



D2.3

D2.3 Curricula for VET-teachers for flexible learning processes

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List of Abbreviations

MA	Multifunctional Agriculture
VET	Vocational education and training
SELFIE	Self-reflection on Effective Learning by Fostering Innovation through Educational Technologies
EPALE	Electronic Platform for Adult Learning in Europe
CEDEFOP	European Centre for the Development of Vocational Training
ESEP	European School Education Platform

AgriNext Consortium



BC Naklo - Biotehniški center
Naklo



OnP - On Projects
Advising, SL



COAG JAEN - COAG Jaén.
Coordinadora de
Organizaciones Agrarias



IES Galileo - CONSEJERIA
DE EDUCACION - JUNTA
DE ANDALUCIA



CPI - Center RS za poklicno
izobraževanje



ARCTUR - ARCTUR
Računalniški inženiring,
d.o.o.



KGZ Sloga Kranj -
KMETIJSKO GOZDARSKA
ZADRUGA SLOA KRANJ,
Z.O.O.



TUS - Technological
University of the Shannon:
Midlands Midwest



VUKA - Veleučilište u
Karlovcu



SKINK - Skink, d.o.o.

Executive Summary

Curricula for VET-teachers for flexible learning processes (D 2.3) aims to describe the creating of the curriculum for VET-teachers for flexible learning process and developing training named Up-to-date Competences for Teachers in Multifunctional Agriculture under the AgriNext project, funded by the European Union.

It emphasizes the VET Teachers' and Trainers' empowerment for a continuous response to the MA job market demands. To guarantee flexibilization of school system in a way that is able to rapidly respond to the current job market needs we analyse and identified the teachers' competences considering professional and pedagogical perspective. For this purpose, we used the methodology for developing the training based on:

- Previous results
- Analysis of VET-teachers' professional and pedagogical competences
- Analysis of agricultural consultants in agriculture/multifunctional agriculture
- Current and future competences for the job market of MA

Based on the findings AgriNext partners find out that teacher/trainer who could respond to all these different kinds of demands from the job market in MA should be flexible, innovative, up to date with their professions (in our case MA, agriculture, rural development) and collaborative. Developed training presents these findings and underline digital and green skills as transversal skills.



Figure 1: Pilot training in Karlovac, on August 27th to 28th, 2024

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Introduction

The D 2.3 as a part of WP2 covers the following project-specific objectives:

- Flexibilization of learning environments and curriculums
- Teachers' empowerment for fast response to the job market demands.
- Promoting rural development and vitality by demonstrating and highlighting opportunities of Multifunctional Agriculture
- Increasing digital competences among teachers

The AgriNext project partners who worked on WP2, Task 2.6 - Analysis of VET-teachers' professional and pedagogical competences, Task 2.7 - Development of curricula, Task 2.8 - Pilot testing of the curricula and evaluation, and Task 2.9 - Adaptation of curricula and content digitalisation were, **BC Naklo** as coordinator for T2.6, T2.7, **VUKA** for T2.8 and T2.9 and other beneficiaries:

- COAG Jaen Union De Agricultores (COAG-JAEN), Spain (T2.6).
- Consejeria de Educacion - Junta de Andalucia (IES Galileo Gal), Spain.
- Center Republike Slovenije Za Poklicno Izobraževanje (CPI), Slovenia.
- OnProject (ONP), Spain (T2.6, T2.8)
- Kmetijsko Gozdraska Zadruga Sloga Kranj, Z.O.O, Slovenia, (T2.6).
- Technological University of the Shannon (TUS), Ireland.
- SKINK d.o.o. (SKINK), Croatia, (T2.6).
- ARCTUR RAČUNALNIŠKI INŽENIRING d. o. o. (ARCTUR), Slovenia, (T2.9).

Based on the analysis of VET teachers' professional and pedagogical competences of one hundred and twenty-two (122) teachers, the consortium partners developed the curricula and training program named Up-to-Date Competences for Teachers in Multifunctional Agriculture in the form of face-to-face training. This was pilot tested and evaluated by eight (8) teachers and fourteen (14) partners in Karlovac, from August 27th to 29th, 2024.

After the evaluation, we created a prototype for the online version in all consortium languages (EN, SI, ES, CR), accessed on the webpage of the AgriNext project. This version will later be integrated into the AgriNext IT platform - an interactive learning environment, set for development in 2025.

To guarantee a flexible learning process in capable of rapidly responding to the current agriculture job market needs for knowledge, skills and competences, the AgriNext project partners developed the curriculum and training for up-to-date teachers' competences from two different perspectives - professional and pedagogical.

Explanation of terms

Competences¹ - Demonstrated ability to use knowledge, know-how, experience and - job-related, personal, social or methodological - skills, in work or learning situations and in professional and personal development.

Professional Competence - Demonstrated ability to apply knowledge, expertise, experience and - work-related, personal, social or methodological - skills linked to agricultural activities and complementary activities, coordinated in multifunctional agriculture and resulting in fostering social integration, cultural vibrancy, and environmental sustainability.

Pedagogical Competence - Demonstrated ability to use knowledge, know-how, experience and - job-related, personal, social or methodological - skills, in teaching and other pedagogical activities or learning situations to achieve efficiency in teaching-learning process.

Curriculum² - Inventory of activities related to the design, organisation and planning of an education or training action, including definition of learning objectives, content of programmes, methods and material, as well as arrangements for training teachers and trainers.

Multifunctional Agriculture (MA) - Multifunctional agriculture involves the integrated provision of agricultural activities (such as crop cultivation, livestock farming, and beekeeping) alongside non-agricultural activities (such as agritourism, social/care farming, farm shops, farm education, and nature and landscape management). This approach aims to enhance income generation while fostering social integration, cultural vibrancy, and environmental sustainability.

SELFIE - is a free tool designed to help schools embed digital technologies into teaching, learning and assessment.³

¹ Cedefop; Council of the European Union, 2017. Cedefop, Glossary. Available on <https://www.cedefop.europa.eu/en/tools/vet-glossary/glossary?letter=C>

² Cedefop, Glossary. Available on <https://www.cedefop.europa.eu/en/tools/vet-glossary/glossary?letter=C>

³ EU Commission, SELFIE. Available on <https://education.ec.europa.eu/selfie/about-selfie>



Aim of the document

In a previous stage of the AgriNext project in the WP2 - Flexibilization of school systems, the consortium of AgriNext partners made and developed:

- Overview of existing flexibilization of participating schools.
- Proposals for flexibilization of VET on national levels.

Based on the results of the previous stages, the consortium developed the curriculum for VET teachers to support a flexible learning process and training named Up-to-date Competences for Teachers in Multifunctional Agriculture.

This document aims to describe the process of creating the curriculum for VET teachers to support a flexible learning process and developing the training named Up-to-date Competences for Teachers in Multifunctional Agriculture.

The methodology used is based on the:

- Results of the previous stages of D2.1 and D2.2.
- Analysis of VET teachers' professional and pedagogical competences (T2.6).
- Report on current and future competences for the job market of MA.

The subsequent process includes:

- The development of curricula (T2.7).
- Pilot testing and evaluation of the training program titled Up-to-date Competences for Teachers in Multifunctional Agriculture (T2.8).
- The adaptation of the curriculum and content digitalisation - a prototype of the online version in all consortium languages: EN, SI, ES, HR, accessed on the webpage of the AgriNext project (T2.9).

The curriculum for VET teachers to support a flexible learning process, along with the training program titled Up-to-date Competences for Teachers in Multifunctional Agriculture, is available on [the AgriNext project webpage](#).

Methodology

1. Previous results

Initial findings from the overview of the existing flexibilization options of participating schools (D2.1) show that there are significant differences between countries and even between programmes at different levels within the same country, which poses an additional challenge in proposing a flexibility model that we want to be feasible in all partner countries and beyond.

[Proposals for flexibilization of VET on national levels \(D2.2.\)](#) are based on previous analyses conducted in four countries (Croatia, Ireland, Slovenia, Spain) and conclusions from the roundtable events in each country, where different stakeholders provided proposals and new ideas.

The Flexibilization Model of the VET System (D2.3) is based on ten areas:

- Flexibility in curriculum design and school autonomy.
- Allowing flexibility in the enrolment process.
- Flexibility in programme implementation and delivery.
- Learner-centred approach, individualised support and plans.
- Breaking down programmes into units or modules to enable movement across the system.
- Integration and development of competencies, prior knowledge validation, recognition, credit transfer and qualification framework.
- Inclusion of social partners and response to labour market needs.
- Allowing horizontal and vertical flexibility (including I-VET and C-VET).
- Promoting alternatives to grade retention and avoiding suspension.

BC Naklo prepared instructions for further development of the WP2 ([Appendix 1](#))

2. Analysis of VET teachers' Professional and Pedagogical Competences

To develop a curriculum and training activities for teachers focused on upskilling their pedagogical and professional competences in the field of MA, the AgriNext consortium developed a Survey of professional and pedagogical competences of vocational teachers.

Training activities should be related to the need for learners to acquire both vocational and key competences through high-quality provision underpinned by quality assurance, supported by the continuous professional development of teaching and training staff, innovative pedagogies, mobility, and international strategies. Teaching and learning should align with new opportunities and the fast-changing skill needs of the labour market and societal, technological, and economic challenges.

The survey was translated into four consortium languages (Spanish, Croatian, Slovene, and English).

One hundred twenty-five (125) teachers registered and one hundred twenty-two (122) completed the survey on professional and pedagogical competences of vocational teachers.

The survey was divided into two parts:

Broad questions

- Gender
- The country where I teach
- Which subjects do you teach (general or professional)?

Pedagogical and Professional Competences

- Innovative and inclusive approaches
- Empowering learners with green skills
- Professional skills in multifunctional agriculture
- International activity

The report ([Appendix 2](#)) analyses the pedagogical and professional competences of one hundred twenty-two (122) VET teachers in the field of multifunctional agriculture.

Sixty-seven (67) female, fifty-six (56) male and two (2) other respondents answered the survey. Seventy-four (74) were from Spain, twenty (20) from Croatia, nineteen (19) from Slovenia, and twelve (12) from Ireland. Forty-three percent (43%) of the teachers teach professional subjects.

Teachers' claims of innovative and inclusive teaching approaches.

The statements provided in the survey are as follows:

- The student is at the centre of the teaching process.
- I recognise and take into account the student's prior knowledge in the planning and implementation of classes.
- I plan and implement forms and methods of work that enable the differentiation of the learning process and promote the integration of theory and practice, collaborative work and integration
- I dedicate a lot of time to ongoing student follow-up to gather information about a person's prior knowledge, knowledge gaps and constructive feedback.
- I take the time to check if the students have understood the expected goals and results of the lessons.
- I encourage self-reflection of students and peer-to-peer evaluation of students' products and services.

Of the 122 respondents, around 70% said that the learner is always at the centre of the teaching process and around 61% said that they always take time to check if the students have understood the expected goals and results of the lessons. Around 10% of teachers rarely dedicate a lot of time to ongoing student follow-up to gather information about a person's prior knowledge, knowledge gaps and constructive feedback, and 7% rarely encourage self-reflection of students and peer-to-peer evaluation of students' products and services.

Most teachers expressed interest in the training on Methods and forms of work that support student-centred teaching.

Teachers' statements on how to integrate green skills into teaching

The statements provided in the survey are as follows:

- I refer to the topics/challenges/problems of sustainable development and climate change
- I encourage learners to perceive and address challenges/problems/behaviours from all aspects of sustainability (environmental, social, cultural and economic) that are interconnected.
- I encourage learners to question their own values and the values of others as well as the needs and views of the world, which support the current economic and social system in relation to nature and the environment...
- I approach the chosen issue/challenge/problem of sustainable development and climate change in a systemic way, with the aim of gaining an in-depth understanding of the causes, consequences and key solutions...
- I encourage learners to think about a sustainable future - how they could work differently to support social and economic development, taking into account the protection, conservation and revitalisation...
- I encourage learners to act independently and collaboratively with others with the aim of protecting and conserving nature and the environment and promoting biodiversity.

