (or now); and although they may have done important work, many were little-known outside of their organisations. Even when people's names are widely known today – perhaps because a road or a municipality is named after them – the details of their lives, especially their early lives, are usually not known. The need to remedy this situation ties in with what I said earlier about the need for role models for young people.

Another important factor is the need to encourage a culture of reading among youth. The best way to do this is to provide material that interests them, that is not too long, and that is relatively easy for them to read. We believe that the books in this series provide just that.

While the books in the They Fought for Freedom series are pitched at high school learners, they will also be of interest to the general adult reader who is looking for an easy way to learn about people who played an important role in their country's history.

## More about They Fought for Freedom series

They Fought for Freedom is a unique series written for young readers that covers the lives and exploits of southern African leaders who struggled for freedom and justice. Among the many marvellous people whose stories are told are leaders such as Chris Hani, Desmond Tutu, Nelson Mandela and Ruth First. Written in clear language and accompanied by relevant photographs and stimulating activities, these books are an ideal classroom or library resource.

The series consists of 20 titles covering the lives and exploits of: Albert Luthuli, Chris Hani, David Webster, Desmond Tutu, Dora Tamana, Helen Suzman, Lilian Ngoyi, Mohandas Gandhi (the South African years), Nelson Mandela, Oliver Tambo, Ruth First, Seretse Khama, Sol Plaatje, Steve Biko, Thabo Mbeki, Trevor Manuel, Yusuf Dadoo, Z K Matthews, Helen Joseph and James La Guma. ▲

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# The crucial importance of investing in ECD

There can be no doubt that the early years in education are the most important ones, as they lay the foundation for all future learning. Therefore, it is encouraging that the Department of Basic Education has taken over the crucial Early Childhood Development (ECD) portfolio from the Department of Social Development, an education expert says, while calling for a greater focus on and investment in these life-shaping years both in public and private institutions.

**“R**esearch is clear that early childhood development drives success in school and life,” says Desiree Hugo, Academic Head: Schools Division at ADvTECH.

“Raising the profile of this stage of learning in all schools must – where it is not yet the case – become a priority alongside the effective management of the transition between the home environment to a school environment.”

According to Professor James J. Heckman, Henry Schultz Distinguished Service Professor of Economics at The University of Chicago, a Nobel Laureate in Economics, and an expert in the economics of human development, early childhood represents a critical time to shape productivity, when the brain develops rapidly to build the foundation of cognitive and character skills necessary for success in school, health, career and life. Early childhood education fosters cognitive skills along with attentiveness, motivation, self-control and sociability – the character skills that turn knowledge into know-how and people into productive citizens.

“As the saying goes, you only get one chance to make a first impression. This is equally true where ECD is concerned. You don’t get an opportunity to go back and change the outcomes arising from these formative years,” says Hugo.

“This is why for us in South Africa, we must endeavour to ensure that the early years learning environments our children experience are nurturing, supportive and inclusive. And the pedagogy must be reflected in the richness of the learning environment by offering aesthetically pleasing and ergonomically designed learning spaces.”

Hugo says an effective learning environment can be compared to an ecosystem where many elements – spaces (indoors and outdoors), resources, routines, teachers, and families – are intertwined and support the student’s incremental growth and personal learning journey.

“The pedagogical focus in the early years must be on building academic confidence so that students develop a love of learning and are prepared to enter future learning opportunities and ultimately the world of work with the skillset and knowledge that will ensure that they are adaptive and can successfully respond and contribute to their immediate and extended communities in a positive manner.”

When students feel safe, they will be open to learning. Therefore, the environment becomes incredibly important as the third teacher – it creates that safe space – building strong relationships and making important connections with the essential learning elements.

“Students in the early years also learn best when the learning is presented through play and where they are given the opportunity to explore, discover and make



**Desiree Hugo – Academic Head:  
Schools Division at ADvTECH**

necessary connections – where they can discover that there are many ways, possibilities, and perspectives and that mistakes are necessary and accepted as part of the learning process – thus building resilience.

