

15th Scientix Projects  
Networking Event  
Galway (Ireland), 24 May 2019



Including  
pre-service teachers  
to prolong the life of  
innovative projects

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# Saturdays of Science. Objectives



- The promotion of scientific and technological vocations in kids.
- The creation of a culture of inquiry and engineering process in schools.
- The development of skills for the implementation of STEM approaches in pre-service teachers.



# Saturdays of Science, what is it?

- Scientific workshops for students from 6 to 12 years old.



- Counts on FECYT's collaboration. The Spanish Foundation for Science and Technology – Ministry of Science, Innovation and Universities.



# Saturdays of Science. How does it work?



Children, divided into small groups, develop experimental projects for about 2 hours based on:

Inquiry  
Based-Learning



The Engineering  
Design Process



# Saturdays of Science. How does it work?



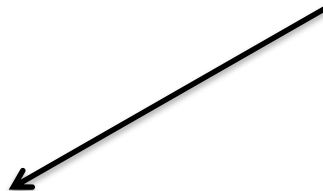
Experimental projects are designed by pre-service primary teachers and former students. Then, they are supervised by University professors



The projects are conducted by pre-service primary teachers



The results are evaluated by University professors to



Improve future implementations

Use the conclusions in other projects

# How to prolong the life of innovative projects?



The pre-service collaboration in *Saturdays of Science* also allows us to connect it with other projects like botSTEM

(<https://www.botstem.eu/>)



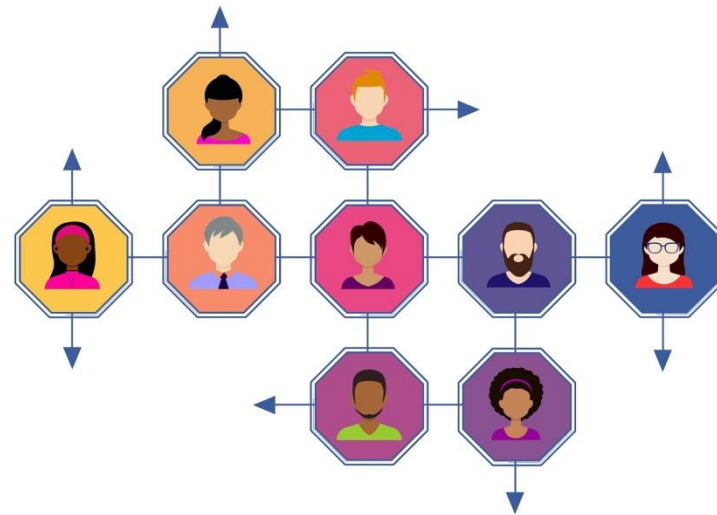
This European Project aims to develop a new methodology to integrate STEM programmes into the formal education curricula for childhood and Primary Schools, using Inquiry Teaching and the Engineering Design Process. Robotics and programming are included as educational resources.

# How to prolong the life of innovative projects?

This connection has helped us create a learning community where educational professionals are able to exchange knowledge, concerns and ambitions.

For the moment, in the case of pre and primary teachers their amount of work reduces significantly their active implication in this community.

But their growing participation in the implementation of STEM activities allows us to disseminate and share their projects.



# How to prolong the life of innovative projects?

UBU is committed to create a specific curriculum in Science Education in order to help pre-service teachers develop the required competences to implement STEM approaches:

- Degree in Early Childhood Education: Optional Subject-*Workshop of Social Skills for the Professional Exercise in Infant Education* (6 ECTS credits)
- Degree in Primary Education: Compulsory Subject-*Research and Innovation in the Learning of Environmental Knowledge* (6 ECTS credits)
- Master's Degree in Educational Research and Innovation: Optional *Subject-Research and Innovation in Didactics of Experimental Sciences and Mathematics* (6 ECTS credits)
- University Expert in STEAM Teaching with Educational Programming and Robotics (19 ECTS credits)





