

InnovateHER

Impact Report

Empowering the Next Generation of African Women in STEM



Prepared by :
African Female Voices
(NPO 323-906)

Congratulations to the Class of 2025

AFRICAN FEMALE VOICES



INNOVATEHER: EMPOWERING YOUNG
WOMEN TO PURSUE STEM CAREERS

GRADE 12 CLASS OF 2025

By African Female Voices

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OUR VISION & MISSION

African Female Voices is a registered non-profit organisation in South Africa (NPO Registration No. 323-906) with a mission to amplify the stories, experiences, and perspectives of African women, particularly those whose voices are often overlooked or marginalised. The organisation was founded to celebrate women's achievements while advocating for gender equality, recognising the historical and social barriers that continue to limit opportunities for women, especially in education, leadership, and STEM fields. Originally, our vision for InnovateHER was to launch as a "Take a Girl Child to School" initiative, focused on supporting girls' education. However, when funding did not materialise, we took it upon ourselves to design and implement the program, proving that commitment and creativity can overcome initial setbacks. Through InnovateHER, we create spaces where young African women from township and peri-urban communities can see role models who look like them—women who have faced similar inequalities, navigated systemic challenges, and succeeded in careers historically dominated by men. Advocacy is central to our work, and we deliberately move beyond digital storytelling by taking our impact offline, engaging directly with learners through mentorship, workshops, and STEM career exposure. By connecting learners with relatable women in STEM, providing practical guidance, and fostering confidence, we equip the next generation with knowledge and skills while inspiring them to challenge barriers, pursue ambitious dreams, and shape a more equitable future for African women.

THE Problem

According to the World Economic Forum, women represent only 29.2% of the STEM workforce, underscoring their underrepresentation in science, technology, engineering, and mathematics. In South Africa, this disparity is even more pronounced: women account for just 23% of STEM professionals, with only 17% holding leadership positions, and only 13% of STEM graduates are female. This ongoing gender gap limits women's contributions to innovation and reduces workforce diversity, both of which are critical for national and global progress.

Learners from township and peri-urban communities face additional challenges that compound this underrepresentation:

- Limited access to STEM career information makes it difficult to make informed study and career choices
- Lack of mentorship and relatable role models to guide their academic and professional pathways
- Insufficient exam preparation resources limit their readiness for tertiary education
- Financial and structural barriers that restrict access to universities and STEM opportunities

Without targeted programs, these learners remain largely excluded from high-impact STEM pathways, perpetuating cycles of underrepresentation and limiting opportunities for personal, community, and national development.

The InnovateHER RESPONSE



The InnovateHER project, initiated by African Female Voices, is a targeted intervention designed to address the persistent gender gap in Science, Technology, Engineering, and Mathematics (STEM) fields by empowering young women in South Africa. This initiative responds directly to the underrepresentation of women in STEM — a reality reflected in global and local statistics — by equipping Grade 12 female learners with the academic tools, career guidance, and confidence they need to pursue tertiary education and opportunities in STEM disciplines.



- InnovateHER provides learners with a comprehensive set of resources that support their academic performance, university readiness, and career planning. Central to the project is a 15-page InnovateHER STEM Guide, which includes practical strategies for exam preparation, stress management, choosing STEM courses, navigating university applications, understanding funding options, and preparing for future careers. The guide is made available in both digital and, where possible, printed formats to ensure wide accessibility.



- The project also emphasises interactive engagement and mentorship. Through school visits and workshops on topics like exam preparedness, CV writing, and STEM career pathways, learners are exposed to insights from professionals and facilitators who help bridge the gap between school and tertiary STEM opportunities. InnovateHER fosters personal growth, resilience, and leadership development among participants, enabling them to navigate academic challenges with greater confidence.



- InnovateHER adopts a holistic, learner-centred approach that goes beyond academic support. By combining structured exam-readiness workshops, university application guidance, and exposure to women working in STEM, the programme addresses both practical and psychological barriers faced by learners. Through mentorship and relatable role models, participants are encouraged to see themselves as future scientists, engineers, and innovators, strengthening their confidence, aspirations, and long-term commitment to STEM pathways.



