Key Action: Cooperation for innovation and the exchange of good practices
Action Type: Strategic Partnerships for school education

Project Title

Teaching ICT with Inquiry

Project Coordinator

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Project Information

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EC Contribution	197,382.99 EUR
Partners	EUN PARTNERSHIP AISBL (BE) , UNIVERSITE DU MANS (FR) , UNIVERSIDAD DE LA IGLESIA DE DEUSTO ENTIDAD RELIGIOSA (ES) , UNIVERSITY OF CYPRUS (CY)
Topics	ICT - new technologies - digital competences ; New innovative curricula/educational methods/development of training courses ; Reaching the policy level/dialogue with decision makers

Project Summary

TIWI project developed an innovative learning and teaching methodology how to teach ICT with Inquiry aiming to: contribute to ICT curricula development, involve students into programming and coding skills development combining it with Inquiry-Based Science Learning (IBSL). Teachers enabled to focus students on learning ICT by doing, and to challenge them in discovering answers that arise from real world situations.

The Teaching ICT with Inquiry (TIWI) project provided teachers with tools and skills to enable them, with the use of the inquiry-based approach, to teach coding – the digital language used by ICT tools and STEM subjects. TIWI helped upper primary and secondary educators to: gain new skills and be in a position to teach coding efficiently to their students, with the help of examples from STEM subjects; become comfortable in using the inquiry-based approach and interactive tools provided by Go-Lab ecosystem in their teaching for learning by doing; implement inquiry-based activities in classrooms all over Europe.

Almost 1000 participants – ICT and STEM upper primary (9-11 y.o. students) and secondary (12-19 y.o. students) schoolteachers as main target group – were involved in the TIWI project activities in the Europe and beyond (Turkey, N.Macedonia). This number also includes future teachers (pre-service training), who could also: participate in the project activities by taking part in MOOC (IO1) that was also open to any interested teachers of other subjects, use Career material (IO3) produced within the proposed project, and participate in European STEM discovery week 2020 competition (IO2 activities).

Six national face to face multiplier events (MPE) organised by partners in Lithuania (3 events), Cyprus, Spain and France (2 events), encouraged 101 focus teachers per all countries to implement TIWI methodology in their practice. These teachers of ICT as a separate subject or as a part of STEM disciplines were selected through the nation-wide open calls. MEP training activities provided in the MPE programs enabled teachers to discover new ways of encouraging students in learning ICT through inquiry – creation of Inquiry Learning Spaces (ILSs) supported by Go-Lab ecosystem, and that integrated programming or coding activities. During the multiplier events (MPE) teachers discussed participation in a research while creating and implementing ILSs in their classes. They provided responses to pre- and post-implementation survey (IO4 activity) laying the groundwork for the research based on their case studies of Inquiry based science learning use for teaching ICT.

TIWI project team supported focus teachers on the national level during the MEP and beyond it, and empowered teachers to adjust their teaching practices to the innovation proposed and let them share to each other's elements of the new learning design to their students, their XXI century and ICT skills development while using inquiry-based learning. Supporting video for teachers telling about the TIWI good implementation practice (IO2) also created to facilitate initial innovations after the project.

To respond to the market demand for digitally competent professionals in all sectors of the economy and to overcome their shortage Career materials (IO3) containing role model profiles of ICT professionals were developed. These used by secondary education teachers as prompts in order to demonstrate to their students the richness, variety and skills needed for pursuing successful ICT related careers. Considering the project methodology, ILSs related to the careers, and promotional videos are also created to facilitate its use, and to help teachers introduce the particular professional scientific method of thinking and working into the classroom.

Teachers confirmed the method has proven successful in developing more sophisticated programming skills and researchers thinking as well. They noted also increased students' motivation while learning of ICT skills incorporated into an ILS implementation during the lessons. For further Teaching ICT with Inquiry implementation

developed 'Blueprint on the successful use of inquiry in teaching ICT' for educators and policy makers (IO5) in English; Lithuanian short version with the TIWI teachers STEM discovery week 2020 winners' implementation stories localised as well.

TIWI main dissemination channel is a website: http://tiwi.eun.org/
Lithuanian webpage on the national NAE website:
https://www.nsa.smm.lt/administracine-informacija/tarptautiniai-projektai/teaching-ict-with-inquiry/

Link to project card: Show project card

* Results are available for this project. You can click on the link above, and go to "Results" section to view them