“In such circumstances, the environment must be responsive to their needs. Here the educator, through careful observations and interactions, is required to monitor each student’s growth and tailor experiences accordingly, thus ensuring that the students remain engaged and inspired.”

With changing times in all industries comes the need to reflect and reassess, and education is not exempt from this.

“As forward thinking, innovative organisations, whether our schools are situated in the private sector or public sector, we need to constantly reflect and take a good look at what we are doing, how we are doing it, and how we need to change. We need to listen carefully to our learning community and reimagine our spaces.

“We will be best positioned to serve the next generation by ensuring their early years learning is based on well researched philosophy, international connections, intentional use of resources and materials and its adaptiveness, with teaching and learning taking place in both a guided and incidental manner and that the student takes priority.” ▲



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# High school open day checklist

## How parents can get the information they need

Time is running out for parents and guardians of senior primary school students to find and enrol at a high school that will best prepare and position the child for a successful future. It can be very confusing to make a call on which school is best suited for this most important task, as there are countless variables at play. However, if parents are prepared with a checklist of questions they need to ask (as well as examples of good responses), this task can be made a little easier – particularly when attending a school’s open day, an education expert says.

“Good schools will host open days throughout the year, allowing parents and prospective students the opportunity to view and get a feel of a campus, ask questions, and decide whether a particular school is the right fit for them,” says Desiree Hugo, Academic Head: Schools Division at ADVTECH.

“These open days are geared to provide opportunities for sharing the best aspects of a school, and excitement can quickly let important questions that need to be considered fall off the agenda. Whether prospective parents attend an open day, or just pay a school a regular visit to guide decision making, it is good practice to go with a plan in hand so that one can objectively compare schools on the various key elements required from an excellent institution,” Hugo says.

– The first factor is the question of academic excellence and future-focused curricula –

“There can be no compromising on ensuring that the school you choose for your child will provide the absolute best on the academic front. An easy gauge of a school’s ability to deliver, is to have a look at end-of-year IEB Matric results to evaluate the performance of various schools against each other. Another way to judge this factor, is to look at benchmarking.”

Hugo advises that academically excellent schools will ensure they utilise international benchmarking assessments to confirm that the school remains locally and globally relevant with rigorous academic programmes and that academic data supports and engages all students in a personalised learning journey.

“Also look out for clear visibility of student-centred practices as an important part of the academic model, intended to build confidence in an environment that values every student,” says Hugo.

“Furthermore, parents should enquire whether the voices of the students are considered valuable in their learning journey towards academic excellence and student success, and whether they are included in academic conversations with their parents about their plans for progress.”

It is also a non-negotiable to enquire about the curriculum. A school must be able to provide evidence that their curriculum choice is implemented with integrity and is future-focused and geared towards equipping students holistically across a

broad range of technologies and global skills. Ask for evidence of what they do, how they do it, and outcomes, Hugo says.

With the above basics satisfactorily answered, parents can move on to broader questions, such as

### Facilities & amenities

The question that needs to be answered here, is how the offering supports the overall learning experience of students. Many schools select a focus for their offering, aligned to their fees, and may not offer all the bells and whistles, but rather ensure that the academic model and subsidiary activities are of an excellent standard instead of offering a wide bouquet.

Check that classrooms are neat, well maintained and that they cater to a wide range of interests and offer flexible seating possibilities. For instance, do classrooms have useful educational technology, is Wi-Fi available, are equipped laboratories accessible, if promised, and are spaces for art, design and innovation utilised for future focused learning?

On the sport side, do they cater to a variety of sport codes aligned to their model and offering, well-kept fields and facilities for those particular sporting opportunities on offer? Even if a child is

not particularly sporty, well-maintained grounds are a good sign to take into consideration.

### Student support

If a student requires additional academic support, whether it be emotionally or academically, what support structures does the school have in place, and how are they accessed? What disciplinary processes are in place to address bullying and other issues that may impact on the wellbeing and success of students? Does the school support the values of respect, diversity and inclusion – and is this evident in the classrooms and across the culture of the school?