The success of the 2025 InnovateHER pilot, which concluded with a graduation and send-off event, demonstrates the project's ability to deliver meaningful impact despite limited resources. Learners showed increased confidence, readiness for tertiary education, and motivation to pursue STEM careers. Building on this strong foundation, InnovateHER is positioned to scale its reach, ensuring that more young women from under-resourced communities are supported, inspired, and equipped to succeed in STEM fields.

Program Overview

Proactive, targeted initiatives are essential to address these disparities. By providing mentorship, career guidance, academic support, and financial assistance, the program aims to increase participation, retention, and success of women from township and peri-urban communities in STEM education and careers, ultimately fostering a more inclusive, innovative, and equitable STEM ecosystem.

Holistic Approach

InnovateHER takes a holistic approach by combining academic support, career guidance, mentorship, and psychosocial development to address the full range of barriers faced by young women pursuing STEM pathways.

Intended Outcomes

Provide students with effective exam preparation strategies, study skills, and stress management techniques to improve performance in academic assessments.

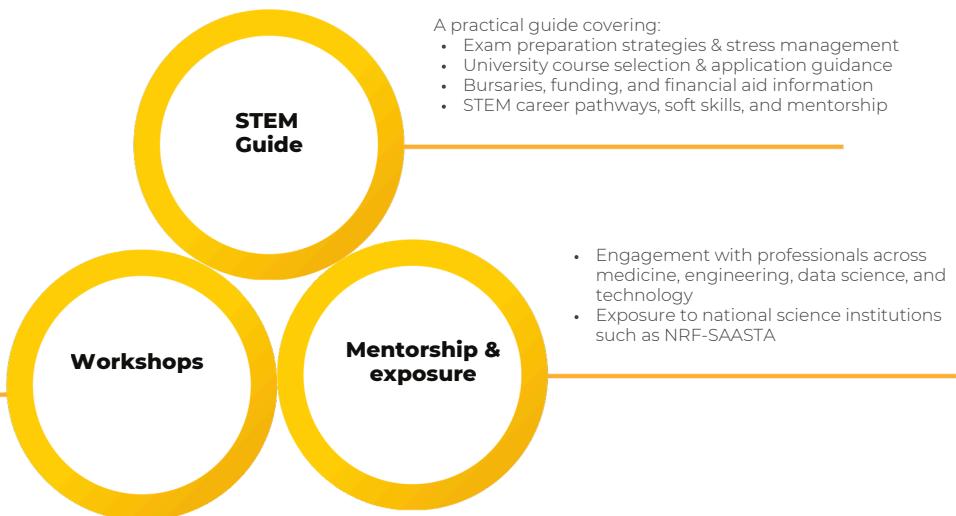
Offer guidance on selecting STEM courses, understanding qualification requirements, navigating the university application process, and accessing bursaries and financial aid.

Share insights into STEM career opportunities, emphasize the importance of soft skills, and provide resources for mentorship and networking to support students' transition from education to the workforce.

InnovateHER addresses these gaps through a holistic, learner-centred model:

The InnovateHER Model: 3 Pillars

- Exam readiness & study techniques
- CV writing and personal statements
- University application navigation
- Career exposure through women in STEM



Pilot Phase Project : Structure

Learner Recruitment

- Target: 19 Grade 12 female learners
- IкамваYouth – Ivory Park & Diepsloot
- Seshegong Secondary – Olievenhoutbosch
- Botse Botse Secondary – Soshanguve

Evaluation

- Send-Off & Graduation at NRF-SAASTA
- Monitored learner engagement & skills
- 100% participation
- Boosted STEM confidence
- Improved university & bursary readiness
- Strong STEM motivation

Workshops & Mentorship

- Exam prep & study skills
- CV & personal development
- University readiness
- Mentorship
- 15+ STEM mentors
- 12 virtual check-ins (36 hours) and Ongoing WhatsApp support

STEM Guide & Workshops

- Exam prep strategies & stress management
- University guidance & bursaries
- STEM career pathways & soft skills
- 4 interactive sessions: Exam prep, CV writing, university readiness, STEM career exposure

Key Components

Resources / Tools

The pilot used the 15-page STEM Guide, workshop materials, Zoom and WhatsApp, exam preparation resources, and mentorship tools.