Around 46% of teachers always use incentives to encourage learners to work independently and collaboratively to protect and conserve nature and the environment and to promote biodiversity. Between 40% and 52% of teachers often use these incentives and activities, 11% to 16% rarely use them, and 1% to 2% never use them.

Teachers' Statements on the Inclusion of Activities Related to Expertise and Skills in Multifunctional Agriculture

The statements provided in the survey are as follows:

- I follow rural development through different media and in different ways I summarise what is happening in the countryside and place it in the classroom.
- When teaching, I encourage learners to use a variety of resources related to rural development (economic, social and environmental).
- I follow developments in the Common Agricultural Policy (CAP) and incorporate them into different forms of teaching.
- I cooperate with different organisations and experts in the field of agriculture. I transfer the acquired knowledge and skills to the learners.
- I encourage learners to reflect on new policies and principles in agriculture relating to the protection of the environment and the preservation of the countryside.
- I encourage learners to reflect on the importance of international strategies such as the Green Deal and its Farm to Fork strategy.

- I have shared my personal experience of multifunctional agriculture (visiting tourist farms, buying local produce, etc.) in different ways in class.

28% of teachers always encourage the use of different sources related to rural development in their teaching. 14% of teachers always follow the development of the Common Agricultural Policy and integrate it into different forms of teaching. However, between 1% and 10% of teachers claim that they never include these activities in their teaching.

Most teachers expressed interest in training on different sources and information for monitoring rural development.

Teachers' statements on the international activity

Statements are:

- I participate in international exchanges within the Erasmus+ mobility programme and integrate the knowledge and skills acquired into different forms of teaching.
- I am registered on the e-Twinning platform and collaborate in various ways with teachers from other European countries.
- I use the Commission's EU platforms for learning and teaching, such as Cedefop (European Centre for the Development of Vocational Training), EPAL (online platform for adult learning in Europe).
- I am an active member of an international association or other form of organisation, and in this way, I pass on the experience I have gained to learners.

33,6 % of teachers often and 31,1 % rarely participate in international exchanges within the Erasmus+ mobility programme and integrate the knowledge and skills acquired into different forms of teaching.

52 % of teachers answered that they never registered on the e-Twinning platform and collaborate in various ways with teachers from other European countries, while 20% said they always or often engage in these activities. 48 % of teachers answered that they never use the Commission's EU platforms for learning and teaching, such as CEDEFOP (European Centre for the Development of Vocational Training) and EPAL (online platform for adult learning in Europe), while 17% said they often or always use them.



3. Analysis of SELFIE⁴

Partner CPI registered on the SELFIE tool and created instructions ([Appendix 3](#)) for the teachers on how to register and complete the analysis of VET teachers' digital skills. Teachers from all four partner schools were invited to participate (Reflection date: 05/04/2024 - 31/05/2024) but only 11 responded. The process was repeated once, but the number of participants remained the same, primarily due to issues with registration and the length of the process ([Appendix 4](#)).

Overall results

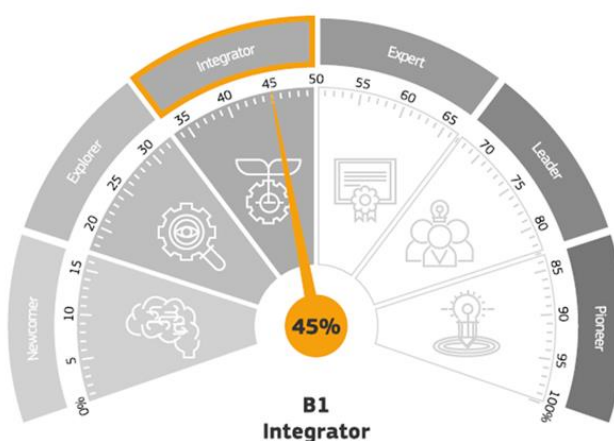


Figure 2: Results of SELFIE Analysis

4. Analysis of Agricultural Consultants in Agriculture/Multifunctional Agriculture

The survey was distributed to a diverse group of agricultural consultants in Ireland. The questionnaire included both quantitative and qualitative questions, covering key areas such as background information, technical expertise, communication skills, feedback and improvement.

A total of twenty-five (25) responses were received and analysed to generate the insights presented in the report made by TUS ([appendix 5](#)).

Key findings include:

Continuous professional development **through upskilling/reskilling** in multifunctional agriculture is necessary for consultants to upskill for them to provide knowledge transfer to clients.

Creating awareness and promoting multifunctional agriculture activities can attract clients by showcasing the roles of rural vitality and development.

Strengthening **feedback mechanisms** is crucial to gather more detailed insights into client needs and experiences, enabling advisory services to adjust accordingly.

Reviewing and updating consulting practices regularly to understand current happenings in the agricultural sector and upskilling for **up-to-date knowledge transfer** is essential.

⁴ Group Results and Feedback Report, SELFIE for TEACHERS, AgriNext - Analysis of VET teachers' digital skills

5. Current and future competences for the job market of MA

Our partners from the economy (representatives of the job market of MA): SKINIK, d.o.o., TUS, COAG Jaen and KGZ Sloga Kranj provided data from the agricultural job market about the current and future knowledge, skills, and competences needed for the workforce ([Appendix 14](#)). The aim of this data is to inform teachers and other target groups of the training about the main knowledge, skills, and competences that should be included in their classes, pedagogical processes, and, further on, in formal and non-formal education programs.

Current knowledge, skills and competences recognized by our partners, which can be synthesized into four main areas:

Climate change:

- Drip irrigation and water-conserving technologies, renewable energy, and bioenergy.
- Knowledge of the agricultural reuse of organic residuals and integrated pest management in plant protection.
- Understanding common pests and diseases affecting plant species.
- Expertise in pest and disease control (chemical, biological, integrated).
- Recognizing alternative crops and livestock and their management.
- Outlining climate change impacts on farming and non-farming businesses and developing strategies to mitigate economic and environmental risks.
- Implementing eco-friendly methods to protect the environment while maintaining high yields.
- Adjusting production to new farming techniques (e.g., selecting crop species or varieties more resilient to droughts or temperature fluctuations).
- Evaluating the environmental impacts of farming and adhering to sustainability practices.

Agriculture technologies and principles:

- Comparing the impact of regenerative, organic, and precision conventional farming.
- Describing innovative farming technologies and marketing tools, such as soil sensors, drones, and data analytics, to optimize resource use.
- Adopting sustainable farming methods, including organic farming, regenerative agriculture, and precision agriculture.
- Characterizing market opportunities and connecting with buyers for niche products, such as farm tourism, specialty crops, or organic produce.

Agriculture policy

- Analyzing government programs and incentives that support multifunctional agriculture.
- Collaborating with stakeholders, including researchers, advisors, and policymakers.

Entrepreneurship

- Classifying farming and non-farming enterprises in multifunctional agriculture (MA).
- Justifying crop diversification, livestock integration, and non-farming MA businesses, such as agritourism and farm shops.
- Formulating business plans, branding, and digital marketing strategies for farming and non-farming enterprises and products.

Transversal/horizontal competences

- **Communication:** Knowledge of effective speaking and listening, interpreting gestures, body language, and emotions, and using the appropriate communication style for the right occasion; knowledge of foreign languages.
- **Collaboration:** Managing teams on the farm and negotiating with buyers and suppliers; fostering collaboration between stakeholders, suppliers, institutions, government agencies, and consumers; providing critical information about food productivity.
- **Evaluating:** Understanding the process and requirements for obtaining certifications.
- **Awareness-Raising:** Continuously raising public awareness about the current state of the market, including all stakeholders in the system.
- **Mentoring:** Guiding and supporting individuals to enhance their skills and knowledge.

Future knowledge, skills and competences recognized by our partners, which can be synthesized into three main areas:

Sustainable practices

- Knowledge of sustainable practices and technologies (such as organic farming, agroecology, crop diversification, sustainable resource use, etc.).
- Comparing circular economy (waste-to-value) approaches, such as biogas production, composting, and renewable energy integration.
- Understanding and implementing precision agriculture techniques.
- Utilizing sensors in agricultural and livestock processes.
- Adopting more sustainable farming practices that are rational and efficient in terms of input use and less dependent on fossil fuels (e.g., cover crops, minimal tillage).

Flexible entrepreneurship

- Describing business models for income streams from multifunctional agriculture (MA), including value-added products and services.
- Analysing emerging consumer demands, such as organic produce, plant-based diets, and local food systems.
- Recognizing funding opportunities, venture capital, and grant-writing for MA businesses.
- Comparing policies, subsidy programs, and regulations for MA.
- Managing Decision Support Systems (DSS).



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- Developing integrated offers that combine production activities (agricultural or livestock) with complementary services, such as agrotourism, direct farm sales, or care farming.
- Operating innovative farming techniques, such as vertical farming, hydroponics, and aquaponics.
- Formulating contingency plans to handle uncertainties and challenges, such as pest outbreaks, water scarcity, or market volatility.
- Establishing project management skills for planning and executing MA business initiatives.

Digitalisation and artificial intelligence

- Understanding how to interpret and use data effectively.
- Knowledge of precision technology, programming, machine learning, and mechanical repair.
- Utilizing software applications, especially those incorporating artificial intelligence.
- Using data to improve decision-making and increase farm productivity.
- Developing data analysis skills.
- Gaining expertise in robotics (e.g., robot and drone technology) and automation.
- Operating and maintaining advanced machines.
- Employing advanced tools such as drones, IoT sensors, precision farming equipment, AI for decision-making, and e-commerce platforms for selling farm products.

Transversal/horizontal competences

- **Critical thinking skills.**
- **Literacy** (differentiate certification schemes like organic labelling, regenerative and biodiversity-friendly farming standards, financial literacy, relevant information, data interpretation and addressing tech-related issues ...).
- **Lifelong learning.**
- **Motivation** for engaging in multifunctional agriculture activities.

6. Developing the pilot implementation

In VET schools, it is not only teachers of vocational and practical subjects (tutors) who prepare students for a particular profession, but also teachers of general subjects. All teachers working in a vocational school must be familiar with the professions for which they train students. They can incorporate vocational areas into their teaching in diverse ways - using examples from the vocational field, applying mathematics to vocational scenarios, problem-solving activities drawn from vocational contexts and many more.

Teachers should possess the competences to identify and integrate students' prior knowledge, background, experience, informal knowledge, and learning abilities in line with the objectives of the educational programme. They should also be able to incorporate innovations required by the labour market, such as those related to multifunctional agriculture, into the teaching-learning process to align education with current and future professional demands.



Based on the Curriculum Recommendation ([Appendix 6](#)) a consortium of partners has developed Curricula for VET teachers to support flexible learning processes and training in Up-to-date Competences for Teachers in Multifunctional Agriculture.

The results of the online voting (from 31. May to 5. June 2024) on the name of the educational program and preferred module ([Appendix 7](#))

Table 1: Proposals for the most appropriate title of the training.

Partner	Title of the training
TUS	Enhancing VET Teachers' Competencies for Multifunctional Agriculture Education and Workforce Readiness
COAG JAEN	Training of up-to-date competences for teachers in multifunctional agriculture
IES Galileo	Training of competences reflecting the multifunctional agriculture job market, for teachers
BC Naklo	Training of up-to-date competences for teachers
TUS	Competence based training for educators that reflects the multifunctional agriculture job market
VUKA	Training of up-to-date competences for teachers

The name of the training: **Training of up-to-date competences for teachers in multifunctional agriculture**

At the meeting in BC Naklo, we agreed on a training structure of four modules, synthesizing the above topics and outlining the modules for which each partner will write the curriculum, content, activities/workshops, and evaluation.

Ideas of the Module content

Module 1: Flexible teacher

brief description of the school systems in Croatia, Ireland, Slovenia and Spain, possibilities of the flexibilization - highlighting the teacher, mentor and organiser of practical work roll, teacher make alliances, ...