### Teachers & campus staff

What is the ratio of teacher to students in classes? And does the school highlight the academic practices to ensure all students are mentored and supported – no matter the class size?

Are all teachers SACE accredited and can the school ensure police clearance is completed on all who work closely on the campus with children? Are the teachers offered professional learning opportunities to ensure curriculum and pedagogy are foregrounded to support student success?

### Holistic academic and skills development

In addition to regular subjects that can be expected at most schools, which additional subjects may students access? What is the school’s approach to 21<sup>st</sup> Century Skills, such as communication, collaboration, analytical thinking, creative thinking, digital literacy, and problem-solving? How are these skills embedded in the curriculum and the everyday learning experience of students? Is there evidence of cross curricular teaching and learning, and are the students granted regular opportunities to share their thinking and co-construct their learning collaboratively?

### Why should parents make it a point to visit an open day at school?

Most of the time, parents tend to miss out on going to the open day that is being held in the school where their child is studying. This is an incredible opportunity that parents lose because an open day will help parents to know a lot of things from teachers regarding the school as well as their child.

– Some important things which parents should keep in mind while attending an open day meeting in school include –

#### 1. Interact with teachers

The open day gives the perfect opportunity for parents to talk to teachers. Such kind of interaction gives an impression that the parent is concerned about the education being given to the child in the school that would ultimately mould him into a knowledgeable and good individual.

#### 2. Changes being made to the curriculum

Parents should make sure that they ask the teachers about the present curriculum being taught to the students in the class, when open day is held in the school. Also, if there any changes that are made to the existing curriculum, the information needs to be passed on to the parents on this occasion.

#### 3. Enquire about pedagogy

Pedagogy refers to the theory and practice of education and how it influences the growth of learners that is the students. It is extremely important for parents to enquire about the pedagogy methods being used by teachers, since it shows how quickly children could grasp the concepts being taught.

#### 4. Bring important issues to light

When schools conduct an open day, parents get the perfect opportunity to communicate about important issues with teachers. For example, Parents can give suggestions to teachers as to how they should effectively deal with the students, in order to make them understand what is being taught in the class and other such related school issues.

#### 5. Get to know about your child’s performance

Parents get to know about their child’s academic and non-academic performance in the class from the teachers on an open day. It is extremely important for teachers to explain to the parents where their child stands from amongst other students in the class, so that appropriate steps are taken for further improvement.

#### 6. Actively participate in the school’s various initiatives

Schools should encourage parents to come to the open day that is organised by them. This is because it gives out a chance to parents to put forth their views and opinions on various matters surrounding the school’s management and new initiatives that are being undertaken.

#### 7. School software

The time and date of the open day can be communicated to the parents by the school using school software. The discussions that happen during open day need to be well documented and the same needs to be shared with the parents via school software portals.

Therefore, in order to make the open day a successful and meaningful gathering; parents, teachers and students must come together, co-operate and communicate in the best possible manner during this occasion. ▲



# Are you preparing your learners to live successfully in the Fourth Industrial Revolution (4IR)?

A lot is being said about the **Fourth Industrial Revolution (4IR)** and the need to be ready for it. While there are lots of frightening statistics and scary stories, there is not a great deal of understanding of what the Fourth Industrial Revolution is exactly, and what we need to do to be active participants in it. Education is meant to be the way to facilitate a positive future for our youth; but, what does that mean for you the Educator?

Via Afrika's online course, **Teaching for the Fourth Industrial Revolution**, has been written specifically for educators to help you prepare yourself, and your learners, for successful and effective lives as we continue deeper into the Fourth Industrial Revolution. As part of Via Afrika's Digital Education Academy, this course consists of **nine two-hour sessions** that you can do online in your own time.

The first session, Getting to the Fourth Industrial Revolution, provides a key understanding of what an industrial revolution is, and why we are talking so much about the Fourth Industrial Revolution right now. This session provides an insightful look into the key elements of the first three industrial revolutions to lay the foundations for a detailed look at what the 4IR is, how it has already had an impact on society and what this means for an educator. Finally, in this session, a very brief overview of the key technologies of the Fourth Industrial Revolution will give you insight into what the technological changes are for you as an individual, and you as an educator. This session is an excellent introduction to anyone who wants a firm grasp of the 4IR.