Stakeholders / Responsible

The program was led by the founder, 15+ mentors, school staff, coordinators, and volunteers.

Timeframe / Duration

The pilot ran May to November 2025, with four workshops, twelve mentorship check-ins, and a graduation event.

Key Outcomes / Impact

Learners gained STEM confidence, university readiness, leadership skills, and career awareness.

Deliverables / Outputs

The pilot delivered guides, workshops, mentorship sessions, graduation, and an impact report.

Launch

The InnovateHER project was officially launched on 10 May 2025 at the University of Johannesburg, bringing together learners, mentors, educators, and key partners such as NRF-SAASTA and IkamvaYouth. The event featured inspiring keynote speeches from Gugulethu Zwane (Acting Director-General, DSTI), Dr Mamoeletsi Mosia (NRF-SAASTA), and Dr Judy Dlamini (FALF NPC), followed by a panel discussion with young women in STEM, including Nozibusiso Gumede, Boitumelo Lekhoe, Prof Tebogo Mashifana, Khanyisile Masemola, Dr Moleboheng Ramulomo, Puseletso Manyaka-Lesofe, and Pabalelo Banks. Through workshops, mentorship, and interactive sessions, the launch set the stage for building confidence, skills, and pathways for young women to pursue careers in science, technology, engineering, and mathematics.



The InnovateHER STEM booklet

The InnovateHER STEM Guide was developed to respond to the real challenges faced by Grade 12 female learners pursuing STEM pathways. Its content is informed by direct engagement with learners, educators, and STEM professionals to ensure relevance, accessibility, and impact. The guide focuses on three core areas: exam preparation, university readiness, and STEM career outlooks, providing learners with practical tools and inspiration at a critical stage of their academic journey.

EMPOWERING TOMORROW'S STEM LEADERS TODAY!

THE FACES OF STEM: MY STEM STORY CONTRIBUTOR LIST



DR DINEO TSABEDZE

Academic and Clinical Head of Nuclear Medicine



DR ZAKITHI MKHIZE

Associate Medical Writer and PhD in Medicine (Virology)



MONGIWA HAZEL NTULI

Youngest BSc in Actuarial and Financial Mathematics student



LEBOGANG MANGENA

BSc(Hons) Mathematics, Qualified Data Scientist Manager



PROF ANNAH MOTEETEE

Executive Dean: Faculty of Science
University of Johannesburg



BOITUMELO P. LEKHOE

Field Service Engineer (Robotic Surgery & Radiation Oncology)



LEBOGANG MASEGA

Product Manager (Apps and Web)



KHANYISILE MASEMOLA

Inter-disciplinary Scientist, Electrical Engineer and Chemist

UNLOCKING THE WORLD OF STEM

A Practical Toolkit for Future STEM Leaders



Tailored for Grade 12 learners in South Africa intending to study towards a career in STEM (Science, Technology, Engineering, and Mathematics)

Methodology

The InnovateHER STEM Guide was developed using a learner-centered approach. A multidisciplinary team of educators, STEM professionals, and counsellors led the project, while focus groups with Grade 12 female learners identified key needs and gaps. Insights from these sessions informed a literature review covering exam preparation, university readiness, and STEM career pathways. Interviews with STEM professionals for the "My STEM Story" segment added real-life inspiration. The guide was then designed for accessibility in print and digital formats, with feedback from educators and mentors ensuring relevance and usability.