Module 2: Innovative teacher

Trends in pedagogy and teaching methods, Methods and forms of work that support student-centred teaching; asking questions that encourage learning, self-reflection of students and peer-to-peer evaluation of students' products and services...

Module 3: Up-to-date teacher

Meaning of various sources, documents, information, news, different sources and information for monitoring rural development. Various international strategy papers promoting rural and agricultural development: CAP, Green Deal, Farm to Fork, Biodiversity..., various sources and information for monitoring multifunctional agriculture; networking: international associations or other form of organisation in multifunctional agriculture - pass on the experience I have gained, to learners, ...

Module 4: Open (new proposal: Collaborative teacher)

Networking teacher - e-Twinning platform and collaborations with teachers from other European countries; EU platforms for learning and teaching, such as CEDEFOP (European Centre for the Development of Vocational Training), EPAL (online platform for adult learning in Europe); possibilities for Erasmus+ mobility and passing on the experience gained, to learners...

Table 2: Ranking of partner's preferences for modules. (1- most preferring, 4 - not preferring)

Partner	M1 Flexible teacher	M2 Innovative teacher	M3 - Up-to- date teacher	M4- Open Collaborative teacher	Results
TUS	4	1	2	3	M2 - Innovative teacher
COAG JAEN	4	2	1	3	M3 - Up-to-date teacher
IES Galileo	2	1	3	4	M3 - Up-to-date teacher
BC Naklo	2	3	1	4	M4 - Collaborative teacher
TUS	2	1	3	4	M2 - Innovative teacher
VUKA	1	2	3	4	M1 - Flexible teacher
	VUKA	TUS	COAG JAEN, IES	BC Naklo	

In all modules **transversal competences: green skills** and **digital competences** are emphasized as much as possible in a practical way (e. g. handouts requiring green skills, digital skills in planning, assessment, etc.) and through **practical examples in the field of multifunctional agriculture**.

Further instructions for the developing Curricula for VET-teachers for flexible learning processes were written ([appendix 9](#) and [appendix 10](#)).

Pilot implementation of the training Up-to-date Competences for Teachers in Multifunctional Agriculture

Teachers' empowerment for a continuous response to the MA job market demands

Aim of the training Up-to-date Competences for Teachers in MA

The aim of the Training Up-to-date Competences for Teachers in MA is continuous of teachers' professional and pedagogical competences in response to changes in the agriculture job market. The target group includes teachers in VET agriculture schools, both those who teach and train professional modules and those who teach general subjects, with the goal of raising awareness about the importance of rural development and staying up to date with the agriculture sector.

The target groups are teachers and trainers, both those who teach and train professional modules in agriculture and food processing, and those who teach general subjects, as well school management and other pedagogical staff experienced in the VET teaching process, and on-the-job learning.

Transversal competences:

- Improving teachers' digital competences through various personal and teamwork activities linked to the content of each module.
- Improving teachers' green competences through critical thinking using the best practice examples.
- Enhancing general education skills, including critical thinking, problem-solving methods, teamwork, creativity, communication skills, information literacy, and entrepreneurship skills.
- Respect for gender, religion, race and equality / equal opportunities.
- Raising awareness of sustainable development in rural areas, multifunctional agriculture, flexible teaching and learning systems, and lifelong learning.

Curriculum of the training

The curriculum structure is divided into General (part A and part B) and Special (for each Module - M 1, M 2, M 3, M 4).

General Curriculum

Part A includes: the name of the educational program, target groups, EQF level, who could train, training description (the aim of the training, transversal competences, learning objectives, list of modules), participant's preliminary knowledge required, pedagogical and methodical recommendations, and self-assessment.



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Project number:
101056023

Part B includes: the organization of the Training of Up-to-date Competences for Teachers in Multifunctional Agriculture

- [Face-to-face training](#),
- [Online training \(Self-paced\)](#)

Special Curriculum

For each of the four modules

- Face-to-face training: Curriculum and Implementation plan for each Module of the training ([M1](#), [M2](#), [M3](#), [M4](#)).
- Self-paced learning material

Curriculum for each module includes: the name of the module, overview, learning objectives, a list of learning units, outcomes of each unit and implementation plan.

All the curriculum documents are available in four languages: [English](#), [Croatian](#), [Slovenian](#), and [Spanish](#). (Linked is example of M1 in all languages)

Report on the Pilot implementation of the training

The pilot implementation of the international three-day workshop training for Up-to-date Competences for teachers in Multifunctional Agriculture took place at VUKA, Karlovac from August 27th to 29th, 2024 (Agenda - [Appendix 11](#)).

A total of twenty-three (23) participants attended the pilot implementation of the training: project partners, teachers per partner country, and trainers (Attendance list - [Appendix 12](#)).



Figure 3: Face-to-face training, Economics and marketing in multifunctional agriculture Integration of digital technologies in agriculture

Within three days, the participating AgriNext partners presented a program consisting of four modules:

Module 1: Flexible Teacher

Module 2: Innovative Teacher

Module 3: Up-to-date Teacher

Module 4: Collaborative Teacher

The training was conducted in English and promoted active participation by teachers and project staff. All lecturers prepared various pedagogical activities in which the participants actively participated, included field trips to two farms and a natural monument, the Mrežnica river which contributed to a positive and collaborative atmosphere.



Figure 4: Field trip - OPG Kovač, Farm and oil production tour

Croatian partner VUKA presented **M1 - Flexible Teacher** with lecture's guests from agriculture and digital sector with lectures on Specific of Agriculture Workforce: IoT Vineyard Managers and Fruit Growers vs. GPS - Free Tractor Operators (Toni Batel, Monte Vidal savjetovanja d.o.o.), and Integration of digital technologies in agriculture (Mato Mrkalj from [RDP Technology](#)). They also included a field trip to OPG Kovač, Farm and oil production tour and OPG Fanjek, organic farm (hazelnut cream spread production tour). Activities in M1 were presented as Practical examples of IoT and AI in agriculture: Creative Use of Digital Technologies in MA, Development of Digital Support in MA, and Discussion on video Applications of AI in Agriculture.

Irish partner TUS presented **M2 - Innovative Teacher** which includes 8 Units: Blended learning, Flipped Classroom, Gamification, Project-based Learning, Personalised Learning, Collaborative Learning, Inquiry-based Learning and Learning Management Systems. Learning and teaching activities performed in this module were: Teaching MythBusters, Flipped classroom model in agriculture education, Gamification educational activity on multifunctional agriculture, Collaborative learning in agricultural education and Inquiry-based learning in agriculture education



Figure 5: Field trip - OPG Fanjek, organic farm (hazelnut cream spread production tour)

Spanish partners IES Galileo and COAG Jaen presented **M3 - Up-to-date Teacher** which includes 6 Units:

Agritourism and food tourism, Economy and AM, Digitalization in the agroforestry and livestock sector, Renewable energies in the rural environment, Compatibility of activities in MA, Social demands and activities in MA. Module 3 was interactive, participants engaged in discussion on examples of responsible tourism, agrotourism, and food tourism, and Agrotourism and food tourism business model: case studies. Further Critical thinking based on practical examples of Managing Cash Flow in Agricultural Enterprises, Depreciation in Agricultural Assets, Integrating Multifunctional Aspects in Agricultural Economics. Critical analysis of case study and Realisation and development of digital solutions for problems posed. Demonstrated renewable energy and its environment, photovoltaic solar installation. For MA managing very important activities on MA farm prospect analysis, Productive Planning of an MA farm, reformulating business plans to improve results in MA and, finally, addressing social demands that MA must address.

Slovene partner BC Naklo presented **M4 - Collaborative Teacher** which includes 4 Units: Collaborative Teacher Competences, Teachers Collaborating in School Environment, Teachers Collaborating Locally and Regionally, Teachers Collaborating Internationally. Icebreaker activity on competences for different professions and “As a teacher I collaborate with...” and demonstration of the utility of EU platforms: ESEP/e-Twinning, CEDEFOP, EPALE. Emphasising and using digital skills participants engaged in Collaborating on drafts/ideas for Lesson plans in Multifunctional agriculture using ChatGPT, using MagicSchool AI, Miro, and comparing different AI tools to choose the one best suited for their needs.

5

Basic digital skills are a precondition for inclusion and participation in the labour market and society.

Besides **transversal skills** mentioned in the General Curriculum, Training Up-to date Teachers' Competences in Multifunctional Agriculture emphasised **digital and green skills**

⁵ EU Commission, Shaping Europe's digital future, Digital skills. Available on: <https://digital-strategy.ec.europa.eu/en/policies/digital-skills>



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Online training

The Online training **currently available on the website** includes the following elements: Descriptions, two forms of the training, General Curriculum, Self-assessment, Promo video for each Module, Training Material for each Module (EN, SI, ES, HR) Exercises for each Module and offers intuitive and user-friendly navigation through all the content.

The **AgriNext IT platform** will be developed and designed to support interaction, information exchange, and sharing, key aspects defined in its functional specifications. As such, **the current version of D2.3 is a simplified digitization of the training material, with limited interactive features.** Once integrated into the platform, **D2.3 will be upgraded to include interactive elements and functionalities that enhance the overall learning experience.** This will enable **ongoing engagement, resource-sharing, and collaboration among users.** The IT platform will serve as a dynamic virtual environment, centralizing all project materials and enabling communication, resource exchange, and data sharing among target groups.

All partners involved in the WP2, tasks from T 1.6 to T1.9, agreed that the most proper form for online training is self-paced training. In this format, the training is available to participants at any time and place of their choosing.

Online structure of the Training for Up-to-date Competences for Teachers in Multifunctional Agriculture (appendix 13)

1. Home page
- 1.1. Online training
- 1.2. Face to face training



Figure 6: STRUCTURE of online training

The content of the modules is presented in Units following the curriculum and outcomes. The modules include interactive elements within the text, mostly in the form of links to short videos to deepen understanding and visualise the content and additional references. ([Example of interactive elements in M1](#) on page 5 of the Flipbook under “Activity”)

Each module has interactive exercises linked to the module content ([Example of Interactive Exercises M1](#)). The exercises include Multiple-Choice Questions (6 questions), True/False Questions (6 questions), Short Answer Questions (4 questions)

The tasks aim to deepen the learners’ knowledge and skills through the training process as well as to make the training more dynamic.

[The self-assessment quiz](#) is designed with 24 multiple-choice questions, adapted for an online format, and can be used in all three forms of the training: self-paced training, face-to-face, and blended.

All the documents are available in four languages: [English](#), [Croatian](#), [Slovene](#), and [Spanish](#)

Evaluation of the pilot implementation

For the evaluation of the training program and contents, an **external evaluation** has been carried out with the participation of VET teachers in the field of agriculture who have participated in the face-to-face training and have read and analysed all the training materials developed by the project partners. A total of 4 evaluators per country took part in this process and both, the pilot face-to-face training and the materials developed for the online training, were evaluated in depth. Different evaluation tools have been designed using the methodology and rubric developed by Achieve and ISKME ([Appendix 15](#)) and used to collect the evaluators’ opinions:

- Evaluation through a focus group with a semi-structured interview, using question and reflection rounds and collecting feedback through interactive digital tools (Mentimeter).
- Evaluation questionnaire on the face-to-face training activity.
- 4 in-depth evaluation questionnaires to assess the contents of the online training.

The training materials and the event itself have been evaluated and results are analysed and incorporated into the external evaluation report (D7.2).