Each of the key 4IR technologies is covered in a session on its own. These technologies are:



These six sessions above develop the knowledge and skills needed to appreciate and evaluate the specific technology. You will learn more about its purpose, application and the opportunities it creates. You will also experience a basic introduction to using the technology within an educational context. Of course, as an Educator you will want to be able to apply these learnings in your classroom.

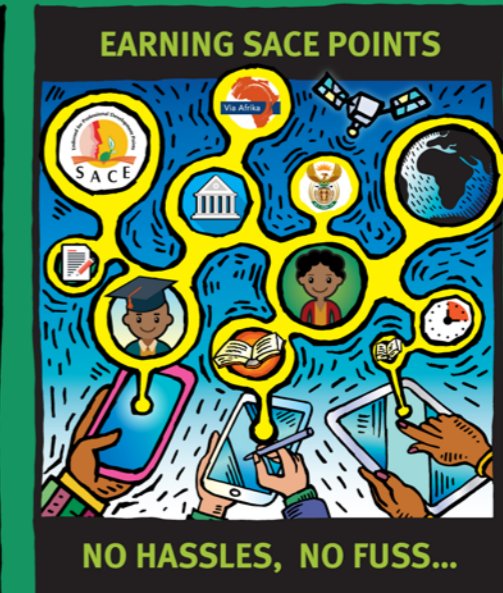
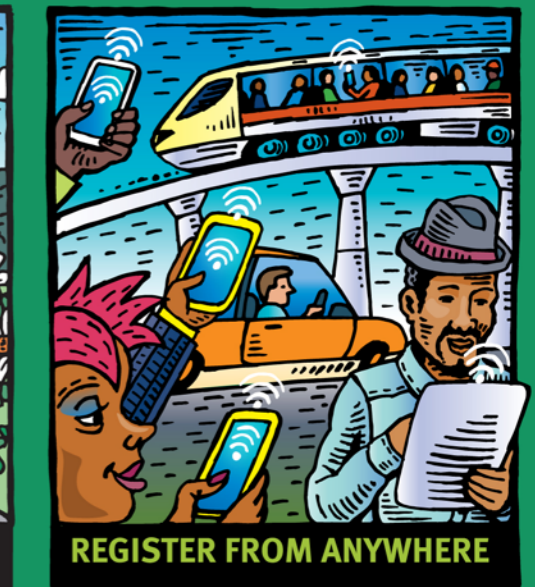
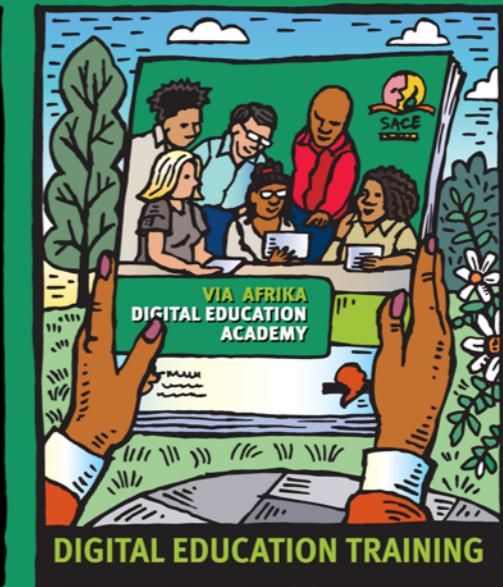
While each of the previous sessions gives insight into the application of the technology, the session GenReady for the 4IR will offer you various teaching and learning strategies, as well as personal and professional development concepts needed to bring 4IR into your classroom.

The final session in the course explores some of the other 4IR technologies, like 3D printing and cloud computing, for example, that have an impact on our lives in the 4IR.

