NEWSLETTER

Connecting VET Teachers to Agriculture 4.0 Erasmus+ 2017-1-HU01-KA202-035964

PUBLISHED BY: GJMSZI | EDITOR: Zoltán Horváth | 5TH ISSUE | 2019 / JUNE

Pilot courses in Hungary and Macedonia

After finalization of the 3 modules of **Teaching agricultural informatics in agricultural vocational training**, initial pilot courses were launched in both target countries in Hungary and Macedonia in spring 2019. Read the following reports.

Piloting in Hungary

25 February – 26 April 2019

After completing the three modules of the curriculum in each of the three target languages (EN, HU, MK) they were uploaded to the project's Moodle e-learning framework. An initial pilot training course was launched for Hungarian agricultural vocational schools. The "Teaching agricultural informatics in agricultural vocational training" course started with an information day in Gödöllő on 15 February 2019.

Applications for the Information Day was conducted via an online registration form. In total 46 teachers from many different parts of the country attended the information day event.

In addition to presenting the aims of the project and details of the planned training, a number of lectures were also given by expert practitioners in the field of agricultural informatics, including Agromechatronics, Farming 4.0, Data Collection in Precision Agriculture, and Precision Animal Husbandry.

For the first of the three project modules - Teaching in the 21st century in Agricultural Vocational Schools - lectures on web-based tools, the flipped classroom model, and a methodological renewal of 21st century education were presented.

Following this information day, a total of 63 teachers from 22 VET schools across the country applied for the pilot training course itself.

The pilot training was conducted wholly online with the learning activities being led by professional trainers / tutors. The training materials for the three pilot modules were covered according to the following schedule.

Teaching in the 21st century:
25 February- 10 March, 2 weeks
European Strategies & E-agriculture Initiatives:
11 March - 17 March, 1 week
Digital systems within Agriculture 4.0:
18 March- 26 April, 6 weeks
Each module included:

- an introductory video for the module
- a description of the learning aims of the module
- a learning guide
- a module assignment.

The final assignments were mostly taken from the practical exercises within the given topic. On the online platform, the participants were able to communicate with each other and with the tutors, to exchange ideas or to potentially ask for help. Tutors also posed questions related to the topics within the modules to encourage active participation and to share in valuable experiences from the teachers' own practice. In addition, and partly as an experiment, an online 'webinar' was held by one of the professional tutors - Zsófia Veres, an experienced agricultural engineer in environmental management - about AgLeader SMS, a user-friendly software application specifically used for precision agriculture. It was suitable for the teachers as it required only a basic knowledge of GIS principles.

The Closing Assignment for the overall course comprised:

1. Choosing an appropriate ICT tool and / or method from the first module
2. Developing one's own curriculum for teaching Module 2 or 3
3. Preparing a Lesson Plan / Teaching / reflection.

The training was successfully completed by 51 of the teachers, each of whom received:

- a certificate of 'Innovative Teacher, Creative Classroom', accredited within the Hungarian teacher in-service training program (30 credits)
- a certificate from the AgriTeach Consortium for the course: 'Teaching Agricultural Informatics in Agricultural Vocational Training'.

At the end of the course, participants evaluated the pilot training based on an online questionnaire. This evaluation included:

- What was the quality of the training materials provided?
  - Very good - 71%
  - Good - 26%
- To what extent did the course support your professional development?
  - Extremely supportive - 49%
  - Very supportive - 33%
- How did you rate the course overall?
  - Very good - 56%
  - Good - 41 %

The closing event of the pilot training, including the certificate award ceremony, took place on June 13, 2019 in Makó, attended by most of the successfully completing vocational school teachers and by the partners of the Agriteach 4.0 project.

The scale of the pilot training, coupled with the very high percentage of completing teachers, was deemed to be a very successful and beneficial experience for the partnership.

The training materials created in the project are openly available at this Moodle site – readily accessible after a minimal registration process: http://moodle.agriteach.hu/

Feedback from the Macedonian pilot

Following the finalization of the English version of the online course, the course was translated into the Macedonian language. The Macedonian version of the course is based on the English course with some minor localizations that correspond to specifics of the agricultural profile of the country.

From its start on April 1, 2019 until May 6, 20 teachers from seven VET schools across North Macedonia enrolled on the pilot course.

The pilot began with a contact day in order to provide the teachers with the basic skills of online working, navigating, and learning on the delivery platform, but also to give them the opportunity to learn about each other.

From April 1 until April 8, Module1: Teaching in 21st Century pilot phase was implemented.

During the piloting of Module 1, the participants had the chance to introduce themselves via the module forum on the Moodle platform and to discuss the challenges and assignments with their mentor, Mr. Ljupcho Toshev. Module 1 employed contemporary, innovative pedagogical methods - including project/based learning and the flipped classroom model - in order to provide an opportunity for the participants to try out the very methods that they have learned about during the course.

After a successful implementation of Module1, the implementation of the pilot phase of Module2: European Strategies and Initiatives for e-Agriculture started on April 10.

The goal of this second module was to inform teachers about the importance of a strategic approach to the development of e-agriculture, and to detail the main steps and components of the process, including standards and formats. The implementation of the pilot phase of Module2: European Strategies and Initiatives for e-Agriculture ran until April 17 with Mr. Martin Micevski as the mentor.