The training programme

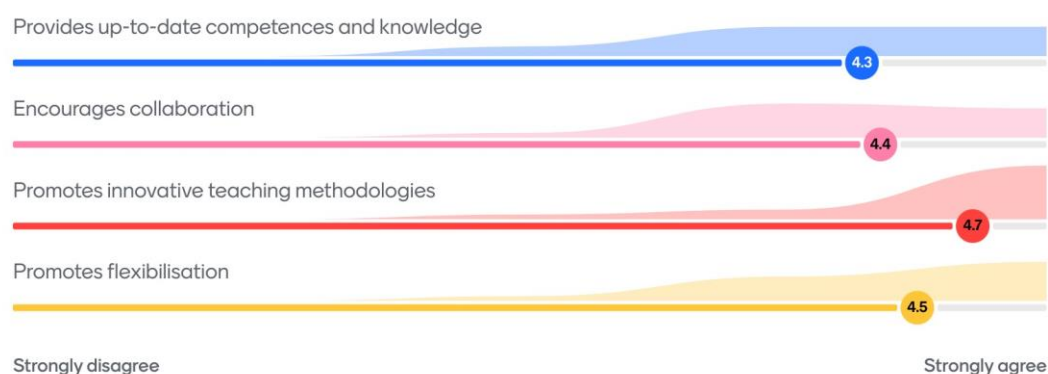


Figure 7. Mentimeter for the focus group evaluation in Karlovac, Croatia.

Conclusion

The training *Up-to-Date Competences for Teachers in Multifunctional Agriculture* was developed by the AgriNext consortium. The training addresses teachers and trainers in vocational education in agriculture and food production, covering both technical and general subjects as well as practical education. The competences that teachers and trainers need in order to rapidly respond to the labour market demands in multifunctional agriculture are varied and represent an upgrade of the competences they already possess for the teaching profession.

The findings of teachers, agricultural advisors, and AgriNext partners from the economy on the competences needed are complex. Teachers are aware that the learner is at the centre of teaching and that checking the understanding of learning objectives is important. In light of these findings, further training of teachers in the pedagogical field should include:

- Identifying the learner's prior learning.
- Monitoring progress.
- Encouraging self- and peer-reflection and evaluation.
- Promoting collaboration among teachers, particularly at the international level, through participation in various EU platforms such as **ESEP** (e-Twinning, EPALE, CEDEFOP).

Teachers make limited use of various media to stay informed about developments in rural areas, are not sufficiently involved in organisations, and lack effective networking with agricultural

experts. They also do little to encourage students to engage with international and national agricultural policies or sustainable agriculture practices.

A teacher who is flexible, innovative, modern, and collaborative can deliver lessons and other teaching activities in a way that integrates the knowledge and skills required by the rapidly evolving agricultural and rural development labour market. Identified areas of expertise where continuous development and upgrading of knowledge, skills, and competences are needed include:

- Awareness and promotion of multifunctional agriculture, which involves non-agricultural rural activities in addition to conventional production agriculture.
- Lifelong learning and in-depth analysis of farm needs.
- Areas related to sustainable practices, flexible entrepreneurship, digitalisation, and artificial intelligence, in line with European guidelines.

In upgrading teachers' competences, transversal competences must also be emphasised, as they are key to the teaching profession and personal growth. In this context, digital and green skills will play an important role as transversal competences.

Appendix 1: Instructions for further development of WP2

OVERVIEW

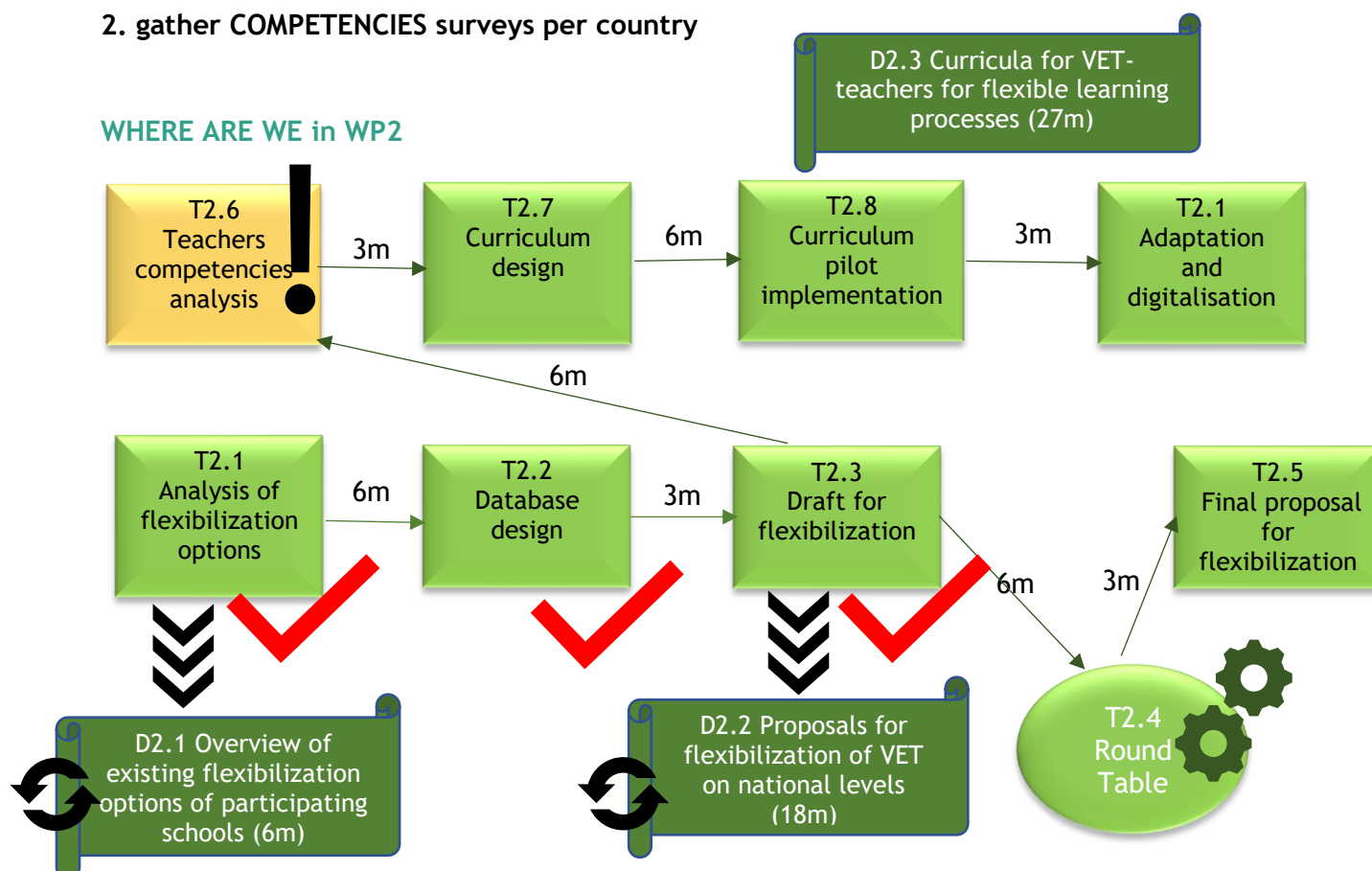
VET-partners will perform analyses of teachers VET competencies (in the field of MA) and their ability to adapt to the job market skill demands. Furthermore, partners will perform analysis of teacher's pedagogical competencies (including learner-centred teaching techniques and digital competencies - including using SELFIE tool).

Participants: TUS, BC Naklo, ONP, COAG Jaén, IES GG, VUKA

The outcome for T2.6 is

1. gather SELFIE surveys per country. SELFIE is assessing level of developed digital skills.
2. gather COMPETENCIES surveys per country

WHERE ARE WE in WP2



TASK TIMELINE

ACTIVITIES T2.6	DEADLINE
Checking automatic translations of questioner	Till the end of meeting 4.4. 2024
Creation of online survey	BC Naklo -
Instructions for SELFIE	CPI 5.4. 2024
Survey period	
Analysing results	
T2.7.	

Final deliverable is due 27th month

D2.3 In order to guarantee flexibilization of school system in a way that is able to rapidly respond to the current job market needs we need to look in teachers' competencies from two different perspective - professional and pedagogical. We need to identify what are the relevant skills of the job market and assess whether teachers have those skills and furthermore do teachers have pedagogical skills to be able to adapt learning processes to those needs. Based on the findings of both aspects (within the project consortium and beyond). Based on that we will develop curricula, test it and adapt it to digital format. The online training will be available in the most suitable online format (Moodle or similar) and in all consortium languages (EN, SI, ES, HR)

Task 2.7. Development of curricula

Development of curricula Based on the analysis findings partners will develop curricula for teachers, with focus on upskilling their pedagogical and professional competencies in the field of MA. TUS will put extra of their HR into this task instead of Broadmore.

4 modules will be developed.

First will be based on need of pedagogical competencies.

Task 2.8. Pilot testing of the curricula and evaluation

2 Teachers plus 2 trainers per each country will test the curricula on the live workshop in Croatia and perform training evaluation. The Workshop will last 3 days + 2 days for traveling.

Date for piloting: 27 - 29.08.2024

Task 2.9. Adaptation of curricula and content digitalisation

After the evaluation, training materials will be adjusted, digitalised and put in the appropriate format (Moodle or similar)

Similar as WP1



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Methodology of Teachers competencies Analysis

Analysis focuses to detect the gap in teachers pedagogical and/or Professional competencies for using relevant pedagogical methodologies and providing relevant knowledge needed in this fast-changing employment environment.

Standard methodology was selected. We started with Literature Review

Based on project documentation, previous deliverables of the Agrinext project D2.1 and D2.2, and on European Frameworks DigComp, GreenComp and LifeComp the CPI and BC Naklo decided to test SELFIE tool for teachers to analyse the tool and its applicability for the needs of the project.

After testing it was decided that SELFIEE will be used to assess the level of digital skills which will be later incorporated in all 4 curricula modules since digital skills are transversal. EU Questioner is standardised, well tested and available in all partner country languages.

The group decided to develop another questionnaire which will show us more specific results relevant for VET specifics especially for the field of MA. Furthermore, we considered progress made in WP2: Flexibilisation of school system and already mentioned trends affecting educational and work sector.

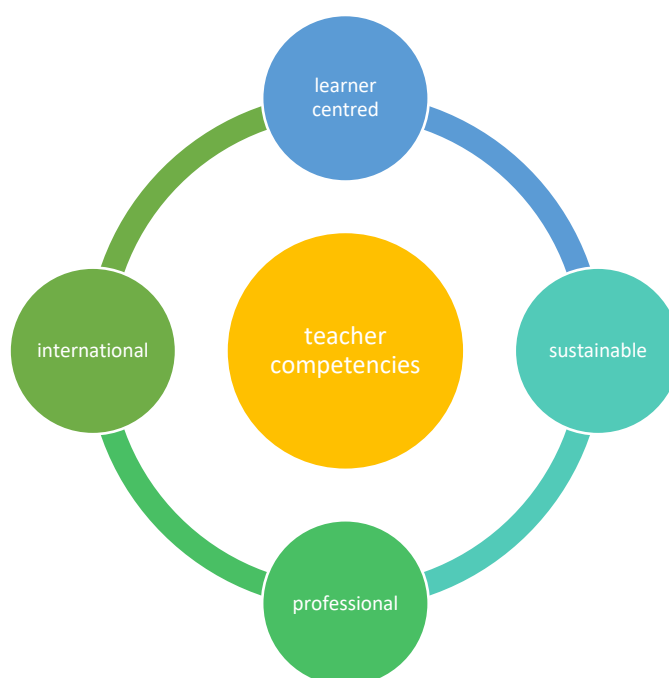
Questioner will gather minimal personal data, mainly related to the country and professional field. **Section 1** will be focused on skills reflecting Learner centred pedagogical approach

Section 2 Sustainable

Section 3 Professional - MA

Section 4 is related to multicultural context, transferability and adaptability





SELFIE Guidelines are in separate file and should be distributed together with the invitation to the link

Appendix 2: Report of the Analysis of VET Teachers' Professional and Pedagogical Competencies and SELFIE

Report of the Analysis of VET Teachers' Professional and Pedagogical Competencies and SELFIE

To develop a **curriculum and training activities for teachers** with focus on upskilling their pedagogical and professional competences in the field of MA, AgriNext consortium develop a **Survey of professional and pedagogical competences of vocational teachers**. Surveying the **digital competences** the tool developed by EU commission **SELFIE** was used.

