Newsletter #3: Project tools

Home   The project   Partners   Activities   Products   **Tools**   Virtual Congress   InnoEduCO2 TV   Language

E-InnoeduCO2 Webinar

Webinar room for **E-InnoeduCO2**.

Please type your name in the box below and use the given Access Code

Name:

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Join

The e-InnoEduCO$_2$ project

"School Scence e-Learning ONE HEALTH"
(e-InnoEduCO2) is part of the Erasmus+
programme under KA226 for the
years 2021-2023.

Innovation in Education on Climate Change

Concello de Outes

USC SEPA
UNIVERSIDADE DE SANTIAGO DE COMPOSTELA
Grupo de Investigación Pedagoxía Social Educación Ambiental

CESGA
Centro de Supercomputación de Galicia

universidade de aveiro

Agrupamento de Escolas de Aveiro

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WHAT IS THE OBJECTIVE OF e-InnoEduCO$_2$?

e-InnoEduCO2 is a **STE(A)M** (Science, Technology, Engineering, Arts & Mathematics) project that is aimed at enabling students to develop innovation-related skills and competencies to compensate for barriers and deficiencies resulting from the COVID-19 pandemic.

Through the development and implementation of e-lab and e-eco models linked to augmented reality, the aim is to strengthen the capacity of educational institutions to provide inclusive and quality digital education in science.

SUMMARY:

INNOEDUCO2 TECHNOLOGY GOALS

This newsletter focuses on the use of technology during the project.

InnoEduCO2 platform aimed to provide a solution to the difficulties that in the COVID-19 pandemic time were faced by pupils and teachers during laboratory practices and field trips, such as:

- Limits of pupils' appearance in the school laboratories in order to maintain the safety distance (COVID-19 protocol), which has as a consequence of a decrease in cooperative work;
- Lack of virtual platforms adapted to the needs of experimental designs;
- Demand from teachers for resources, channels and training adapted to the new reality;
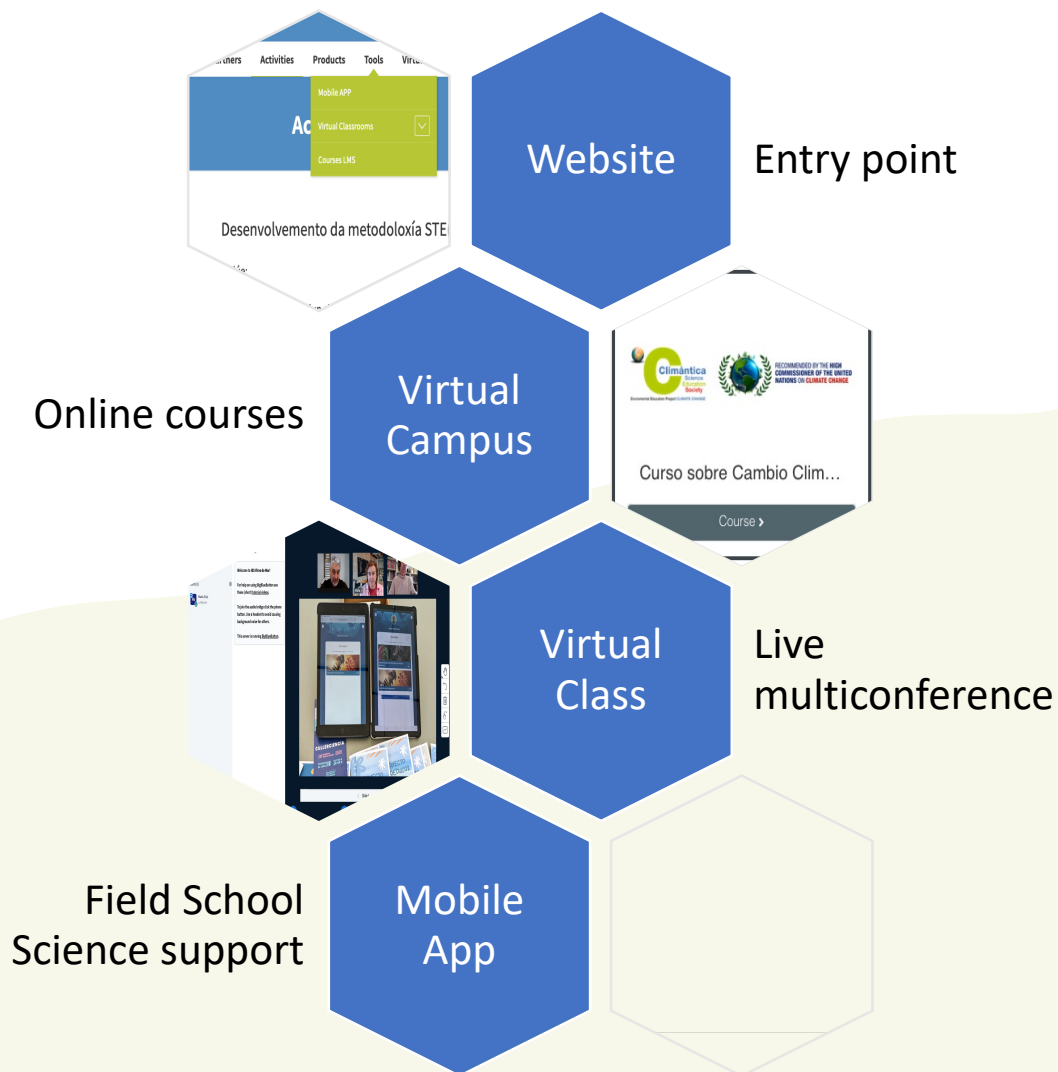
INNOEDU E-LAB TECHONOLOGY

