

Hunting Africa's Einstein with a science lab on wheels

November 8 2017, by Aminu Abubakar



A technician with the "Science on Wheels" truck at a school in Nigeria's Katsina state, where only about a fourth of secondary schools have science labs

A dozen other students look on as Umar Amadu uses a glass pipette to draw a solution from a conical flask as part of a chemistry experiment.

It could be a scene from any [school](#) laboratory around the world, but until two months ago Amadu and his fellow students had no access to

any [science](#) equipment.

Science subjects at his rural secondary school outside the city of Katsina in northern Nigeria were taught using theory only.

But now they have all the kit they need to put theory into practice, thanks to a mobile science lab that tours selected state schools.

"It's an exciting experience. We were being taught only the theoretical aspect of science subjects," Amadu, who wants to be a doctor, told AFP.

"But with this project we now have a better understanding of what we are taught."

Teacher shortage

The "Science on Wheels" project is the brainchild of international development charity Voluntary Service Overseas (VSO) and is supported by the consumer goods company PZ Cussons.

A truck equipped with laboratory equipment tours the state, allowing 7,500 students and 15 schools to conduct practical lessons.

It also aims to haul Nigeria up the rankings for the quality of its science and math teaching, after a World Economic Forum study ranked the country a lowly 131st out of 139.

The Katsina state government pays for the driver and fuel to take the truck to each school twice a week.



The Government Day Secondary School in Muduru, Nigeria, has 734 pupils but had only one teacher for its 157 science students

Katsina—the home state of President Muhammadu Buhari—was the first in mainly Muslim northern Nigeria to introduce so-called Western subjects in education in the 1940s.

But since then the sector has suffered from years of neglect and under-investment. Now, it has a substantial share of the more than 10 million out-of-school children in the north.

About 16 billion naira (\$45 million, 38 million euros) was allocated to education from Katsina's 140.2-billion-naira budget this year.

According to state governor Aminu Bello Masari, the state has a deficit of 13,000 teachers, as there are currently just 5,200 for its 432

secondary schools.

Only 123 of those schools have science labs.

The state government has tried to address the teacher shortage by re-employing retired teachers and even deploying civil servants to classrooms to help out.

It has also tried to attract university graduates from the more educationally prosperous south, with postings to Katsina part of their mandatory one-year national service.

'Drop in the ocean'

For the "Science on Wheels" project, VSO said it had to take on 60 science and math teachers to go to the 15 selected schools.

Amadu's school, the Government Day Secondary School (GDSS) in Muduru, has 734 pupils but had only one teacher for its 157 science students.

School principal Sagir Ladan said the mobile science project has allowed it to take on three more and helped overcome lack of funding for infrastructure and laboratory supplies.



Poor funding for schools in Nigeria means that many students must sit on the floor or perch on broken window sills

Poor funding is obvious from the classrooms at the school, most of which have no furniture, with students sitting on the floor or perching on broken window sills instead of desks.

VSO's country director in Nigeria, Lucia Balonwu, said the charity's project was a small step towards overall improvements.

"The challenges are enormous and our effort is like a drop in the ocean, which we hope will make an impact on the quality of education in Katsina state," she added.

African Einstein?

Governor Masari said it would take at least three years to assess the impact of the mobile science lab project, based on exam results of participating students.

But GDSS Muduru chemistry teacher Oduigue Chidera said there was already "a marked improvement" in the students' motivation and practical comprehension.

"Right now they have the confidence of conducting the practicals by themselves unlike before," he said.

VSO is monitoring the Katsina scheme with a view to rolling it out across Africa, where many countries face similar challenges with basic facilities and equipment.

It wants to inspire young science students to be the "Albert Einsteins of tomorrow", referring to the Nobel-winning physicist who developed the theory of relativity.

"This is the stepping stone for a pan-African science revolution," Balonwu said as students busied themselves with practicals.

"Despite there being over 400 winners since 1901 of the Nobel Prize for physics, chemistry, physiology or medicine, an indigenous Sub-Saharan African is yet to win a Nobel Prize in one of these scientific fields," she said.

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