

When young Africans innovate...


 Google, ECA, Camden Education Trust and partners are teaming up to upskill youths and educators from 14 African countries in preparation for the World Robot Olympiad national and global competitions.



Photo Credit: The Camden Education Trust (2024), WRO, Makerere Innovation Society Uganda.

Robot-building fun is spreading far and wide with young people aged 8 to 18 from 14 African countries expected to take part in the [World Robot Olympiad \(WRO\)](#) by the end of the year. Behind this continent-wide push to upskill young Africans lies a team of partners - [Google](#), the [United Nations Economic Commission for Africa \(ECA\)](#), the [Camden Education Trust](#) and [Irish Aid](#) - on a mission to foster innovation, policy support and cooperation in CS (Computer Science) and STEAM (Science, Technology, Engineering, Arts and Mathematics) education across the continent. Announced during the [African Business Forum \(ABF\)](#), their current plan is to engage over 9,000 students in WRO competitions over the next few months.

...They realize Africa's economic potential

Rewind to early 2024: [the Economic Commission for Africa \(ECA\) and Google signed an agreement](#) to support digital transformation in Africa focusing on four collaboration tracks: Digital Skills Development, AI Policy Research, Cybersecurity & Content Responsibilities, and E-commerce and Digital Trade. As part of its mission as one of the United Nations' five regional commissions, ECA fosters regionwide partnerships that promote economic and social development, intraregional integration, and support international cooperation for Africa's 54 Member States. Among key priorities for ECA's human capital development is bridging the digital divide, particularly among young women and girls, to build essential digital and STEAM powered skills.

On his [opening address](#) during the partnership signing ceremony on the margins of the 2024 edition of the Africa Business Forum, H.E. Claver Gatete, Executive Secretary at ECA, noted that *“the potential of Africa’s digital economy is enormous. However, realizing this potential rests on closing critical gaps in digital skills. We must find workable answers to critical questions, such as how do we bridge the gap for the 650 million workers that need to be trained or retrained in digital skills by 2030.”*



“Currently, 75 percent of our youth do not possess the required digital skills to participate in the digital economy, and only 15% of countries incorporate computer skills as part of their curriculum. Our conversation, therefore, should not only be about how many are schooled, but rather how many are skilled to make Africa a powerhouse for solutions...by engaging in frank discussions on how to partner with the private sector to steer Africa’s stake in the STEAM future.”

H.E. Claver Gatete

Executive Secretary



At the Africa Business Forum in Addis Ababa, Feb. 19th, 2024: H.E. Claver Gatete with Doron Avni, Google’s Vice President of Government Affairs & Public Policy, Emerging Markets, after signing landmark MoU to foster and accelerate digital transformation in Africa.



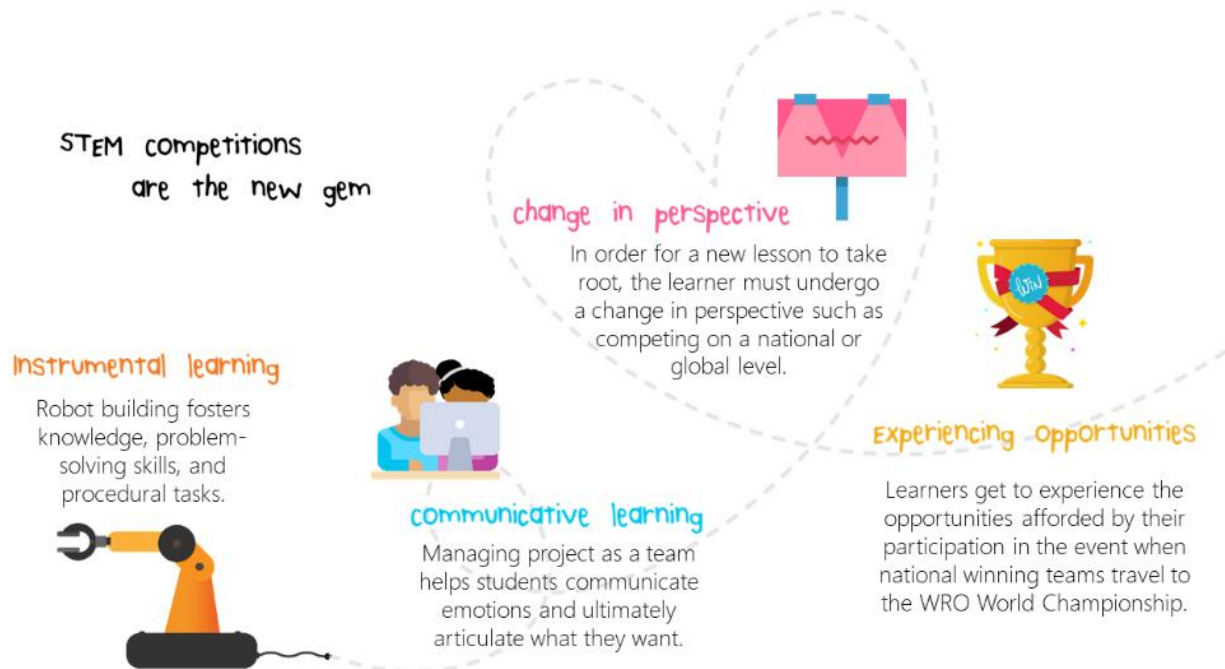
Photo Credit: Google, ECA

[Image links to press release]

<https://www.uneca.org/stories/eca-and-google-sign-agreement-to-foster-and-accelerate-digital-transformation-in-africa>

...They acquire skills for life

For future skills to match the ecosystem for quality jobs, particularly in AI, African students need an arena to apply their skills and explore what lies beyond the ‘good enough’ horizon. This is where the fun and challenge factors brought in by global competitions steps in.