The activities envisaged for the InnoEduCO2 Project required a flexible and adapted support from technology. This implied a design where several elements would provide functionalities identified at the beginning from partners. CESGA (Galicia Supercomputing Centre) was the partner responsable of this task.

The diagram below illustrates the different elements and main functionalities from each part.

The Project technological platform,or e-lab, provides support for project related class activities as well as to field data collection, which it could later be analized and worked within the different piloting experiences of the Project.

In the following pages, detailed information on each tool will be presented

Website — Entry point

Online courses — Virtual Campus

Curso sobre Cambio Clim…
Course ›

Virtual Class — Live multiconference

Field School Science support — Mobile App

VIRTUAL CLASS SUPPORT

Class activities were seriously affected since COVID-19 pandemic, changing routines, stablishing new procedures and safety restrictions. All this forced (science) teachers and their students to adapt to new ways of working and learning in order to progress in their school year.

As classes were required to be smaller in size, students groups were split, and some students or teachers could also be isolated at home for some days because of the virus. Innoedu provided a tool to each participant school to create a virtual live class where students could be toghether, regardless of their location, allowing blended modalities to facilitate student work.

The virtual class was based on an Open Source software, Big Blue Button, (BBB), integrated and adapted to the looks of the Project image.

The main features of the virtual class to facilitate and enhance student engagement are:

- Audio / video sharing from up to 100 participants
- Live Polling.
- Sharing External Video.
- Presentation Uploading (i.e. PowerPoint)
- Multi-User Whiteboard.
- Emoji Statuses.
- Breakout Rooms: This allows live group work in smaller roms for a period of time, and then bring back all students together to resume the big group work.
- User role management

The main virtual room is accesible from https://www.innoeduco2.org/e-innoeduco2-webinar/ and from "Tools" section in the web, each partner has its personalized Access to individual rooms.
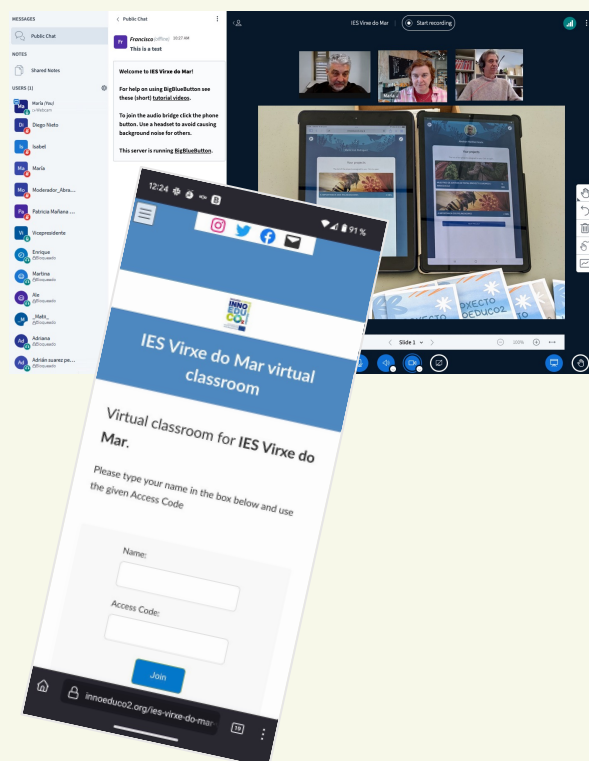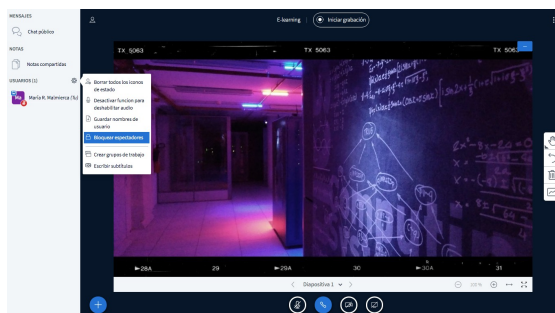
INNOEDUCO2 ONLINE CAMPUS

In cooperation with the Project synchronous tool to facilitate online classes, the Project selected and adapted an Open Source tool to provide asynchronous Access to learning contents and resources.

