



Erasmus+ Ka2 D.E.L.T.A. Project

Drones: Experiential Learning and New Training Assets

Newsletter no. 3 – October 2018





## **At a glance**

Did you know that many current job positions will not exist anymore in 10 years time? And did you also know that in 10 years time there will be many job positions that don't even exist today?

Most future jobs require STEM knowledge skills but more than 20% EU students perform low in STEM literacy.

Millions of STEM skilled workers are needed from the job market but education strives to fill the gap!

DELTA Project's ambition is such alike: improving STEM literacy and skills in VET students thanks to Drone's technology, also preparing them for the tough job market of the future!

## **Why drones?**

Students enrolled in VET courses often put endless efforts in studying Mathematics and Physics. Subjects are perceived as difficult and far away from real life.

Drones' technology applied to education combines learning experiences based on experiential practice, in an interdisciplinary approach:

engineering for solving design issues, production and maintenance of light aircraft, built with advanced materials that allow the flight in accordance with EU regulations;

mathematics (from trigonometry to set the flight plan, to 3D modeling through the cloud of points for volumetric calculations and remote sensing);

the physical and natural sciences to fully understand the application fields of technology.

## **Problem Based Learning**

The motivation to learn starts with a problem: this is the methodological approach that all partners share in DELTA project. When students face a problem to solve themselves, they are motivated to look for a practical solution, exploiting all the knowledge and skills that they have. This approach is more effective than the classical "chalk and talk" theoretical model of education.

## **Work Based Learning**

Students learn in a work-based setting according a project-work approach. Teachers are encouraged to build a learning environment that simulates the real work situation but that it is also safe and protected at the same time. This methodology enhances work related skills, entrepreneurship and employability of the pupils, preparing them for their future jobs. Students are also asked to share their knowledge and skills with their peers, according to a "collaborative learning model".

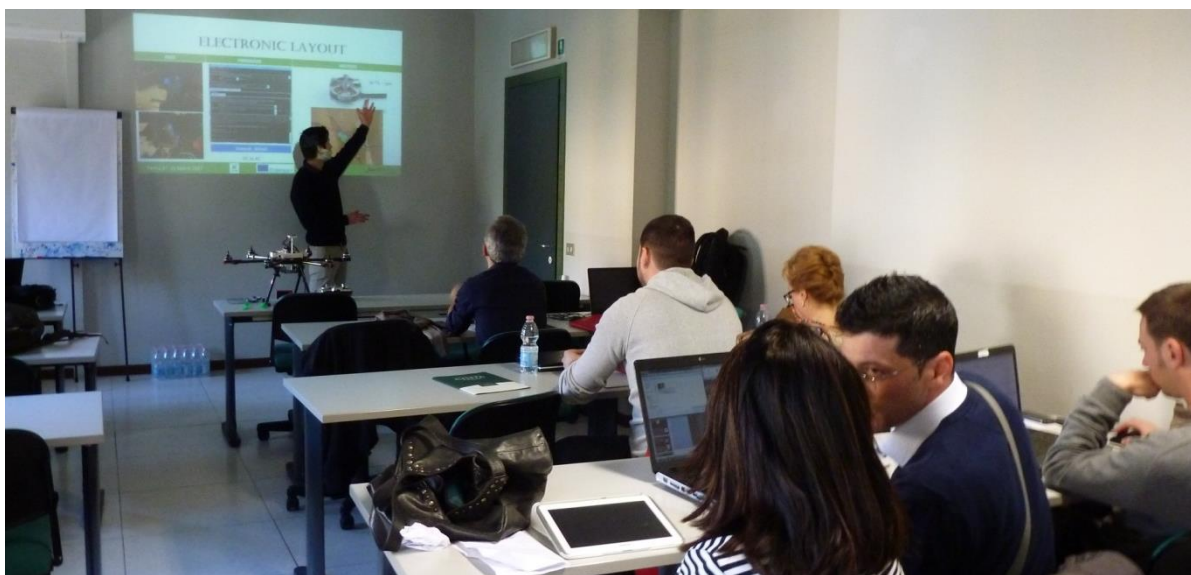


## **Teachers' training**

Before getting started with the project based experimentations, VET teachers and tech experts shared a Joint Training Week, to share both the school programs and the drones technology highlights.



The purpose was to find and plan the implementation of the most effective way to build STEM teaching programs using drones as the enabling technology. The partnership considered the drones technology from the point of view of the “cycle of industrialization” (engineering, ICT, electronics, mathematics, science).





## **Students' training**

Before immersing students in real work-based learning environment, partners decided to make them more familiar with drones technology, flight basics and with general EU and national regulations. Different seminars were organized in Italy thanks to Cisita and Aerodron....



As well as training sessions were organized also in Romania thanks to Ludor Engineering company, based in IASI...



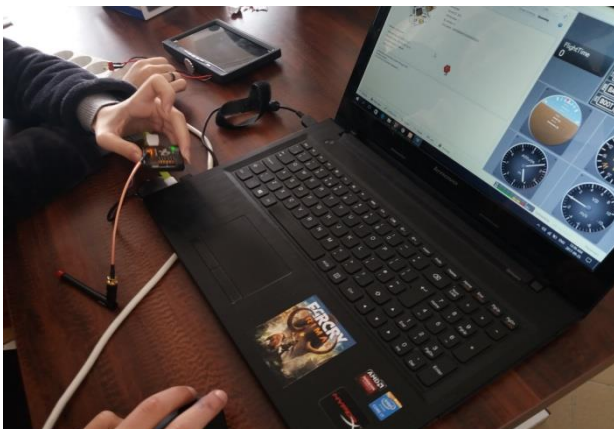


And in Spain also, thanks to AITIIP research & development center based in Zaragoza



**EVENTS:** 7<sup>TH</sup> – 8<sup>TH</sup> March 2018 – 4<sup>th</sup> Transnational Meeting - Maranello (Italy)

During the meeting, which was hosted by P3 Ferrari school in Maranello, partners discussed the design and implementation of IO3 program about the electronical parts of drones. Among the possible choices of implementation, partners discussed the neural network technology, which allow the simultaneous recognition, localization and mapping of physical objects based on specific electronical sensors and on the most advanced Artificial Intelligence technology.



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Experiential Learning and new Training Assets

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**PARTNERSHIP**

