Robotics and programming in a secondary school thanks to an innovative educational project

LOCATION: Seville
DURATION: 1'47"

SUMMARY: José Pujol is an engineer in Electronic and Control Engineering. A decade ago he left his job in private enterprise to commit to teaching. Since then, he has put in place an innovative robotics and programming teaching system in which students don't receive theory classes, but learn whilst developing projects, including automated greenhouses, smart houses, 3D printers… Their work in the Vicente Alexaindre Secondary School Seville has led to them receiving first place in the "Antonio Dominguez Ortiz" 2016 awards for classroom innovation, awarded by the Andalusian Council.

VTR:

BACKGROUND: "We'll finish the projects that, especially online, there are still sections that need finishing."

Vicente Alexaindre Secondary School, Seville. These secondary school students have created in Tech class a scale model of a smart house…

GABRIEL KOJ
Student

"It has solar panels which are used to charge batteries, it has an automatic door with a distance sensor…"

They're testing the functioning of their robotic arm. They adjust the greenhouse in which everything is automated… And don't forget the 3D printer.

CARLOS DÍAZ
Student

"We put together the structure, and the printer's electronics."

It's the result of a year of hard work with their teacher José Pujol. An engineer in Electronics and Control Engineering, he left his previous job a decade ago to commit to education. This course has been awarded by the Andalusian Council for classroom innovation.

JOSÉ PUJOL
Vicente Aleixandre Secondary
School Teacher

"Instead of someone telling me how a LED works, I'm going to learn more if I take a LED RGB, programme it and learn how it works."

Their students are learning about programming and are developing a project.

JOSÉ PUJOL
Vicente Aleixandre Secondary
School Teacher

"Encouraging the students' creativity and they're the ones who choose the projects."

And they're developing them using free hardware and software.

JOSÉ PUJOL
Vicente Aleixandre Secondary
School Teacher

"Which allow everyone to access this knowledge, anyone can use them, create them, modify them."

On a separate note. This committed teacher has created an association, Kiwibot, aimed at spreading robotics and open source programming. Some students, are already involved, they collaborate with him after school. Back in the classroom but, there are no exams. The students self-evaluate with the teacher. The grades aren't what's important.

GABRIEL KOJ
Student   *"Probably I will work with technology and programming in the future."*

It's what they really learn and future expectations will open before them.

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