R2 Summary – PBL with interdisciplinary approach – blended course for VET teachers

In this phase, project partners elaborated the resources (curriculum, e-learning environment, learning content and methodology) of the blended course for VET teachers that is aimed at preparing them for applying project-based methods in a collaboration with other teachers, students and companies using innovative teaching methods. At the end of the course they are supposed to get ready to plan, design and implement micro-courses responding to the education-gap identified in the professional area by delivering a "responsive project".

Project-Based Teaching Methods for VET Teachers

This training presents a method by which teachers of VET institutions will be able to reduce the "skill gaps" constantly indicated by the labour market by mobilising their own internal professional and pedagogical resources and creative energies. The training prepares participants to expand their own professional and digital portfolio with a special project method and to develop and deliver project-based micro-courses for their students for covering the gaps.

The expected learning outcomes were aligned with the European Qualification Framework (EQF) and the Digital Competence Framework for Educators (DigCompEdu) developed by the EU.

The training is practice-oriented, focuses on cooperation of VET teachers and representatives of local companies, with involving the students as well.

The online section of the course runs in Moodle that was chosen by the partners as the e-learning environment. Moodle is an open-source web platform widely used in secondary and high education and known for its high flexibility regarding the number of enrolled users and has a lot of inbuilt functions.

The course is available in the following languages:

- *English*
- *Hungarian*
- *Italian*
- *German*

https://course.vetprofit.itstudy.hu/

Methodology and Content

The leader organizationof this WP, ITStudy prepared the curriculum for the course in English which the partner translated to Hungarian, Italian and German.
The methodology used involves:

- *learning-by-doing;*
- *active learning;*
- *focused on the methods of digital education.*

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Modules:

- Module 1. Project-Based Learning and Responsive Projects
- Module 2: Innovative Assessment Practices for VET
- Module 3. Digital tools in Project-based Learning (PBL) and in Responsive Projects (RP)
- Module 4: Planning and Developing Micro-courses.

Students' projects

Parallel to the course development, VET teachers and companies of the related field to their subjects set out true-life projects to be performed by the students. To involve stakeholders, 3 multiplier events were held for: 1 in Germany and 2 in Hungary, organized by DRDC and MAKESZISZ.
8 projects ideas have been developed by the partners in the 2 industrial fields to which the project focuses on: agriculture and IT-programming.

Projects defined by JAC (Italy):

- *Green building*
  BIM modelling; integrated design; Environmental sustainability; Energy efficiency

Projects defined by MAKESZISZ (Hungary)

- *Meteorological data influence on plant growth*
  Collecting meteorological data and measuring soil temperature in school garden. Data processing, interpretation and conclusions. Get to know an ongoing technology with a partner company.
- *Precision agriculture with drone technologies*
  Become familiar with different soil practices and aerial imagery. Collecting and analyzing data at an existing farm.
- Complete cultivation technology of a model plant
  Overview a complete cultivation technology on one model culture. Increasing the efficiency of different work processes.

Projects defined by PREMO (Hungary)

- *Measuring and increasing website traffic*
  More effective marketing activity and customer identification by increasing website traffic.
- *Utilization of a spatial service management platform*
  Increasing the visibility of local businesses and local attractions, institutions and public services by more relevant reach of users.
- *Development of an application to help family businesses*
  Understand changes in technologies to improve efficiency in family businesses in viticulture, winemaking and catering.

Projects defined by DEULA (Germany)

- *Agriculture 4.0*
  Design of systems that interact with databases and their applications in management.

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Project basics

Title: Multidisciplinary, Project-based Digital Learning Content for VET
Acronym: VETPROFIT
Project ID: 2021-1-HU01-KA220-VET-000025350
Partner countries: Germany, Italy, Hungary
Coordinator: iTStudy Hungary Ltd.
Duration: 01 November 2021 – 31 October 2024.
Target groups:
VET- schools' leadership
VET teachers/trainers
Companies (Agriculture and IT sectors)
Beneficiaries:
VET students
Employers

Aim of the project

The aim of the project is to reflect the needs of the labour market in vocational education and training, to prepare teachers to work with companies to develop project tasks for students and future employees to solve real problems proposed by them. To achieve this objective, the partnership:

Objectives

- *review the curriculum, learning materials and teaching methods used in the initial training of IT and Agricultural sectors in the partner countries;*
- *train VET teachers of these sectors about the project method, related digital tools, innovative assessment practices and digital content creation;*
- *assign real-life project tasks for VET students, in close collaboration of teachers and labor market representatives;*
- *create a repository of project-based, re-usable, high-quality, motivating digital learning contents with an interdisciplinary approach;*
- *prepare students for successful project implementation by designing and delivering mini-courses for them;*
- *create a model to be published as a guide for teachers of other VET institutes.*

Partners

iTStudy Hungary IT Education and Research Centre. Hungary
DEULA - Nienburg GmbH, Germany
Fondazione ITS – JobsAcademy, Italy
Association of Hungarian Horticultural Vocational Training Institutions, Hungary
Premontre Vocational High School, Technical School and College, Hungary
Discovery Center Nonprofit Ltd., Hungary

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