Training activities should be related to the need for learners to acquire both vocational and key competences through a high-quality provision that is underpinned by quality assurance, supported by continuous professional development of teaching and training staff, innovative pedagogies, mobility, and international strategies. Teaching and learning should be in the tune with new opportunities and fast-changing skill needs of the labour market and societal, technological, and economic challenges.

The report performs analyses of teachers VET competences in the field of multifunctional agriculture and their ability to adapt to the job market skill demands and analysis of teacher's pedagogical competences (learner-centred teaching) and digital competences. The survey was translated into 4 consortium languages (Spain, Croatian, Slovene and English).

One hundred and twenty-five (125) teachers registered on the survey of professional and pedagogical competences of vocational teachers, and hundred twenty-two (122) answered on the survey. Eleven (11) teachers answer to the SELFIE.

Analysis of the survey of professional and pedagogical competences of vocational teachers

1. Gender

Female	67
Male	56
Non-binary	0
Prefer not to say	1
Drugo	1



2. The country where I teach

Croatia	20
Ireland	12
Slovenia	19
Spain	74
Drugo	0



3. Which subjects do you teach (general or professional)?

54 respondents (43%) answered professional subjects to this question.



126 responses submitted

Which subjects do you teach (general or

CFGB Agrojardineria
 stručnih predmeta rama agraria la y Tepes profesional agraria
 Zonas Verdes **Formación profesional** profesional rama
 de professional e general strokovne nastavnik
 strokovne predmete y composiciones especial agraria Formaciòn Profesional

4. INNOVATIVE AND INCLUSIVE APPROACHES

■ always ■ often ■ rarely ■ never

The student is at the center of the teaching process.

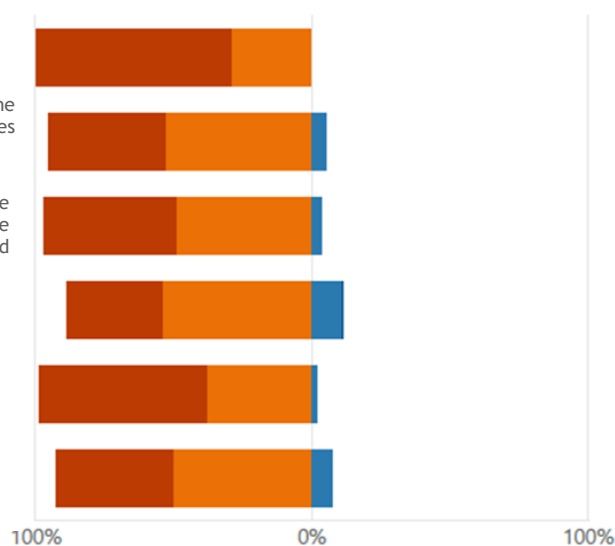
I recognise and consider the students' prior knowledge in the planning and implementation of classes (e.g. I prepare activities of varying degrees of difficulty

I plan and implement forms and methods of work that enable the differentiation of the learning process and promote the integration of theory and practice, collaborative work and integration with the real working environment.

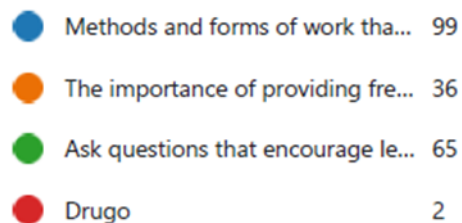
I dedicate a lot of time to ongoing student follow-up to gather information about a person's prior knowledge, knowledge gaps and constructive feedback.

I take the time to check if the students have understood the expected goals and results of the lessons.

I encourage self-reflection of students and peer-to-peer evaluation of students' products and services.



5. I am most interested in training in the following areas (choose 1 or 2 areas):



6. I am empowering learners with green skills by:

■ Always
 ■ Often
 ■ Rarely
 ■ Never

I refer to the topics/challenges/problems of sustainable development and climate change.

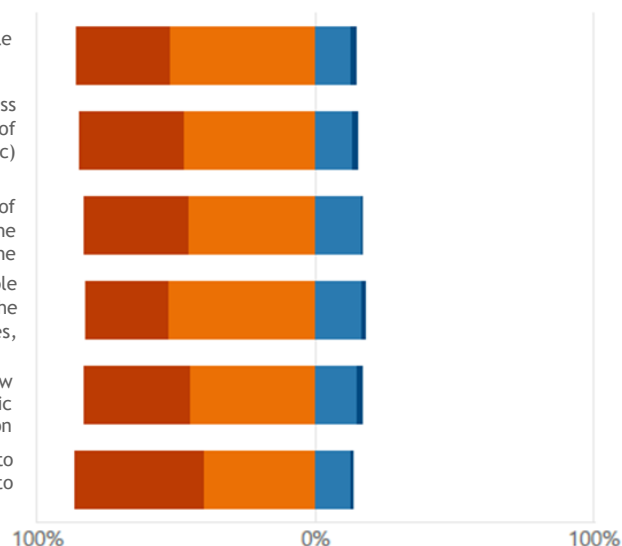
I encourage learners to perceive and address challenges/problems/behaviours from all aspects of sustainability (environmental, social, cultural and economic) that are interconnected.

I encourage learners to question one's own and the values of others and the needs and views of the world, which support the current economic and social system in relation to nature and the

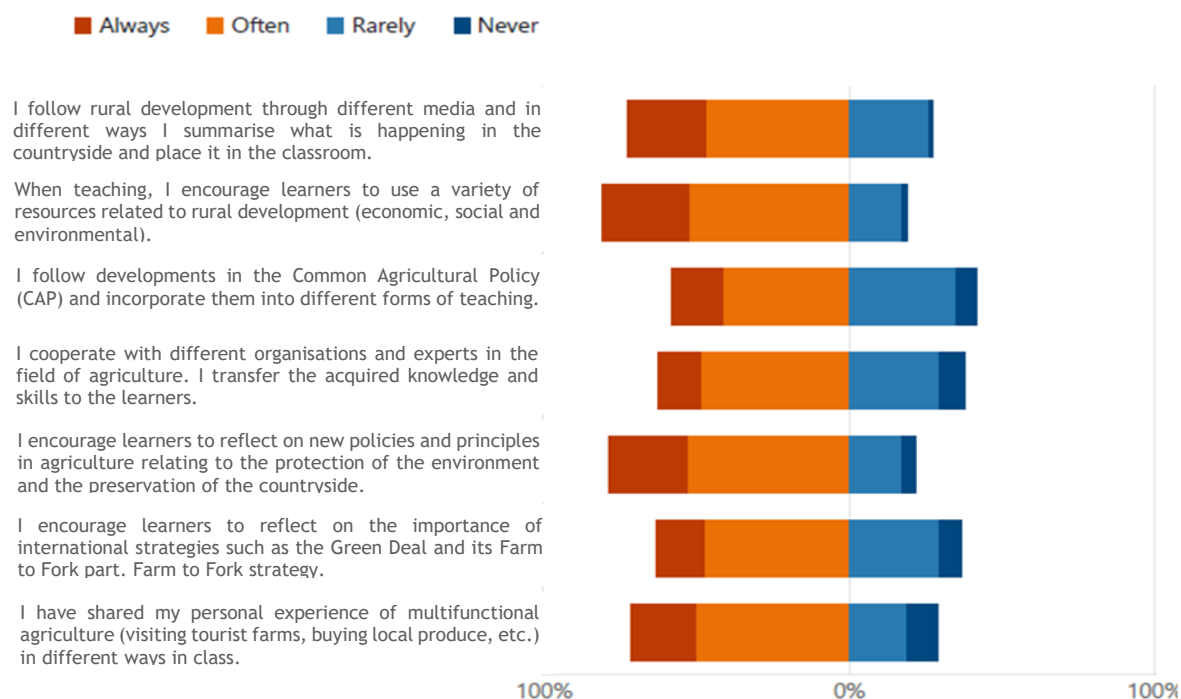
I approach the chosen issue/challenge/problem of sustainable development and climate change in a systemic way, with the aim of gaining an in-depth understanding of the causes, consequences and key stakeholders in the system.

I encourage learners to think about a sustainable future - how they could work differently to support social and economic development, taking into account the protection, conservation

I encourage learners to act independently and with others to protect and conserve nature and the environment and to promote biodiversity.



7. Question on professional skills in multifunctional agriculture

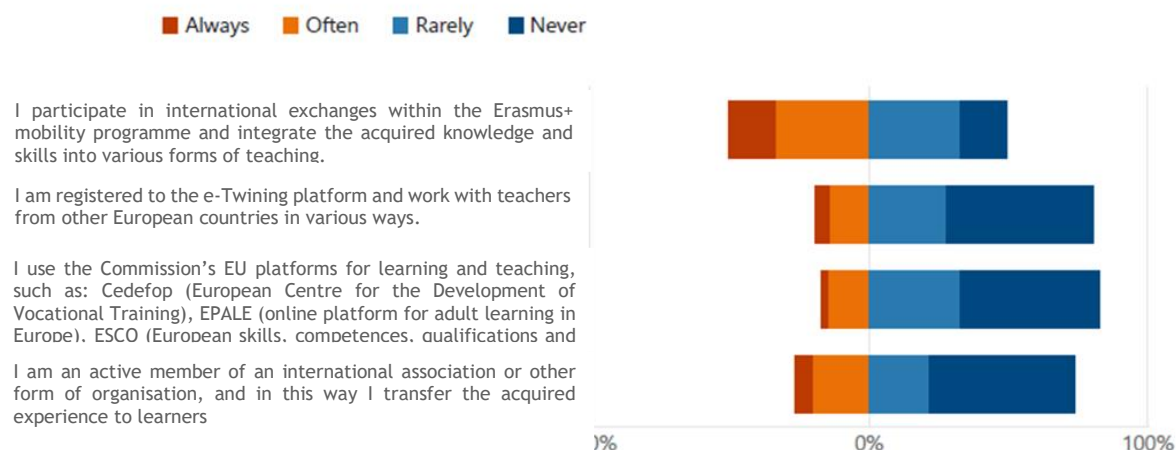


8. I am most interested in training in the following areas (choose 1 or 2 topics):

- Different sources and informati... 66
- Various sources and information... 55
- Network of stakeholders involve... 30
- Various international strategy p... 60



9. Question International activity



10. I am most interested in training in the following areas (choose 1 or 2 topics):

- Overview of the Commission's E... 47
- Examples of good practice in tra... 89
- Examples of good practice in th... 67



Analysis of SELFIE⁶

Group: AgriNext - Analysis of VET teachers' digital skills

Group description: The AgriNext Teachers Community is a group of teachers from Croatia, Ireland, Slovenia and Spain. They are assessing the digital literacy of teachers teaching in the field of multifunctional agriculture.