The pilot phase of Module 3: Digital systems within Agriculture 4.0, was implemented from April 22 until May 6.

The aim of the third module was to encourage a teaching approach fostering lifelong learning skills, promoting intellectual curiosity, and developing competencies in innovative agriculture technologies.

In this module, teachers had the chance to understand and learn significantly about the technology used in digital farming, how ICTs can improve overall agricultural production, and to analyze and compare different approaches in agriculture using IoT technologies. In the content of this module, the teachers also had the chance to get a more holistic understanding of the benefits, trends, methods and practices of different applicative solutions in Agriculture 4.0. The mentor for Module 3: Digital systems within Agriculture 4.0 was Mr. Blagoja Mukanov.

Out of the 20 participants, 16 teachers from six different VET schools successfully completed the course. In order to successfully complete the course, 80 points were required out of a total of 100 points. Participants in the course won points by completing the assignments and quizzes in each of the three modules. All participants that successfully passed the course were given certificates by the AgriTeach 4.0 consortium.

The general feedback from the participants about the course was very positive. Some of the teachers had previous experience with Moodle and with similar educational tools, while others were using it for the first time.

The participants agreed that learning in this way through Moodle, and other similar learning management systems would stimulate even the least interested of students. All participants agreed that the online course had a significant impact on their professional development and, having completed the course, they were ready to implement some of the new methodologies learned in Module 1 in particular.

The biggest limitation that the teachers faced was the unstable internet connection in some of their schools, coupled with old, non-maintained, inadequate computer systems.

The course was closed with final contact day at which participants were given the opportunity to discuss any problems, to put questions to the tutors, and to debate possible sustainability plans for the future.

Multiplication event for agricultural advisors in Hungary

April 5, 2019 a multiplication event of the Agriteach 4.0 project was organized by GAK Educational, Research and Innovation Nonprofit Ltd. for agricultural advisors and consultants at Szent István University in Gödöllő. All Hungarian partners were represented at the event, Zoltán Horváth – Galamb József Agricultural Secondary School as project coordiator, Szilvia Gerhát - ITStudy Hungary, László Papócsi and Attila Nagy - GAK Educational, Research and Innovation Nonprofit Ltd.

In addition to the project partners, Erika Székely the leader of the Hungarian Chamber of Agriculture Rural Development and Advisory Directorate also gave a presentation about the digital readiness and further training of consultants.

The topics of the event included:

•Presentation of the Agriteach 4.0 project and training program

Introducing AgriTeach Module 2 Innovation Projects, e-Request, Business Diary, Advisory Systems, Agriteach module 2

Ideas for furthering the results of the Agriteach project

Joint survey of SzIE and NAK on the digital readiness of consultants in the context of planned further training of consultants.

Current Practical Information for the 2019 e-Request

Interoperability Opportunities in E-Agriculture Information Management

Nearly 40 people attended the event, and the presented ppt-s can be found here: http://agriteach.hu/en/events

Aim of the project

Guide agricultural VET teachers in the renewing of their teaching methods by providing them a freely available online course “Teachers for Farming 4.0” based on a networked learning pedagogical model.
The project will integrate the networked learning methodology of a successful Leonardo project Tenegen with the pedagogical innovations of learner-centred methods such as the Creative Classroom (CC) and the Flipped Classroom (FC) model.
The learning environment and teaching model applied by this project is aligned with the pedagogical innovations of the ET 2020 framework, focusing for the development of 21st century skills, creativity, and the digital entrepreneurship of students.

Objectives

- A focused needs-analysis, and comparative study to identify the training needs by involving VET teachers and representatives of the beneficiaries - the agricultural companies.
- Developing a standard competency framework for agricultural workers and agricultural ICT practitioners aligned with EU standards such as the EQF and the e-Competence Framework.
- Curriculum Design based on the CAPDM methodology.
- Developing learning content for THREE MODULES:
  - M1 Reinventing agricultural education
  - M2 European Strategies and initiatives of e-Agriculture
  - M3 Digital systems within Agriculture 4.0
- Development of an online collaboration platform and the implementation of the components for “Teachers for Farming 4.0”
- Piloting the “Teacher for Farming 4.0” course (HU, MK).
- Refining the syllabus and the course components according to feedback from the participants.
- Planning for valorization and sustainability.

Project basics

TARGET GROUP
Agricultural VET teachers

BENEFICIARIES
Students, farmers, advisors

PARTICIPATING COUNTRIES
Hungary, Macedonia, Czech Republic, United Kingdom

TARGET COUNTRIES
Hungary, Macedonia

PROJECT START DATE
01-09-2017

PROJECT DURATION
24 months

COORDINATOR ORGANIZATION
Galamb József Agricultural Secondary School Hungary

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Erasmus+

Teachers for Farming 4.0 online course

Contact us

COORDINATOR
Galamb József Agricultural Secondary School Hungary

CONTACT PERSON
Zoltán Horváth – director

Phone: +36 62 510-896
Email: galambj.iskola@gmail.com
Website: http://www.agriteach.hu

Partners

- Galamb József Agricultural Secondary School – HU
- iTStudy Hungary Kft – HU
- Fondacija Agro Centar za Edukacija - MK
- AG Futura Technologies - MK
- GAK Education, Research and Innovation Centre – HU
- CAPDM Limited – UK
- Wirelessinfo - CZ

Connecting VET Teachers to Agriculture 4.0