Contributors

The "My STEM Story" segment of the InnovateHER STEM Guide features inspiring journeys of female STEM professionals who shared their experiences, challenges, and successes to motivate learners. These contributors, drawn from diverse STEM fields, provide real-world insight and guidance, demonstrating the range of opportunities available to young women in science and technology. The guide was carefully edited and curated by Mashudu Nxumalo, ensuring that each story is engaging, accessible, and aligned with the guide's goal of empowering learners to pursue their STEM aspirations.

Program Reach, Participation, & Evaluation

Monitoring & Evaluation

Overview:

The 2025 pilot focused on supporting Grade 12 female learners in STEM through mentorship, workshops, and access to the digital InnovateHER guide. While financial constraints prevented physical printing, digital distribution ensured comprehensive learner support.

Learners Supported

- Total: 19 learners
- Schools: IcamvaYouth (Ivory Park & Diepsloot), Seshegong Secondary (Centurion), Botse Botse Secondary (Soshanguve), Star Schools (Kibler Park)
- Subjects: Mathematics, Physical Science, Accounting, Life Sciences

Activities Implemented

- Digital InnovateHER Guide Distribution – Step-by-step study strategies, university guidance, and career exploration tools
- Interactive Workshops – Exam preparation, CV writing, mentorship in STEM, and personal development
- Mentorship & Support – Pairing with volunteer mentors from African Female Voices' LeadHERship Program, providing virtual guidance and WhatsApp check-ins
- InnovateHER Send-Off & Graduation – Celebrated learners' completion of the pilot and recognized commitment to STEM

Funding and Resources

- Founder contribution: R15,000 (self-funded by African Female Voices founder)
- Donations: R3,500 raised through the NextGen R200 campaign
- Resource constraints: Some physical printing; some guides and materials provided digitally

Participation Rate

- The InnovateHER pilot achieved a 100% participation across program activities, including in-person workshops, WhatsApp engagement sessions, CV writing, exam preparation, and progress tracking, with most learners submitting trackers and actively engaging with mentors throughout the program.

Key lessons from the pilot indicate that while digital resources are effective, printed materials improve accessibility, structured mentorship greatly enhances learner engagement and outcomes, and early planning with donor involvement is essential for program sustainability and scale-up.

Reach

The InnovateHER pilot project directly supported 19 Grade 12 female learners from township and peri-urban communities, including IcamvaYouth in Ivory Park and Diepsloot, Seshegong Secondary School in Olievenhoutbosch, and Botse Botse Secondary School in Soshanguve. Learners were enrolled in key STEM-related subjects such as Mathematics, Physical Sciences, Accounting, and Life Sciences, reflecting their interest in pursuing higher education and careers in science, technology, engineering, and mathematics fields. Throughout the pilot, participants engaged in four interactive workshops focused on exam preparation, stress management, CV writing, university application guidance, and STEM career exploration. Mentorship support was provided through 12 virtual check-ins totaling 36 hours, delivered by a network of over 15 STEM professionals, academics, and facilitators who shared practical insights, career guidance, and motivational support. The combination of targeted workshops, one-on-one mentorship, and exposure to real-world STEM pathways empowered learners to build confidence, develop critical academic and soft skills, and prepare effectively for their transition into tertiary education. The pilot's structured approach demonstrated the potential for scaling, showing that even a small, focused cohort can achieve measurable growth in knowledge, motivation, and career readiness.



Learner Outcomes

Success Stories



Key Statistics:

					
Grade 12 Pass Rate	Learners pursuing tertiary studies	Bachelor Pass	Learners Pursuing STEM studies	Workshop & mentorship participation	First-generation university learners
100%	~94%	~92%	~80%	100%	~70%

IkamvaYouth (Ivory Park & Diepsloot): Learners are enrolled in Diploma studies, and some are pursuing Bachelor's degrees at the University of Johannesburg, a Bachelor at the Cape Peninsula University of Technology, and a BSc in Geography and Geology at the University of Zululand.

Seshegong Secondary: Learners are studying Computer Science and Astrophysics at the University of the Witwatersrand, a Diploma in Electrical Engineering and a BSc in Biological Sciences at Walter Sisulu University, and a Diploma in Geomatics at CPUT.