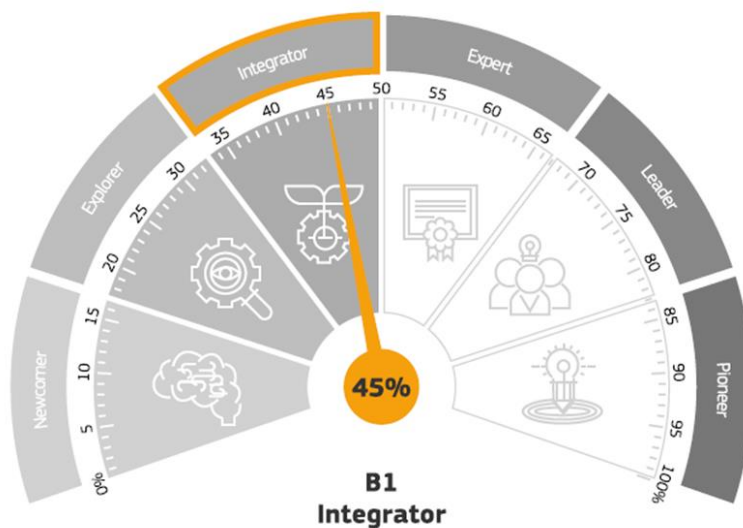
Education sector: School Education (Primary and Secondary)

Reflection date: 05/04/2024 - 31/05/2024

Number of participants: 11

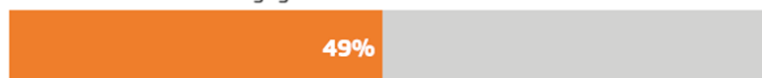
⁶ Group Results and Feedback Report, SELFIE for TEACHERS, AgriNext - Analysis of VET teachers' digital skills

Overall results



Results by area

Area 1 - Professional Engagement



B1



Area 2 - Digital Resources



B1



Area 3 - Teaching and Learning



B1



Area 4 - Assessment



B1



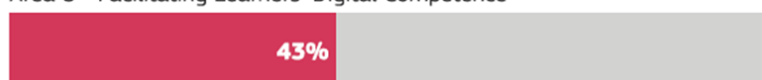
Area 5 - Empowering Learners



B1



Area 6 - Facilitating Learners' Digital Competence



B1



Proficiency levels explained

Integrator (B1)

You experiment with digital technologies in a variety of contexts and for a range of purposes, integrating them into your practices. You creatively use them to enhance diverse aspects of your professional engagement. You are eager to expand your repertoire of practices. You will benefit by increasing your understanding about which tools work best in which situations and on fitting digital technologies to pedagogic strategies and methods. Try to give yourself some more time for reflection and adaptation, complemented by collaborative encouragement and knowledge exchange, to reach the next step, Expert.

Suggestions to improve digital competences⁷

Using digital technologies in your professional practice can offer new opportunities and enhance your work. A first step to develop your digital competence is **awareness**. You can initiate discussions with your colleagues or other people that have some expertise on this competence and search for more information about it and what it means to you as a teacher.

Professional Engagement

1. Use a variety of digital technologies according to your communication goal, target or context, so as to meet your organisational communication needs (e.g. email or instant messaging, individual chat or group discussion forum).
2. Administer online learning environments in line with ethical considerations and data management strategy in compliance with the main principles of the General Data Protection Regulation (GDPR) (e.g. consider administration features, describe a policy on managing content and students' data, edit privacy settings).
3. Analyse and select digital technologies for effective collaboration and interaction based on their affordances and limitations (e.g. use online collaborative spaces to engage with peers in the joint production of teaching resources that each of you can refine for their purposes and thus learn from each other, or implement a joint project where your students interact with students from different contexts).
4. Use digital technologies to meet your professional practice needs (e.g. use an online learning management system, use tablets for students to work on a project)
5. Start trying different methods to support your reflection on your teaching practice and reflective learning with the use of digital technologies (e.g. use online self-reflection tools, keep a reflection diary, explore reflective digital story telling).
6. Recognise possible risks and threats for you and your school's reputation relating to your digital activity (e.g. personal data and content shared or published without your consent).

⁷ From Feedback per item results of SELFIE

7. Identify your learning needs and define your learning goals so as to analyse and select the resources and activities that best suit them (e.g. reflect on your learning needs and look for a webinar, an online community or a repository that can satisfy them).
8. Start trying professional learning opportunities on the use of digital technologies in education to support your professional practice (e.g. micro-teachings, hands-on workshops, online courses).

Digital resources

1. Use various online tools and portals to search for a wide and diversified set of digital resources. Consider involving yourself in networks and learning communities which can help you locate resources which are engaging and appealing to your student and that respond to educational needs.
2. Use various digital technologies, based on their affordance, so as to create digital educational resources that meet learners' need. This includes using interactive and engaging formats such as multimedia presentations, games and online activities that can be realised within the constraints of your educational setting.
3. Find opportunities to use a variety of digital technologies based on their affordances to modify and repurpose digital resources so as to meet teaching and learning aims. For example, you can customise content for an online lesson, use e-book editors to change pictures/readings mirroring students' context and experience.
4. Use various digital tools systematically to store, organise and facilitate access to educational digital content. Choosing a logical and consistent way to organise your digital content allows you and others to easily locate and use them.
5. Share digital resources choosing the most appropriate channels for private, limited or public use. Consider main issues when using copyrighted material for your teaching and learning activities, including how to determine whether a work is copyrighted, whether you will need to ask permission for a particular use or understanding if fair use conditions for education purposes apply.

Teaching and learning

1. Extend your teaching and involve your students in more digital activity based on software programs and suites, mobile apps and tools, online and cloud-based resources, and / or if possible, use instructional and interactive technologies such as whiteboards. A good starting point is to think about using the tools you are currently using in different ways and whether you can integrate other digital tools, for example mobile phones or other personal devices, into your teaching and their learning.
2. Work to provide students with feedback and opportunities for reflection on their learning, in real-time and/or asynchronously. A non-intrusive presence will allow you to learn about your students and their individual challenges and problems and to tailor guidance and feedback accordingly.
3. Explore the possibilities of using various digital technologies to support and enhance your students' collaborative learning in face to face and/ or online settings. For instance, co-authoring on a team-based task where individuals take on complementary roles and responsibilities. Tasks focused on researching and investigating set topics that involve collaboration to document, present, and otherwise share findings can work well.



4. Explore the possibilities of encouraging your students to plan their own learning using digital tools that support planning work, scheduling using digital calendars, goal setting and recording progress using digital journals. Investigate how they can use digital tools that support planning and scheduling learning using digital calendars, and how they can start building capability for personal goal setting and recording progress using digital journals. For example, ask them to identify how a particular learning goal can be reached and to design a plan to reach it, thinking about how technology can assist in the process.
5. Consider exploring how emerging technologies such as virtual and augmented reality or AI can be used to provide students with novel learning experiences and new kinds of learning to foster the development of useful transversal skills, as well as a strong sense of the ethical aspects of accessing and using such technologies.

Assessment

1. Start trying using digital technologies to enable and enhance your assessment of your students' learning. Consider, for example, how digital technologies can be used to support assessment, either formative or summative or both. This could involve exploring the value of online quizzes, games, digital forms, mobile apps, assessment platforms as well as asking your students to use such tools to self-assess their learning, in class or at home.
2. Explore how technologies can be used to gather evidence on your students' individual and/or group learning activities. This can include using digital quizzes, online polls, learning surveys, and various types of learning analytics as integral elements of the assessment process. The focus of this should be to gather and analyse evidence of learning and to identify any learning difficulties.
3. Consider exploring how digital technologies can be used to support the integration of feedback and reflection on students' learning into their practice. This could involve using blogs, wikis, video-based feedback or other digital annotation on assignments in order to help students see how they can improve.

Empowering learners

1. Explore students' digital context and start using available resources and tools. Aim to assign tasks that best reflect their reality providing examples of available digital technologies.
2. Start trying different digital learning activities for students who need additional support (e.g. adapting the levels of difficulty in assessment activities, analyse with students all activities not solved correctly).
3. Start exploring digital technologies that engage your students and get them to explore their learning pathway. You can ask them for example which digital tools they use, how they search for information, how they evaluate the accuracy of what is brought to them, how they index the available information and finally how they present it.
4. Start analysing the characteristics of the available technologies and adapt them to different situations. You can start applying one at a time, keep notes with your experiences and share them with colleagues in a digital diary.

Facilitating learners' digital competences

1. Implement learning activities requiring students to compare the accuracy of sources. You can, for example, present your students with a website or audio-visual content taken from

the internet on a topic they have just studied and ask them to identify inaccuracies, missing information or bias by cross-checking it with other sources.

2. Develop learning designs which support students to communicate and collaborate respecting behavioural and communication norms. This may include encouraging students to document their communication and collaboration rules and to reinforce them among themselves; and even challenging their rules by integrating tasks or variations that require different collaboration strategies or norms for communication.
3. Ask your students to express and convey their ideas creatively by using digital tools. This may include using digital tools and devices to create visualisations, simulations or digital stories.
4. Start trying learning activities that foster students' awareness of the benefits and drawbacks of using digital technologies. This could include asking students to identify online behaviour (of their own or of others) that makes them happy or sad, or discussing existing data protection rules to ensure they are aware of them.
5. Start trying learning activities that foster students' understanding of legal and ethical implications when using digital technologies. This could include planning activities in which they are required to understand the traces they leave when they are online/their digital footprint, how to protect their digital identity and how to avoid disclosing personal information.
6. Start trying learning activities that encourage students to use digital technologies to employ strategies for understanding and solving problems (e.g. brainstorming, mapping, visualisation tools, etc. to analyse a problem and develop a possible solution).

Links and References

<https://education.ec.europa.eu/selfie-for-teachers>

Appendix 3: Selfie instructions

Work Package 2: Flexibilization of school systems

Task 2.6. Analysis of VET-teachers' professional and pedagogical competencies

INSTRUCTIONS FOR TEACHERS

1. AIM

Questionnaire aims to gather insights into the competencies of teachers in adapting to the rapidly evolving job market needs. It focuses on two key perspectives: professional competencies related to job market skills and pedagogical competencies necessary for adapting learning processes. By assessing teachers' skills and pedagogical approaches, we aim to inform the development of curricula for topics needed for teachers' trainings in the field of multifunctional agriculture.

Your participation is priceless, and we are kindly asking you to solve **2 questioner each**.

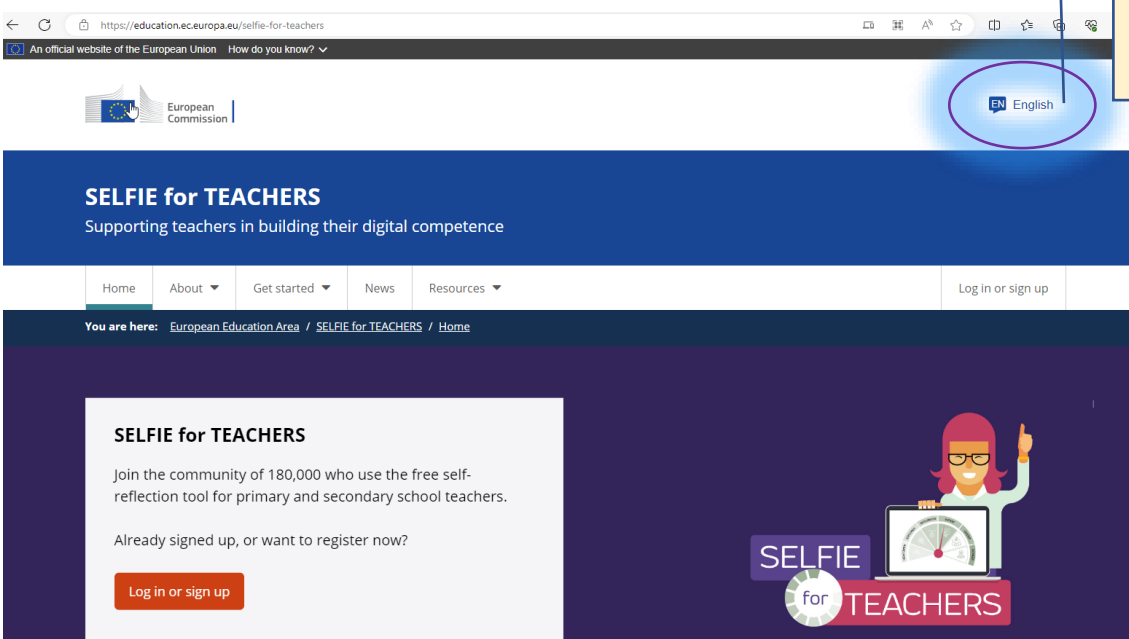
a) **SELFIE AgriNext 2.6** - roughly 25 minutes and

b) **Forms Analysis of teachers' competences** - roughly 10 minutes.

2. INSTRUCTIONS

SELFIE tool is a free tool, developed by the European Commission & we mentioned AgriNext project proposal.

[SELFIE for TEACHERS | European Education Area \(europa.eu\)](https://education.ec.europa.eu/selfie-for-teachers)



If you don't have an account, you can create an account, and it will lead you through following process.

