

ARCSSTE-E - iLAB Robotic Education Programme (REP)

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One of the mandates of the African Regional Centre for Space Science and Technology Education in English (ARCSSTE-E) is to popularize space education through outreaches and awareness programs to school children and the general public in the rural and urban parts of Nigeria. For effective implementation of this mission, space clubs are established by ARCSSTE-E as part of the “catch-them-young” initiatives geared towards the sustained efforts in sensitizing and educating students at all levels on the benefits of space science and technology and its applications. Over the years, the Centre has inaugurated over 300 space clubs in primary, secondary and tertiary institutions in Nigeria. The Robotic Education Program, which is an initiative between ARCSSTE-E and iLab Obafemi Awolowo University, is one of the activities introduced to existing space clubs in 2011. The robotic education is intended to inspire the students. Though it is a relatively new field of study in Nigeria yet it was fully explored by the younger generation to stimulate interest in space exploration.

The pilot phase of the Robotic Education Program (REP) began in February and July 2011 and was successfully completed in July 2011. Thirty (30) Students from 3 selected secondary schools which are Ambassadors College, Ile-Ife, St David's Grammar School Ile-Ife and Adesina College, Ibadan received 6-weeks training on robot building and programming using Lego MindStorm® robotic kits. The students and their teachers were mentored by tutors from iLab-OAU, iLab-OAU were a set of trained and skilled students of Obafemi Awolowo University studying in various departments including Electronic and Electrical Engineering and Computer Science department.

The pilot phase of the robotics education programme was structured such that it had six classes spread over six weeks. The programme was divided into various parts so that the aims and objectives can be achieved; Week 1: Introduction to Robotics, Week 2: Assembling Lego Robots, Week 3: Use of Sensors, Week 4: Programming the Robots, This class was a form of extension of the previous week but with focus on a different platform, Week 6: Students built their own robots and played around the programming of the robots.

The students came up with very interesting robots for diverse application; robots designed to move robots around the room without crashing against obstacles, robots that moved around a particular colours, a robot that detects potholes on the road etc. The student wrote there program with very little assistance from the tutors and it worked fine.

After the training programme, a robotic competition on the application of robots in the society was held between the three schools after which Ambassadors College emerged the winner of the competition. This now form the team for the centre which represented Nigeria at the 2011 World Robot Olympiad (WRO) that was held in Abu Dhabi, United Arab Emirates from 18 to 20 November, for students between the ages of seven (7) and nineteen (19).

The link for the pictures:

<https://postimg.org/gallery/30ydheo66/>

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