You will receive a certificate issued by Via Afrika, as well as a digital badge (see examples below) for inclusion in your online profiles to show others just how you are developing your 4IR knowledge and skills.



Contact Maria de Witt by email: [vatraining@viaafrika.com](mailto:vatraining@viaafrika.com) for more information.



72 online two-hour Windows or Android tablet training sessions @ R125 each (VAT incl.).  
Visit our website [www.viaafrika.com/academy](http://www.viaafrika.com/academy) or call Maria de Witt 021 4063005.



## Tips for Matrics from Math teachers

With matric “prelims” looming, and finals on the horizon, maths is one of the subjects causing Matrics the most stress. During the revision cycle, how should learners be using the time remaining to prepare?

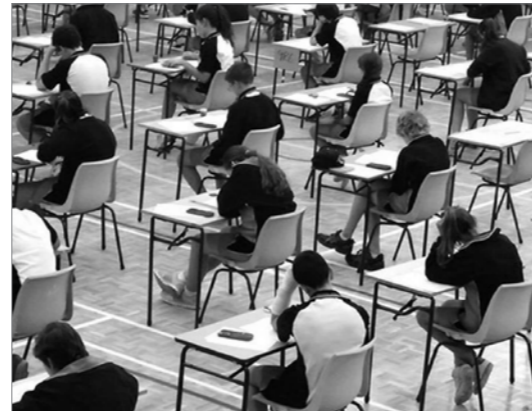
The Answer Series has a very engaged WhatsApp network of approximately 250 maths educators. Members are from around the country and include teachers, lecturers, course developers and even maths-science students working as tutors.

“They give each other such valuable support,” says CEO of The Answer Series, George Eadie. “I felt we should share some of their tips to assist, inspire and most importantly instil confidence in the nation’s Matrics, at a time when they need it the most.”

### 10 tips to make your revision count

1. The final National Senior Certificate exam covers the work done through the whole FET phase; Grades 10, 11 and 12. Always go back to your textbooks from previous grades and master concepts such as Algebra, Exponents, Graphs, Equations and Inequalities, etc.
2. Find a study buddy and work together.
3. Buy a cheap A4 notebook you can use for maths revision notes. On the left-hand side of the first few pages, copy out the topics listed in the contents of your Grade 10-12 textbooks. Using 3 different highlighters, mark which topics you are “excellent”, “good” and “not good” at.
  - a. To work out how important a section is, look at the number of marks allocated to the topic in past papers. Prioritise according to this. Algebra, for example, is a very important topic to be better at.
  - b. Using a calendar, work back from the exam date and plan what sections you need to revise when, in order to cover all the work before trials. Allocate enough time to study and practise what you are not good at to improve and gain confidence in these areas but don’t neglect the sections that come easily to you. Remember, you will be able to work more quickly through these questions and potentially gain maximum marks, so assign time to practise these sections too.
4. Never let a day go by without completing at least one maths problem. Tick off everything you attempt on the list in your revision book, and on your calendar, to monitor your progress.
5. For each maths topic, divide a page in your revision book into four blocks. Number each block 1 to 4. Assign one page per concept, e.g., “hyperbola” or “parallelogram” or “function”. In the blocks, put:
  - a. the definition or explanation of the concept and any other information,
  - b. a drawing or sketch or any visual representation in diagrammatic form, and
  - c. a mathematical example.

The day before the exam, you can use these summaries to study from, so the more information you can put on the page, the better.
6. Know which topics will be examined in paper 1 and 2. Remember, the format of the question papers won’t change – only questions change.



7. Get hold of at least ten previous Paper 1 and Paper 2 question papers, with their answer sheets/memorandums. (Some of the supplementary papers, e.g., June 2019 and March 2018, are excellent practice papers.) These can be found on the Department of Basic Education’s website. Every week, sit quietly and answer a whole paper. Time yourself so you get comfortable working under pressure.
8. Once done, mark your answers and ask your study buddy, peers or your teacher for assistance should you need clarification.
9. Each time you encounter an unfamiliar question, update your notes under that topic.
10. Never be too shy to ask your teacher for help – this is your future.

