



S.E.T. for socio-economic growth

National Science and Technology Forum (NSTF)

media release

International Day of Education, 24 January 2025

OLICO Maths Education: unlocking mathematical potential across SA

South Africa's (SA) basic education system is plagued by numerous challenges, including inadequate infrastructure, persistent inequality, substandard education quality, underqualified teachers, high dropout rates, overcrowded classrooms, and insufficient support mechanisms, among other pressing issues. Despite these challenges, the matric class of 2024 achieved a remarkable 87.3% pass rate, the highest ever recorded in SA. The [National Science and Technology Forum \(NSTF\)](#) congratulates the Class of 2024 with this outstanding achievement in the face of difficult circumstances. The Minister of Basic Education, Ms Sivive Gwarube, announced that she and the Department will now focus on improving the *quality* of passes going forward.

Awarding excellence in mathematics education in SA, OLICO Maths Education: SA joins the global community in celebrating the International Day of Education on 24 January. Commemorated under the theme "AI and education: Preserving human agency in a world of automation", this significant day encourages reflections on the power of education to equip individuals and communities to navigate, understand and influence technological advancement. OLICO Maths Education, the 2024 Non-Governmental Organisation (NGO) Award winner of the NSTF-South32 Awards, is committed to addressing challenges to achieving universal quality mathematics education. The organisation's innovative approach to learning is shaping the future of SA's youth. OLICO is recognised for their dedication to bridging educational gaps, the team is empowering learners with essential maths skills and opening doors to opportunities previously beyond reach. They continue to transform the landscape of maths education in SA by making it accessible, meaningful, and enjoyable for learners. With a vision to unlock mathematical potential, OLICO empowers thousands of students annually, fostering a love for learning and creating pathways to success. They received the prestigious award for their work to make sense of maths through high quality programmes and resources for thousands of South African school children from disadvantaged backgrounds.

How does SA compare to the rest of the world? Severe challenges remain with regards to STEM education in SA in particular. (STEM = science, technology, engineering and mathematics.) A 2023 international standardised benchmarking survey, the [Trends in International Mathematics and Science Study \(TIMSS\)](#) revealed that SA's grade 5 learners ranked last out of 58 countries in maths and science. The TIMSS study compares learners' competence in maths and science in grade 4 and 8. In 2023, SA participated with 58 countries for maths, and 44 countries for science. SA participated in maths and science assessments for grade 5 (instead of 4) to see if that made a difference for the poor performance, it didn't. In all cases, in both subjects, and both grades, SA scored below the 400 mark, which is the Low Benchmark level ("demonstrating basic mathematical understanding" and "showing knowledge in some science facts"). Only in maths grade 8, did SA improve over four rounds of participation over the years, and are now close to the lowest benchmark of 400, with a score of 397.

Proven track record of impact: Starting with just 22 learners in Diepsloot, OLICO now supports over 5,000 learners directly and reaches an additional 20,000 through partnerships. This remarkable growth is matched by outstanding results: for the past five years, OLICO learners have consistently ranked in the top 20% of matric maths performers. One of its partner schools in Diepsloot has risen from 231st to consistently ranking in Gauteng's top 10 Quintile 1-3 schools, often claiming the top spot.



(Dr Lynn Bowie celebrates a remarkable achievement for OLICO Maths Education, proudly holding her award handed to her by the Minister of Science, Technology and Innovation, Dr Blade Nzimande.)

Dr Lynn Bowie, Director of Mathematics at OLICO, highlights the transformation: "At initial intake, learners average 25-35% in maths. Last year, Olico learners achieved a 97% matric pass rate and 92% pure mathematics pass rate, with a maths average of 62% compared to their schools' average of 32%."

Team committed to change: The dedicated professionals behind OLICO include educators, technologists, and community leaders who are united in their mission to transform lives. By fostering a love for maths and building confidence, they equip learners to overcome challenges and pursue further education or careers in STEM fields.

Empowering future generations: A testament to its success is the cycle of positive change OLICO has created. Ten percent of its current staff are former beneficiaries who now inspire and mentor new learners. "When we support learners in succeeding at maths, we're not just opening doors for them; we're also strengthening the future pool of scientific talent," says Bowie. Receiving the [NGO Award](#) at the 2024 [NSTF-South32 Awards](#) held on 11 July, she affirmed OLICO's commitment to educational excellence: "This recognition celebrates the dedication of our young, inspirational staff who go above and beyond to create a safe and supportive space for learners to thrive".

Join OLICO's mission: OLICO [invites](#) partners, educators, and stakeholders to join their mission to transform maths education in SA. Together, we can ensure that every learner has the opportunity to succeed.

About the NSTF (National Science and Technology Forum): NSTF is an independent non-profit stakeholder body and network – a civil-society forum of over [140 organisations involved in science, engineering, technology \(SET\) and innovation in SA](#).

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- Instagram: [@nstf_sa](#)
- TikTok: [nstf_sa](#)

References

- <https://www.un.org/en/observances/education-day>
- <https://olico.org/our-projects/>
- <https://olico.org/>
- <https://www.ewn.co.za/2025/01/14/basic-education-introduces-reorientation-plan-to-address-maths-and-science-challenges>
- <https://brokenchalk.org/challenges-in-the-educational-system-of-south-africa/>
- <https://olico.org/our-projects/>
- [TIMSS Trends in International Mathematics and Science Study](#)

About the NSTF

The National Science and Technology Forum (NSTF), established in 1995:

- is a broadly-representative stakeholder body for all science, engineering and technology (SET) and innovation organisations in South Africa
- gathers stakeholders around burning issues of national and global interest, across the public and private sectors, including matters of public policy
- includes a network of professional societies in SET and STEM education (STEM = science, technology, engineering and mathematics) - the NSTF proSET membership sector.
- recognises, awards and profiles the outstanding contributions of individuals and groups to SET and innovation through the prestigious NSTF Awards
- runs and supports collaborative projects and youth outreach, including recognition of top performance in mathematics and science, role modelling, bursary and STEM career information
- runs and supports the [STEMJator.org](#) which attracts youth and educators to Explore>Discover>Learn the world of STEM including careers. (Established by NSTF proSET)

For more information
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