IoT, Big Data and AI: Innovating STEM Teaching Through Strengthening Teacher Professionalisation

Teacher Training & School Collaboration Programme in the Czech Republic, Hungary, Poland & Slovakia
September to December 2021

Background

Societies face a technological revolution and IoT, Big Data, and AI provide solutions that tackle global challenges, including climate change, food security or pandemic outbreaks.

STEM (Science, Technology, Engineering & Mathematics) skills are crucial for driving innovations and are in high demand in the workforce. To stimulate students' curiosity in STEM subjects and to prepare for possible future professional career paths, teaching and learning STEM must start at an early education level and be embedded in real-life scenarios.

Teacher training and teacher professionalisation are indispensable in this process: Only by providing quality education and by using a variety of formal, informal and non-formal innovative educational tools, teachers will be able to provide students relevant opportunities to build their digital skills and to apply their gained knowledge in daily life and a larger real-world context.

About the Project

Funded under the International Visegrad Fund, The project 'IoT, Big Data and AI: Innovating STEM Teaching through Strengthening Teacher Professionalisation' is a 4-month long hands-on training programme for teachers on IoT, Big Data & AI -related teaching in secondary schools in the four Visegrad countries Czech Republic, Hungary, Poland and Slovakia: on a pedagogical, curriculum & technical level.

Schools of participating teachers are provided with cutting-edge technological equipment that allows them to monitor and analyse environmental and climate change through joint data collection, such as air temperature, rain rate, humidity, solar and UV radiation, etc..

A common technical platform connects all schools and enables an interactive teaching & learning environment that transcends borders and allows teachers to discuss, jointly explore and identify areas for collaboration.

The project not only offers experiential teaching & learning opportunities for STEM subjects; it also allows cross-fertilisation across other subjects (e.g., English, Ethics, Geography, Social Sciences, etc.).

For further information, please visit the following:
- Project Website
- Overview
- Coordinating Schools & Partners

Join us if you want to

Build pedagogical expertise & digital competence

Explore and create 21st century teaching & learning settings in their own classrooms

Collaborate with other teachers in V4 countries through peer-to-peer exchanges

Train your students in innovation & entrepreneurial skills, as well as soft & intercultural skills such as global citizenship, critical thinking & creativity.

Apply here!

Deadline: Monday, 21 June 2021, 00:00 CET

Programme Elements

The programme consists of a variety of activity formats that encourage formal & non-formal education opportunities and includes diverse education tools.

Peer-to-Peer Collaboration	Workshops conducted by peers for peers	Dialogues with experts	Virtual classroom visits in Asian & European schools	Exchange between representatives of parent associations & teachers	Creation of virtual library of resources on wellbeing & mental health (articles, e-books, blogs, videos, hand-book, etc.)	Virtual get together of all project participants at the end

Eligibility
Teachers from secondary, high and vocational schools in V4 countries (Czech Republic, Hungary, Poland and Slovakia). Both STEM & other subject teachers will be able to integrate the project's modules in their daily curriculum or to run them as extracurricular activities.

Cost
No registration or participation costs

Language
Good command of English

Requirements & Access to Technology & Software
Technological equipment for environmental monitoring purposes will be provided by project partners

Participating schools need to ensure access to:
- Internet & computers with webcam
- Video chat platforms (Microsoft Teams, Zoom or Skype) as well as collaboration platforms such as Google Drive, Dropbox, Facebook, Slack and Graphic Design & Editing Tools.

Duration
September to December 2021

Time Engagement
Ca. 5-10 hours per month
Specific dates/times of monthly activities or meetings will be confirmed by project coordinators in due course

Participation and Commitments
- Regular attendance and active participation in activities and online group meetings
- Resource creation and sharing to strengthen the peer-to-peer learning and support platforms
- Completion of individual and team assignments related to the topics being covered in meetings & webinars
- Promotion of project activity and knowledge gained from the project in own teaching & learning community.

This project is supported by • Visegrad Fund

Coordinating & partnering schools

In collaboration with