“My top tip, when it comes to writing exams, or practising past papers, is to answer all the routine questions first, then come back for the more challenging ones that take more time,” Eadie advises.

His message to the 2022 matrics is: “Keep calm, there’s still lots of time, so long as you use it wisely. Good luck – you’ve got this.”

## Ten school lunchbox tips for stress-free mornings

Parents and caregivers face the daily challenge of providing nutritious, affordable, and quick-to-prepare school lunchboxes.

While a hastily made sandwich and cold drink were once acceptable, the rules of the game have changed. Long school hours and lengthy commutes require more substantial meals, while the spiralling cost of living has made convenience shopping expensive. Food allergies and intolerances add another level of complexity. Factor in load shedding, with schedules that change rapidly, and you have all the ingredients for a family argument, late arrival at school, and/or wasted food.

To add to the challenge, in some school circles the standard of snacks has been elevated. Some parents opt to provide expensive, pre-packaged meals, create Instagram-worthy sandwiches, and carve fruit and vegetables into appealing mini-sculptures.

“Life is stressful enough for parents and children without making school lunches an area of competitiveness,” says Shafeeka Anthony, Marketing Manager of personal finance portal JustMoney.co.za, and a busy mother of two children. “Have some perspective and focus on health, quality and taste. This will save you time and money and leave you with more cash to invest in your children’s long-term future.”

Ten lunchbox tips to relieve stress on a busy school day:

1. **Invest in decent containers:** Buy a good-quality, sturdy, compartmentalised lunchbox and a small flask. This will save on packaging as you can place food directly into the lunchbox compartments. The flask will enable you to add hot drinks and nourishing soups to the menu.
2. **Set up lunchbox stations:** Store non-perishable lunchbox items in one area, such as a dedicated kitchen shelf. Allocate a section of the fridge to perishable items.
3. **Plan your school lunches:** Draw up a roster of your children’s favourite foods and prepare a shopping list. This will help to ensure that you have all the ingredients on hand.
4. **Shop online:** Compare prices and, if a favourite item is on special, buy it in bulk when it makes sense.
5. **Check what’s in season:** Buying seasonal fruit and vegetables will cut costs and expose your child to a variety of fresh foods.

6. **Make your own:** Prepare your own popcorn, bake sweet potato and homemade chips, and make healthy muffins and fruit and nut bars.
7. **Involve your children:** It’s pointless to buy food that kids “should” eat but do not enjoy. Make choosing and packing lunches a fun task that you can enjoy together.
8. **Prep ahead:** A Sunday night is a good time to wash, slice and package food. Prepare nutritious snacks, boil eggs, and put aside what you know you’ll need in the morning.
9. **Avoid pre-sliced, individually wrapped items:** Slice your own meats and cheeses. This will save money and avoid excessive plastic packaging.
10. **Make the most of meal leftovers:** Double up when making the family dinner, divide into portions, and freeze.

“Finally, remember to have fun when preparing for another busy school term. Your children grow up so fast, and time with them is precious,” advises Anthony. “Pop the occasional sweet treat in the lunchbox, include a loving note, tuck in a birthday surprise, or add a sticker that is bound to make them smile. There are so many pressures on children already, so don’t make school lunches the cause of family friction.”



Focus on health, quality and taste when preparing school lunchboxes



# Engineering 101: how to choose a degree programme for 2023

Engineering has long been a popular field of study for school leavers because of the high demand for qualified and experienced professionals in this field, the diversity of options within the field, and the interesting and varied nature of life as an engineer.

However, contrary to the road to career success for prospective engineers of the past, study options have increased dramatically from the historically limited public university offering, and those who are interested in this field should ensure they consider all their options so as to align their chosen branch of engineering with their personal goals, as well as their ability to make an immediate and positive contribution in the workplace, beyond mere academic and theoretical knowledge, an education expert says.