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EU Login
One account, many EU services

English (en) ▼


dce requires you to authenticate
Sign in to continue

Enter your e-mail address or unique identifier

[Create an account](#) Next >

Or

If you do not wish to create an EU Login account, you can sign in by using one of the following third-party sign-in options ("Sign-in Service"). [Read more](#)

 [Sign in with your eID](#)

This website uses cookies. [Click here to learn more.](#) Close this message X

EU Login
One account, many EU services

English (en) ▼

[Create an account](#) Login

Create an account

[Help for external users](#)

First name

Last name

E-mail

Confirm e-mail

E-mail language
English (en) ▼

☐ By checking this box, you acknowledge that you have read and understood the [privacy statement](#)

Create an account Cancel

EU Login
One account, many EU services

English (en)

[Create an account](#)
[Login](#)

Create an account

[Help for external users](#)

First name

Last name

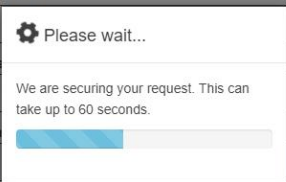
E-mail

Confirm e-mail

E-mail language

☒ By checking this box, you acknowledge that you have read and understood the [privacy statement](#)

[Create an account](#) [Cancel](#)



Please wait...

We are securing your request. This can take up to 60 seconds.

Confirm registration on your e-mail by changing the password.

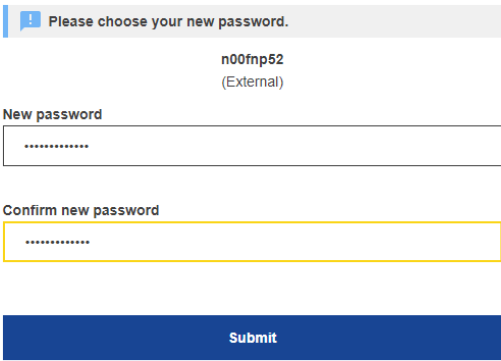
This website uses cookies. [Click here to learn more.](#)
[Close this message](#)

EU Login
One account, many EU services

English (en)

[New password](#)
[Login](#)

New password



Please choose your new password.

n00fmp52
(External)

New password

Confirm new password

[Submit](#)

Passwords cannot include your username and must contain at least 10 characters chosen from at least three of the following four character groups (white space permitted):

- Upper Case: A to Z
- Lower Case: a to z
- Numeric: 0 to 9
- Special Characters: !"#%&'()*+,-./:;<=>?@[\] ^ _ `{|}~

Examples: YgCScx5JVb ZGWcnFKBB8 JHRU:ihRz

[Generate other sample passwords](#)

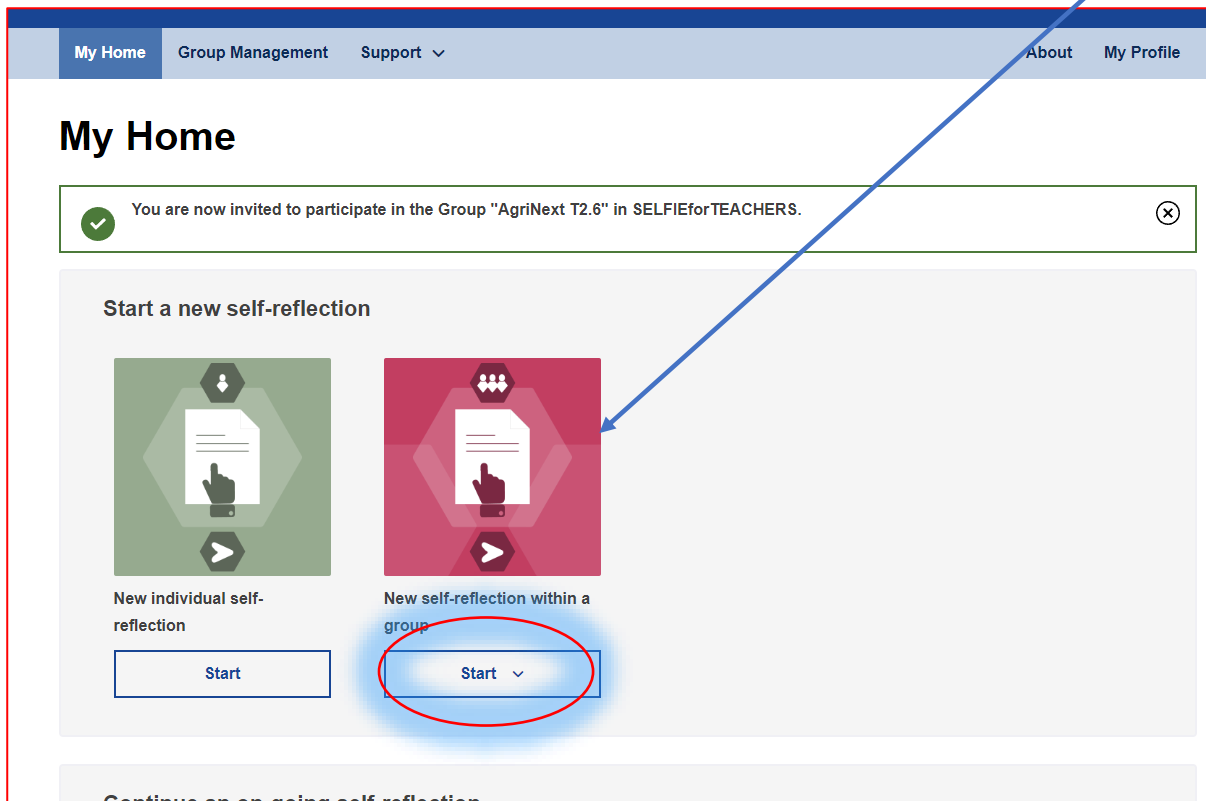


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**Project number:
101056023**

[Click here to join the AgriNext group.](#) After joining make sure to select: **New self-reflection within a group.**



My Home

Group Management Support ▾ About My Profile

My Home

✓ You are now invited to participate in the Group "AgriNext T2.6" in SELFIEforTEACHERS. (X)

Start a new self-reflection

New individual self-reflection

Start

New self-reflection within a group

Start ▾

Continue an on-going self-reflection

Start a new self-reflection



New individual self-reflection

Start



New self-reflection within a group

Start ^

AgriNext T2.6 group self-reflection

Continue an on-going self-reflection



On-going individually initiated self-reflection

Continue v



On-going self-reflection within a group

Continue ^

AgriNext T2.6 self-reflection within a group

If you didn't finish self-evaluation, you can always continue here.

Self-reflection is totally anonymous.

But when you start, make sure you select that you agree to share data within a group otherwise we won't be able to get the group average.

Start a new self-reflection within a group

GROUP NAME

AgriNext group self-reflection

School Education (Primary and Secondary)

Manage your data privacy

The results of your self-reflection and your personal data belong to you. You can, however, choose to share your anonymised results (ie results that are not linked to your name). This anonymous data can be used for research purposes or to plan training.

You can learn more about how we process your personal data through our [SELFIEforTEACHERS privacy statement](#)



Do you agree to share your self-reflection anonymised data? *

☐ Yes, I agree to share my data ☐ No, I do not agree to share my data

Cancel

Continue

If you already filled self-reflection, the tool is asking you if you want to preload your answers and which if you already filled more self-reflections.

Start a new self-reflection within a group

GROUP NAME

AgriNext T2.6 group self-reflection

School Education (Primary and Secondary)

Preload answers from a previous self-reflection

You can start a self-reflection with the answers you provided in a previous self-reflection and modify them according to your current situation.

Do you want to preload the answers of a previous self-reflection? *

☒ Yes ☐ No

Select self-reflection *

Select

Select

AgriNext 08-03-2024



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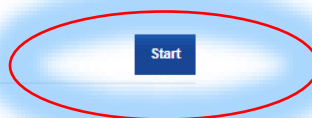
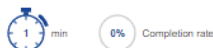
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Project number:
101056023

Now you can begin answering the questions.

1 Before you start

Before starting your self-reflection, indicate your level of digital competence.

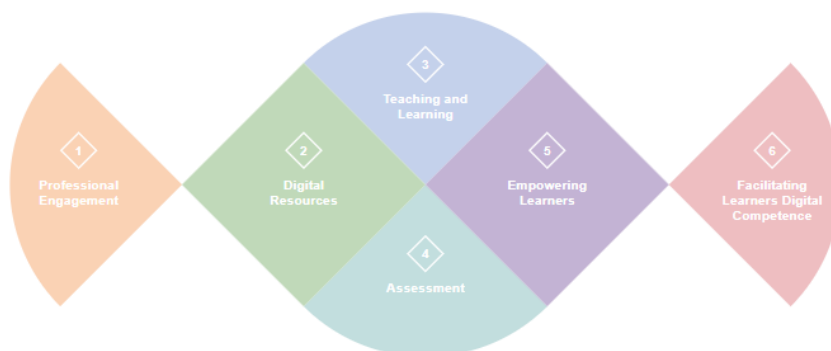


2 Digital competences

Answer a series of reflective statements on how you are using digital tools and technologies in different areas of your work. As soon as you have completed the statements for one area you can access your results for that area.



Start



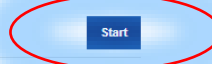
+ 1 Professional Engagement	100% Completion rate
+ 2 Digital Resources	100% Completion rate
+ 3 Teaching and Learning	100% Completion rate
+ 4 Assessment	100% Completion rate
+ 5 Empowering Learners	100% Completion rate
+ 6 Facilitating Learners' Digital Competence	100% Completion rate

At the end it is important to submit self-reflection. But before you can submit fill

+ 3 Teaching and Learning	100% Completion rate
+ 4 Assessment	100% Completion rate
+ 5 Empowering Learners	100% Completion rate
+ 6 Facilitating Learners' Digital Competence	100% Completion rate

3 Some information about you

Before finishing, how would you describe your digital competence? To better understand your professional context, please provide some information about yourself.



4 Submit your self-reflection

Find out your level (from beginner to innovative) and how to improve even more. After submitting your answers, you will be able to download a report with your level for the six areas and obtain your certificate of participation

Submit self-reflection >



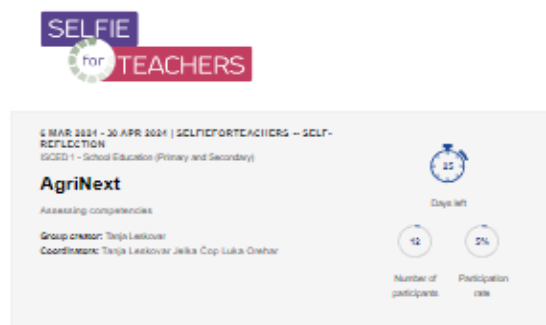
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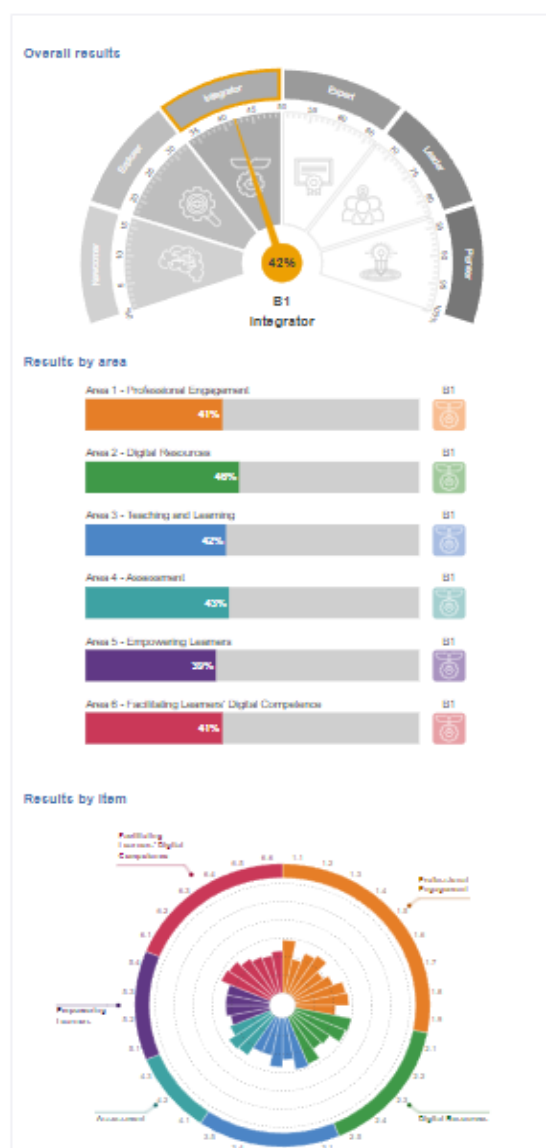
Project number:
101056023

How results are shown for coordinators

Group Results and Feedback Report



Group results



Results and Feedback Report



AgriNext - School Education (Primary and Secondary)

Self-reflection completed on 28 March 2021

Group results



Compare results

Apply filters to compare your current results with averages of all users or other groups.