# How to prolong the life of innovative projects?



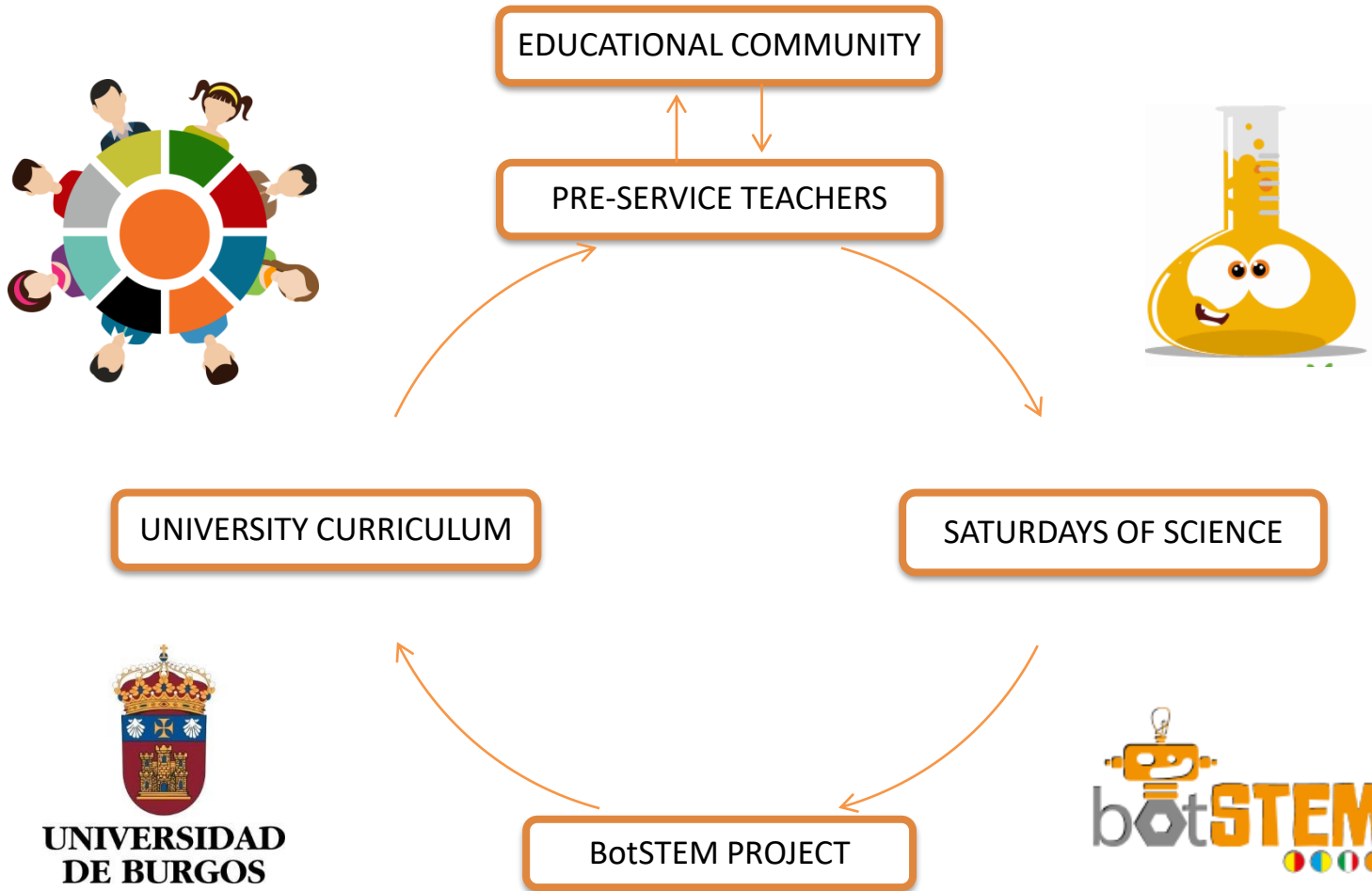
In this way, along with the growing learning community,

- The interest of our university students in learning about this way to teach Science year after year participating in *Saturdays of Science*,
- Their internships in pre-primary and primary schools and
- Their future professional careers

allow progressively the implementation of this approach in Pre and Primary Schools and their consolidation as a referent in a transdisciplinary education.



# How to prolong the life of innovative projects?



# How to prolong the life of innovative projects?

Without doubt we can assure that thanks to pre-service teachers our projects have a longer life and a greater impact on the present and future of Science education in our community.



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THANK YOU VERY  
MUCH FOR YOUR  
ATTENTION

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