“The specifics of admission requirements for various institutions vary, but it’s safe to say that if you are great at maths, physics and chemistry and have a good command of English or the language of instruction of the institution, engineering is an excellent and sustainable choice of study,” says Neil Manson, Head of School: Engineering, Science and Health at The Independent Institute of Education (IIE).

Manson notes that perceptions of a career in engineering can be quite limited, but that it is worth noting that the day-to-day life of an engineer – whether in public or private sector – incorporates many different facets depending on specialisation, which can include:

- Designing materials, components, systems or processes,
- Planning the capacity and location of infrastructure,
- Investigating, advising and reporting on engineering problems,
- Improvement of materials, components, systems or processes,
- Managing or operating plants and processes,
- Managing implementation or construction projects,
- Implementing designs or solutions,
- Research, development and commercialisation of products,
- Education, training and development of engineering personnel,
- Postgraduate studies, research and teaching.

“Furthermore, students who graduate with an Engineering degree have valuable and sought-after knowledge, skills and attributes that enable them to work and excel in multi-disciplinary projects and easily expand into other industries, such as banking, insurance, ICT and many others,” Manson says.

Manson says the non-negotiable boxes that need to be checked when investigating which engineering degree to pursue and where, is to ensure that accreditation with the Engineering Council of South Africa (ECSA) is in place and that the institution is accredited with the Council for Higher Education (CHE).

“It is also then important, after those matters have been dealt with, to find an institution that has a close link with industry and that the curriculum is contemporary and updated. While engineers are in high demand, companies are also careful to scrutinise the quality of qualifications, an institution’s reputation for producing work-ready graduates, and the likely ability of a

graduate to consistently perform at the highest level.

“Engineering is a complex field and engineers carry a lot of responsibility – sometimes life and death responsibilities – on their shoulders. So it is important not only for satisfying employer demands, but also for developing and empowering yourself to be able to fulfil your duties with confidence, that you find an institution and qualification where the classes are small and you can receive individual attention that goes beyond just covering the theory.

“Ask prospective higher education institutions for a tour of their campus facilities, and look out for up-to-date facilities and laboratories, inspiring campus grounds, and modern programme design.”

Prospective students should also enquire about a faculty’s focus on sustainability, its level of industry engagement, its focus on real-life communities in its curriculum, its focus on entrepreneurial development and the extent to which it provides its students with collaborative research opportunities and industry interaction.

“Engineering is a tremendously rewarding career and opportunities will continue to grow locally and globally even during tough economic times. Matriculants with the academic ability to be successful, and a keen interest in the field, would do well to investigate their opportunities and find the perfect fit within the field for them, as well as the right institution to develop them holistically and help them get ready to contribute upon graduation.” ▲

## LEARNERS WHO BENEFITED FROM THE ALATEEN PROGRAMME

Below are some comments from school children in the Alateen programme

(Names are changed to protect members’ anonymity)

My daughter has changed so much in the past year since attending Alateen. There’s a new confidence, a renewed happiness, and more openness. She has the courage to share in AA meetings, and to engage with people outside of them. She’s growing into an amazing person, and I couldn’t be prouder of her.  
“Proud Mother”.

It’s amazing how much honesty there can be in Alateen when alcohol is full of lies. “Maria” age 11.



Alateen has relieved me of the stress in my life. I have more focus on my schoolwork and I have stopped overthinking everything. I have serenity in my life for the first time as I have stopped worrying about my Dad’s drinking and am more confident.  
“Jabulani”, age 11.

I have been told by my friends & family I am much more relaxed, calmer and more mature. I have been going to Alateen for nearly three years and I don’t worry so much about my Mom and am not so negative. “Lucy” now age 13.



Alateen has helped me stop worrying about what might happen at home if my parents are drinking and fighting. “Ray” age 12.

Alateen has helped me deal with the stress at home and my school marks have improved. I didn’t want to go to meetings at first, but now I look forward to the weekend meeting and seeing my friends there.  
“Rebecca”, age 15.

Before Alateen I found it very difficult to talk to other people at school. Now I feel freer, am much more confident, and understand it’s not only my family that has this problem. “Mark” age 14.

