CATA TECH: DE DRONES

Figure 1: Students participating in the hands-on activities

Figure 2: Students doing final checks with their codes before taking off.

OVERVIEW

Flying Labs	Spain Flying Labs
Location	Logroño, Spain
Date	27 November 2021
Length (number of days)	1 Day
Sector program (optional)	YouthRobotics
Format	In-Person training
Co-organizer if applicable	None
SDGs	GOAL 4: Quality Education

SCOPE & OUTCOMES

Type of training	1. Introduction training to drones 2. Youth/STEM training
Goal of the training	1. Create drone awareness 2. Train and empower youth and the workforce of the future
Expected outcome for participants	Participants expected to learn about tinkering, experimenting and learning more about drones with drones. This also included assembling the drone in pairs and later flying a real drone.
Confirmed outcome after training	Confirmed outcomes of this training included youth being able to: ● Understand the characteristics of drones ● Become familiar with the assembly of an open-source drone ● Complete flight teste with a simulator and a micro quadcopter ● Practice collaborative methodology and self-knowledge ● Reflect on the many uses of drone technology and become aware of social challenges.
Eventual next steps	● Improved drone kit

	● Improvement of the presentation to the boys to fix concepts that are not clear or notes that are not interesting. ● Build new materials to expand the workshops.

PARTICIPANTS	
Profiles and the number of participants	● School children - 95 children around the ages 0f 12.
Name of participants' organizations	● Educaires ● iSchool
Gender ratio	Female : Male 50% : 50%
Who paid for the training?	Free training
Participant fee rate (if applicable)	No fee
Scholarships offered?	No scholarships offered

CONTENT	
Training components	The workshops or trainings all have the same format of three areas: - Motivation and Introduction - Assembly of the drone kit called "Dronino" - Indoor or outdoor drone flight
Training resources used	● Presentation in free format with LibreOffice ● Projector ● Drone Kits - Made in house called "Dronino" ● DJI Tello Drones ● Tablets with Tello apps installed ● Blog Post
Approaches and methods used	● We adapted the training to our young audience by firstly being enthusiastic and highly motivating. We simplified the presentation and elaborated more on

	practices in the process rather than theory.
	• At the kit assembly level, we progressed gradually, making sure every youth was learning along the way. We did this by … shorter or longer
	• To test their understanding, we used Tello drones for hands on practice which the youth excelled at
	• At the end of the workshop, youth get a chance to communicate or present what they learned in the workshop back to the Instructors, which for us is a great way of knowing that the training was successful in imparting the youth with new knowledge and concepts.
	• Since this is the third training, we have also allowed youth who have previously benefitted from the training to come back again. We encourage this as their interest and attendance shows us that they are enjoying the training and eager to learn more.