When applying John Mezirow's Transformative Learning Theory to a competition like the World Robot Olympiad, we see that all aspects of effective learning are met. Photo Credit: Pixabay, the Camden Education Trust (2024)

Together, partners selected the World Robot Olympiad as a trusted non-profit framework to achieve their goals, taking young African learners to the next level of CS learning fostering digital, creative and problem-solving skills every step of the way. According to the WRO annual report, WRO participants code for roughly 65 hours before a regional event – and many more for national and international events! Research conducted by WRO Germany also says that 79% of competing students develop problem-solving skills. Competing on a global stage alongside teams from all corners of the world is also a great way for young people to celebrate their achievements nationwide and continent-wide.

...They solve real-world problems

When students compete, they face real-world problems that require creative and innovative local solutions. They become more inquisitive, research independently, solve problems, learn to work with others and strive to do more than is required. They reach the next level of learning to think logically, test their thinking in teams, learn to present their research, and be creative and resilient – quite a priceless portfolio in the future workplace where workers are to solve increasingly complex challenges and socio-economic equations.

"Google is honoured to partner with ECA and Camden Education Trust to upskill over 9,000 young students in AI, robotics, and coding, fostering their participation in the World Robot Olympiad (WRO) global competition", says Charles Murito, Regional Director Government Affairs & Public Policy for Sub-Saharan Africa. "Our objective is to unlock the potential of African youth and provide young innovators with the opportunity to create a better world through technology. We acknowledge the dedication of local teachers, educators, NGOs, and departments of education for making this program a reality."

This year, students' mission, should they accept it, is no smooth sailing: ethical, societal, environmental, and legal waves will be theirs to navigate as they dive deep into this year's "Earth Allies" theme and investigate how robots can help us live in harmony with nature.

"My SDG15 'Life on Land' project aimed to address land poaching, land degradation and veld fires issues related to SDG 15. By leveraging Infrared and gas detection integrated with SMS technology, cloud based data collection, we developed an innovative solution that could potentially help my country tackle current problems and stand with other countries in promoting environmental sustainability."

Munashe Kawadza

Student at Petra College
3rd place winner of the WRO National competition in Zimbabwe

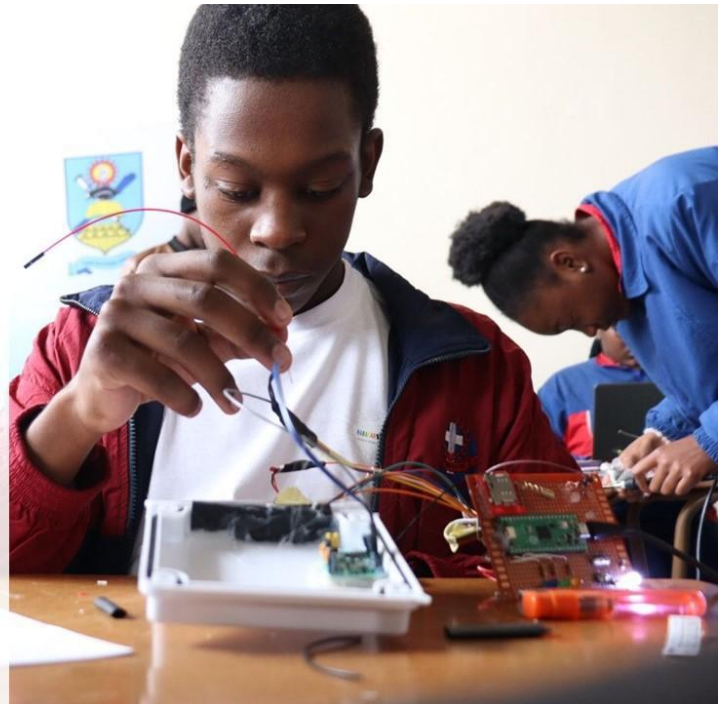


Photo Credits: The Camden Education Trust, The Girls in STEM Trust Zimbabwe, WRO

[[Link to](#)]

WRO in Zimbabwe, June 2024: <https://www.youtube.com/watch?v=-E28tIUIGYc>

...Educators and entire nations are inspired and transformed

While some countries like Nigeria and Zimbabwe are already chanting their [homecoming heroes](#), more teams of young innovators are currently forming and gearing up towards their national competition in 14 countries. After several days of technical fun and intensive team work, winning teams are selected in each country. But that's not it: some of the winners will be traveling to Izmir, Turkey, on November 28, 2024 to compete on the global WRO stage with winning teams from each of the 90 participating countries.



Credits: The Camden Education Trust, The Girls in STEM Trust Zimbabwe, WRO, Google, ECA

The Camden Education Trust is the third partner actively supporting the digital skills component of the ECA–Google Partnership agreement. This not-for-profit company with Charitable Status based in Ireland is bringing its Continuing Professional Development (CPD) expertise and best-practices for scaling education projects into the equation.

While such competitions are a great way to foster intra-African cooperation in STEAM education, the Google–ECA agreement also aims to institutionalize the latter in each participating country. Hence the Continuing Professional Development program developed by partners to onboard educators and equip them with the robotics materials and skills they need to organise the national WRO competitions in their own country. As partners scale this CPD across Sub-Saharan Africa, they also engage with governments and education systems to secure policy support for CS and STEAM education from policymakers.

Who’s next on the WRO agenda? Ethiopia. Partners are currently working with [STEMpower](#) to train over **600** youths in robotics across the 40 STEM centers located in Addis Ababa and other regions ahead of the national WRO competition.

For more information on the initiative:

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