I used to bottle up my feelings about everything, until my anger would explode. At Alateen I learned a better, calmer way to share discuss any problems with my group. “Jay” age 16.





# Realise your international study ambitions with a £3 000 IELTS prize with British Council

In a first for South African students, anyone applying to a higher education institution where IELTS (International English Language Testing System) is an admissions requirement can now enter the British Council's annual IELTS Prize competition to potentially win £3 000 towards their university tuition fees.

The IELTS Prize is a global initiative created to help ambitious young people turn their academic dreams into reality by providing them with financial assistance and the opportunity to pursue their undergraduate or postgraduate course of choice in English-speaking universities around the world.

This year's competition is open to eligible IELTS test takers from nine countries around the world, including South Africa. Test takers in Kenya, Nigeria, Ghana, Egypt, Bangladesh, Canada, Colombia and Lebanon can also submit applications.

Local IELTS test takers who are residents of South Africa and plan to begin their undergraduate or postgraduate studies in the 2023 and 2024 academic years can submit their application between 1 July and 30 September 2022.

The British Council will select a total of seven winners through a competitive application process to receive the cash prize to support their studies.

As well as facilitating students' academic pursuits in world-class educational institutions, the IELTS Prize opens doors for individuals, granting them the freedom to travel to new countries, immerse themselves in new cultures, and become part of a global community.

Nadine Mukhtar, a recipient of the IELTS Prize who is from the UK, said: "This prize helped me decide which country I wanted to pursue my law studies in and turned my academic aspirations into a reality.

"I would encourage everyone who can to apply – not just to help fund your studies, but to increase your confidence in your capabilities and inspire you to always produce your best work," said Nadine.



Joan Munyori – 2021 IELTS prize finalist



Vartika Khandelwal 2021 IELTS prize finalist

### About the British Council

The British Council is the UK's international organisation for cultural relations and educational opportunities. We support peace and prosperity by building connections, understanding and trust between people in the UK and countries worldwide. We do this through our work in arts and culture, education, and the English language. We work with people in over 200 countries and territories and are on the ground in more than 100 countries.

In 2021 and 2022 we reached 650 million people. ▲



Applicants from South Africa who wish to enter the IELTS Prize should visit <https://ieltsprize.takeielts.britishcouncil.org/> where they can find out more information about the prize, the application process, and review frequently asked questions to assist their application.

### About IELTS

The International English Language Testing System (IELTS) is the world's most popular English language proficiency test for higher education and global migration. More than 10 000 organisations globally trust IELTS. These organisations include educational institutions, employers, governments, and professional bodies.

IELTS is jointly owned by British Council, IDP: IELTS Australia and Cambridge Assessment English. Find out more about IELTS here: [www.ielts.org](http://www.ielts.org)



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### ENROLMENT CRITERIA

- Grade 10 to 12 : Maths – Must have 60% or above  
Science – Must have 60% or above

### COMPULSORY SUBJECTS (20 CREDIT SUBJECTS)

1. English (Home) – 5 Hours per Week
2. Afrikaans (FAL) – 5 Hours per Week
3. Maths – 10 Hours per Week
4. Science – 10 Hours per Week
5. Life Orientation – 2 Hours per Week

### CHOICE SUBJECTS (20 CREDITS EACH)

6. <b>ACCOUNTING</b>	OR	6. <b>LIFE SCIENCES</b>
7. <b>Business Economics</b>		7. <b>Geography</b>
<b>Economics</b>	OR	EGD (Minimum 20 Learners)
		Tech Civil (Minimum 20 Learners)

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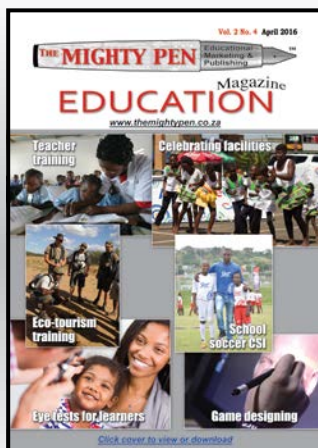
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