This tool is accesible from the Tools sections in the web, or directly at:
https://www.innoeduco2.org/courses/my/

This campus contains the learning courses, with individualized learning paths, to focus on the contents of the Project proposals, such as climate change, biodiversity, seagrass study, etc.

To achieve the level of flexibility and personalization of the online campus, the choice was an Open Source LMS, Moodle.

Moodle is the most popular learning management system among open source solutions, being one of the preferred choices globally to set up a virtual campus.

Among its main features, we can point out:

- Customizable: Moodle is very customizable, with many LTI ((Learning Tools Interoperability) integrations with other products.
- Mobile and desktop Access: There is an app and main responsive HTML5 interface for universal access. It has also accessibility into its priorities.
- Content repository: Moodle's repositories allow users to upload files to a course from a variety of outside file repositories
- Analytics: Moodle has a wide variety of reports and logs that allow instructors to track student progress and successes.
- Course management (teachers): instructors can highly customize their course setup and management.

FIELD SCHOOL SCIENCE SUPPORT

The functionalities previously presented in the InnoEduCO2 platform were complemented with a mobile system for gathering and exchanging geolocated information and integrating data from field practices.

CESGA developed a progressive web app (PWA) for the project that allowed:
- Creation and management of science project and individual field data gathering
- Geolocation of data
- Creation of different types of data (audio, photo, video, numerical)
- Capture of automatic data: geolocation, time, wheatear, air pressure, humidity, temperature, wind…
- User management for teachers
- Visualize data in map or download of individual and project data
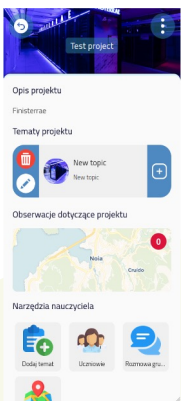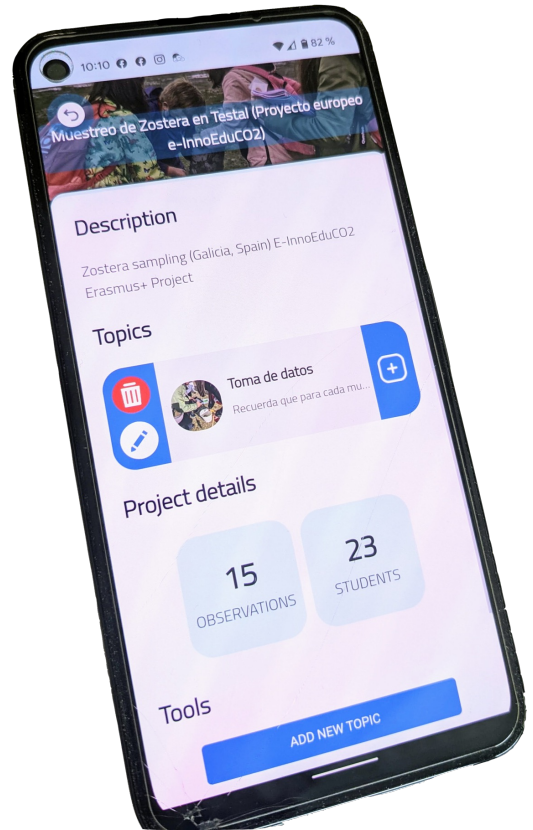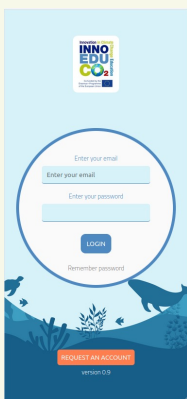
SOCIAL TOOLS

Besides its data gathering features, this app also provides social tools to enhance contact and interaction among participants in the project:
- Social feedback to individual observations
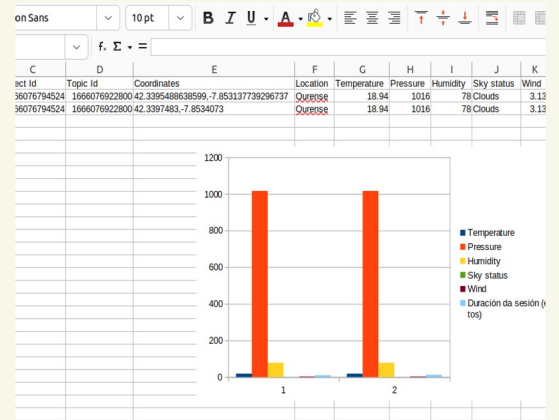- Chat from teachers to students, both individual and group chat

The app is available for download and desktop access from:

https://www.innoeduco2.org/app/

The InnoEduCO2 app is multilingual and responsive, adaptable for mobiles, tablets or even desktop access.
Data gathered can be then used in science class projects, importing it from spreadsheets, etc.

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