

The making of future women scientists

The WWW project has put in place a pedagogical package and attendant supportive mechanisms to help improve teaching and learning of science for schools in Nairobi



Pupils of Tujisaidie Community Centre demonstrate how to make and use an electric bell using locally available materials during the science exhibition for schools in Nairobi under the umbrella of the WWW project.

By targeting schools in Nairobi's informal settlements, the WWW project aims to inculcate a positive scientific mindset to ensure more disadvantaged girls take up careers in science and technical fields.

The outcomes of this initiative were on display at Dhawabu Primary School in Soweto during a science exhibition where pupils used locally available materials to develop complex projects and demonstrate scientific concepts.

By working closely with our partner, Concern Worldwide, we are training and enabling teachers in selected schools in Nairobi to effectively teach Science, Technology, Engineering, and Mathematics (STEM) in a way that makes these subjects more attractive, especially to girls.

The WWW project has also procured science kits made of locally available materials, to be distributed to schools in Nairobi to enhance learning and teaching of science.

The science kits were bought from the School Equipment Production Unit (SEPU).

These kits, coupled with regular mentorship, will help teachers easily demonstrate abstract scientific concepts to help pupils learn better.

A survey carried out in 2017 revealed that there were only 21,400 professional women employed in the science and technical fields in Kenya compared to 52,000 men, more than double the number of women.

We hope to address this imbalance in the next few years.

Girls showcase ingenious scientific models

Pupils from schools in Nairobi's Soweto slums used locally available materials to develop ingenious projects and demonstrate understanding of scientific concepts during the science exhibition



1. A girl from Edelvale Primary School in Nairobi demonstrating a scientific experiment relating to gases and liquids during the exhibition.

2. A girl from of Glory Elite Junior School in Nairobi explaining a model showing the arrangements of planets in the solar system during the exhibition.

3. A girl from Tujisaidie Community Centre in Nairobi showcase a fan which can blow a current of air through grain to remove the chaff.

Cash transfers: Securing girls' education

Susan is among more than 1,900 vulnerable households in arid and semi-arid lands and urban slums in Kenya receiving monthly cash transfers through their mobile phones from the WWW project



Susan Mwikali feeding her pigs which she keeps behind her house in Mukuru slums, Nairobi. She bought them using funds given by the project.

To earn a living, Susan forages in a dumpsite near her house in the sprawling Soweto slums in Nairobi, Kenya.

Sifting through unsorted rubbish and garbage, she picks plastics and other valuable items for sale to feed her family.

In August last year, she was among those selected by the WWW project to receive cash transfers to support her daughter's education.

Over time, she saved the money and bought pigs, which she hopes to breed and sell so she can generate enough money to pay for her daughter's secondary school fees next year.

The first-born daughter is currently in class eight at a local primary school. She also has another daughter in baby class.

She is among more than 1,900 vulnerable households in arid and semi-arid lands and urban slums in Kenya receiving monthly cash transfer through their mobile phones from the WWW project.

Vulnerable families receive direct financial support to enable them cover costs of schooling. It seeks to address economic challenges facing the households with a view to enabling them find alternative ways of survival.

The families are encouraged to save part of the funds and start small businesses to enable them pay school fees for the girls when they get to secondary school and also buy items necessary for their schooling.

The project aims to improve learning and transition of marginalised and vulnerable girls in Kenya.

I started getting the cash transfer from the WWW project last year (2018) in August. The money has greatly helped my daughter in school. We are always asked to pay Ksh 500 every month for tuition. Before, I could not pay for the tuition but now I can pay for her. I saved the money and bought pigs. When they breed, I'll sell them and get money to pay for my daughters' secondary school fees.

SUSAN



Before my mum started getting the money, I used to be sent home for school levies because she did not have the money. Since class seven, I have never been sent away from school because of the money my mum gets from the WWW project. She can also afford to buy for me all the items required in school. I want to pursue my education to university and become a pilot.

PURITY

Peer learning to improve English and Math

According to David Boud, a learning expert, pupils learn a great deal by explaining their ideas to others and by participating in activities in which they can learn from their peers



Pupils from different schools in Kinango Sub-County in Kwale sit in groups to share and learn English and Mathematics from their peers. The peer learning exercise was done in all the 8 project counties.

Numeracy and literacy - English and Mathematics - are critical building blocks for learning.

For this reason, WWW project schools have adopted a peer learning strategy to enable pupils learn with and from each other by discussing and sharing ideas on how to handle specific topics in these two subjects.

Beginning the month of June, 2019, all learners of grades five to eight congregated in different venues to participate in this exercise across all the eight counties. The aim was to share and enhance their knowledge and understanding of mathematics and English.

According to David Boud, a learning expert, pupils learn a great deal by explaining their ideas to others and by participating in activities in which they can learn from their peers.

In peer learning, pupils *construct their own meaning and understanding* of what they need to learn; and engage themselves *intellectually, emotionally and socially* in “*constructive conversation*” and learn by talking and questioning each other’s views and reaching consensus or dissent.

I suggest that these activities be done monthly so as to enable us check on our speed, performance and boost our interest in mathematics

DIGNA, NAROBI COUNTY



It was really interesting and enjoyable as we worked out together. We found the activity easy as we came up with different ideas.

LUCY, KILIFI COUNTY