Botse Botse Secondary: Learners are pursuing BSc Computer Science at Wits, a Diploma in Nursing, a BSc in IT (Computer Science) at the University of the Free State, a BScEng in Chemical Engineering at the University of Cape Town, and a Bachelor of Education at Tshwane University of Technology. A learner from Star Schools is enrolled in a Bachelor of Engineering at Wits.

Two learners are rewriting and will be provided with adequate support.

The 2025 InnovateHER pilot successfully supported 19 Grade 12 female learners from four townships and peri-urban schools, including IkamvaYouth (Ivory Park & Diepsloot), Seshegong Secondary (Olievenhoutbosch), and Botse Botse Secondary (Soshanguve). All learners accessed the digital 15-page InnovateHER guide, with 15 continuing to tertiary studies, pursuing bachelor's degrees, diplomas, or certificates in fields such as Engineering, Computer Science, Astrophysics, Biological Sciences, Information Technology, and Public Finance. Notable successes include distinctions achieved by learners and the pursuit of degrees in Astrophysics, Chemical Engineering, and Biological Sciences. Approximately 70% were first-generation university entrants, and several learners upgraded their qualifications to meet university requirements. Beyond academics, participants developed critical skills in leadership, teamwork, communication, problem-solving, and time management, demonstrating resilience and motivation. The pilot confirms that a combination of structured mentorship, targeted workshops, and digital resources effectively enhances academic readiness, university access, and STEM career confidence, providing a strong foundation for scaling InnovateHER to reach 100 learners in 2026.

Lessons Learned & Next Steps: Word from the Founder, Lebogang Masega



As the founder of African Female Voices, I reflect on the 2025 InnovateHER pilot with both pride and valuable insights. We have learned that while digital resources are highly effective for delivering content, printed materials remain essential to ensure accessibility for learners in low-connectivity areas, enabling them to fully engage with the program at their own pace. Structured mentorship has proven to be a cornerstone of the program, significantly enhancing learners' confidence, resilience, and engagement, and providing the guidance and inspiration they need to pursue careers in STEM. Early planning and proactive engagement with donors and partners have also shown to be critical for ensuring the sustainability and successful scaling of the program.

Having successfully registered African Female Voices as a non-profit organization in South Africa, we are now well-positioned to expand the InnovateHER program to reach 50 to 100 Grade 12 female learners across Gauteng, extending our partnerships with schools and community organizations. In addition to academic support and mentorship, we plan to expose learners to the workplace through industry visits, internships, and engagements with professionals in science, technology, engineering, and mathematics fields. These experiences will allow learners to better understand the practical application of STEM careers and develop the skills and networks required to succeed.

We welcome new partners and collaborators who share our commitment to empowering young women in STEM. Their support will enable us to provide printed guides, facilitate interactive workshops, enhance mentorship, and offer career exposure opportunities that are currently beyond the reach of many learners. Moving forward, we will also strengthen monitoring and evaluation frameworks to track learner progress, assess the long-term impact of the program, and continuously refine our approach. Alumni of the InnovateHER program will be encouraged to take on mentorship roles, serving as ambassadors and role models for new cohorts, creating a sustainable cycle of learning, guidance, and inspiration. Through these initiatives, InnovateHER aims not only to increase learners' readiness for university and STEM careers but also to foster a culture of mentorship, leadership, and innovation. By building strong networks between learners, professionals, schools, and industry, we hope to make a lasting impact on the representation of women in STEM, ensuring that talented young women from township and peri-urban communities have the resources, confidence, and opportunities to pursue their ambitions and contribute meaningfully to South Africa's future in science and technology.

“Always find an opportunity to help one girl cross”



OUR PARTNERS AND Collaborators

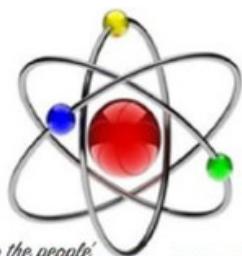


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