Introduction training to drones and robotics for girls

Learner inspecting a drone

Learner coding a robot

Learner checking the controls of a DJI Mavic drone

OVERVIEW	
Flying Labs	South Africa
Location	JOHANNESBURG SOUTH AFRICA
Date	12 June 2021

Length (number of days)	1 Day
Sector program	AidRobotics, DevRobotics, YouthRobotics
Format	In-Person
Co-organizer if applicable	QP Consortium and Tshimologong
SDGs	GOAL 1: No Poverty GOAL 4: Quality Education GOAL 5: Gender Equality GOAL 10: Reduced Inequality

SCOPE & OUTCOMES	
Type of training	1. Introduction training to drones 2. Youth/STEM training 3. Robotics training
Goal of the training	1. Create drone awareness 2. Train and empower youth and the workforce of the future 3. Teach youth how to program robots
Expected outcome for participants	1. Introduction to drones and robots 2. Career options 3. How to program drones
Confirmed outcome after training	Students gained the following skills and knowledge: 1. Understanding the different applications of drones and how it can be used in social good sectors 2. Developing an understanding of regulatory requirements for operating a drone in South Africa 3. Developing basic understanding of a robot and how to program it
Eventual next steps	Source funding for a 3-5 day drone and robotics course for young people

PARTICIPANTS	
Profiles and number of participants	• 2 Local community members • 2 University students- Observers • 10 School children • 2 Industry partners (Airlink)
Name of participants' organizations	SOS (Orphanage for girls)
Gender ratio	100% Female
Who paid for the training?	Free training
Scholarships offered?	Yes

CONTENT	
Training components	1. Introduction to drones 2. Introduction to robotics 3. Robotics kits

Training resources used	• Laptops
	• Drones
	  ○ 1 DJI Mavic Enterprise Zoom
	  ○ 1 DJI Mavic 2 Pro
	  ○ 1 DJI Phantom 4 Pro
	  ○ 1 Tello drone

Approaches and methods used	• Girls were interviewed and those with the appetite and aptitude for tech were chosen. • Robots were provided for the participants, so they can participate in our programming exercises. Drones were also made available and the girls were taught the basic controls of flying drones. • Different types of drones were displayed. • We tested the program of the robots and basic controls of the drones together.