You can see the comparisons in the graph above.

My previous self-reflections

Select

Self-reflections within a group

All users

Enthusiasm for items

If you want to see your results compared with others in the AgriNext group, please use the **compare results** section.

Compare results

Apply filters to compare your current results with averages of all users or other groups.

You can see the comparisons in the graph above.

My previous self-reflections

Select

Self-reflections within a group

All users

Appendix 4: SELFIE for Teachers - Group Report



SELFIEforTEACHERS



Group: AgriNext - Analysis of VET teachers' digital skills

Group description: The AgriNext Teachers Community is a group of teachers from Croatia, Ireland, Slovenia and Spain. They are assessing the digital literacy of teachers teaching in the field of multifunctional agriculture.

Education sector: School Education (Primary and Secondary)

Group creator: Tanja Leskovar

Group coordinators: Tanja Leskovar, Nina Kaličanin, Luka Orehar

Reflection date: 05/04/2024 - 31/05/2024

Number of participants: 11

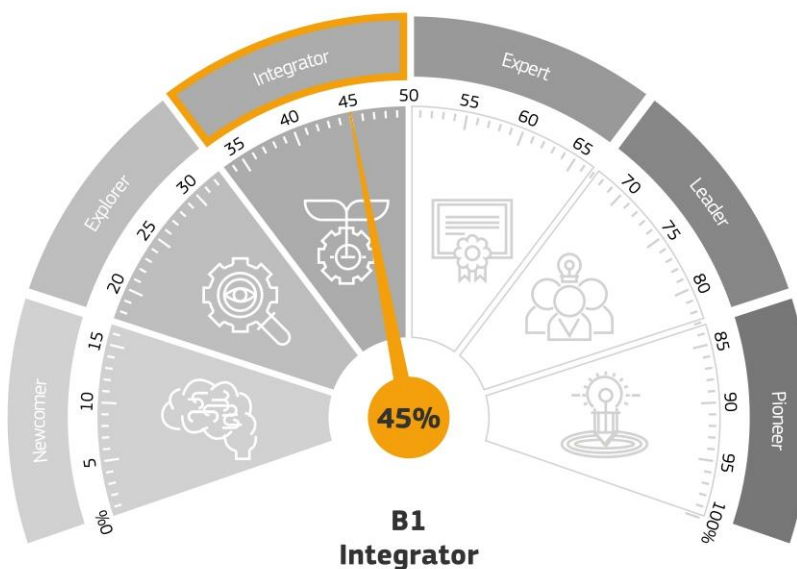
Thank you for using SELFIEforTEACHERS!

This report gives you the overall results from the group.

Based on this Report you can plan the next steps and learning pathways for your group.

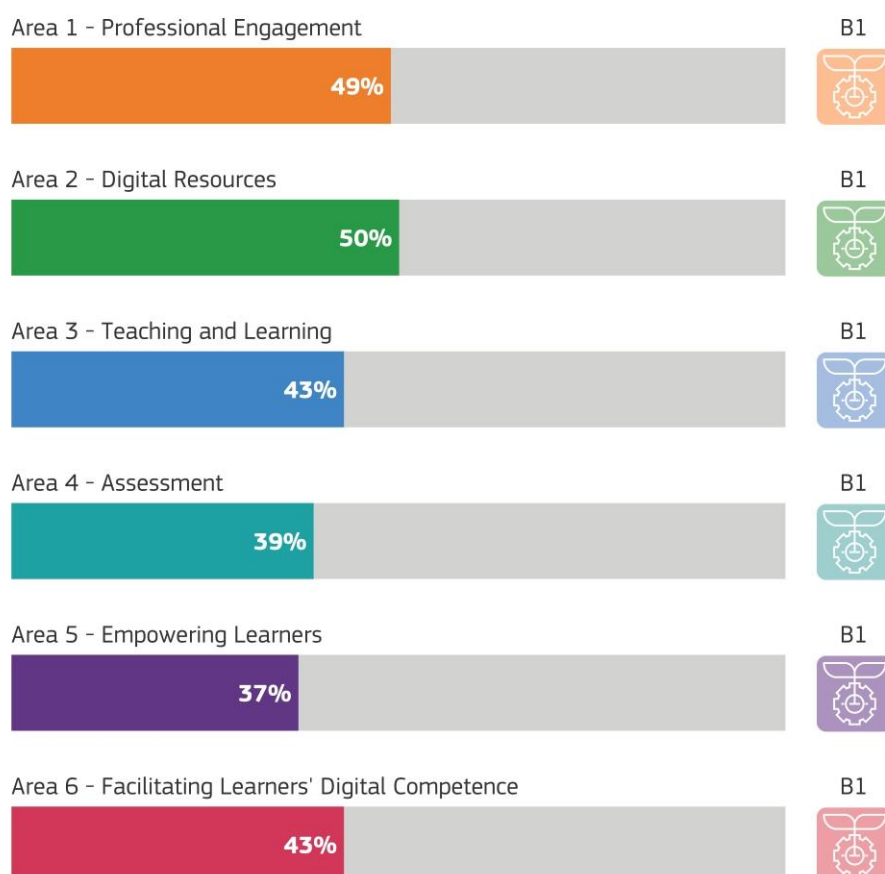
Group results

Overall results

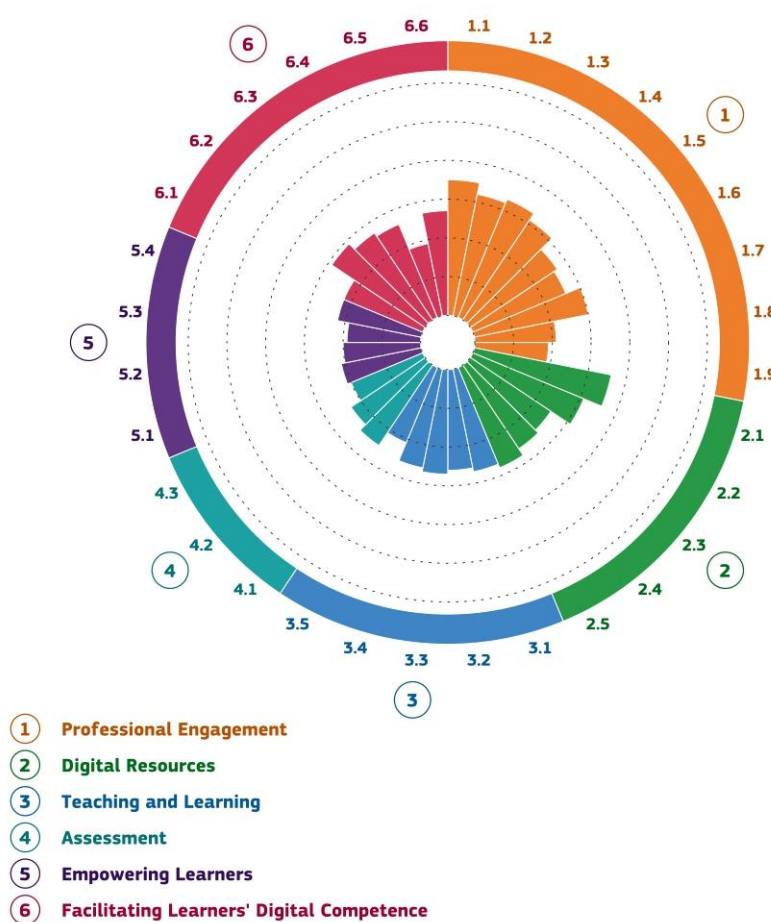




Results by area



Results by item



Proficiency levels explained

Newcomer (A1)

You are aware of how digital technologies can support and enhance your professional practice. The feedback you get from this self-reflection has identified a number of actions you can try. Select one or two to plan your next learning pathway, focusing on meaningfully enhancing your teaching strategies. As you do so, you'll find yourself moving to the next step of digital competence, the Explorer level.

Explorer (A2)

You have started exploring the potential of digital technologies and are interested in using them in order to enhance pedagogical and professional practice. You have tried using digital technologies in some areas and will benefit from more consistent use. You can increase your competence by using digital technologies in various contexts and for a range of purposes, integrating them into many of your practices. This will move you to the next step of digital competence, the Integrator level.

Integrator (B1)

You experiment with digital technologies in a variety of contexts and for a range of purposes, integrating them into your practices. You creatively use them to enhance diverse aspects of your professional engagement. You are eager to expand your repertoire of practices. You will benefit by increasing your understanding about which tools work best in which situations and on fitting digital technologies to pedagogic strategies and methods. Try to give yourself some more time for reflection and adaptation, complemented by collaborative encouragement and knowledge exchange, to reach the next step, Expert.

Expert (B2)

You use a range of digital technologies confidently, creatively and critically to enhance your professional activities. You purposefully select digital technologies for particular situations, and try to understand the benefits and drawbacks of different digital strategies. You are curious and open to new ideas, knowing that there are many things you have not tried out yet. You use experimentation and reflection as a means of redesigning, expanding, structuring and consolidating your repertoire of strategies. Share your expertise with other teachers and continue critically developing your digital strategies to reach the Leader level.

Leader (C1)

You have a consistent and comprehensive approach to using digital technologies to enhance pedagogic and professional practices. You rely on a broad repertoire of digital strategies from which you know how to choose the most appropriate for any given situation. You continuously reflect on and further develop your practices. Exchanging with peers, you keep updated on new developments and ideas and help other teachers seize the potential of digital technologies for enhancing teaching and learning. If you are ready to experiment a bit more, engaging students in expanding the potential of digital technologies at school level and beyond, you'll be able to reach an ultimate stage of competence, as a Pioneer.

**Pioneer (C2)**

You critically reflect on the adequacy of contemporary digital and pedagogical practices, in which you are a Leader. You are concerned about the constraints or drawbacks of these practices and driven by the impulse to innovate education even further. You experiment with highly innovative and complex digital technologies and/or develop novel pedagogical approaches. You lead innovation in your school and are a role model for other teachers. You expand your practices beyond the school community and engage stakeholders for further developments. Continue to be open to new ideas and keep up with the continuous technological and pedagogical advances to enhance your creative and innovative solutions.



Appendix 5: Analysis of agricultural consultants in agriculture/multifunctional agriculture

Analysis of agricultural consultants in agriculture/multifunctional agriculture

Summary

Results from the survey showed that the selected consultant possesses a high level of expertise in agriculture but low expertise in multifunctional agriculture. Clients were more interested in specialised agriculture than farm multifunctionality, indicating an identity crisis. Clients view that those who engage in multifunctional-oriented agriculture have failed to keep up with production-oriented agriculture, leading to the development of new income-generating business activities as an exit strategy.

Introduction

This report summarizes the findings of a survey conducted to evaluate the skills of consultants working in the field of agriculture/multifunctional agriculture, with a particular focus on their ability to transfer knowledge to their clients, including farmers and other stakeholders. The survey, conducted under the AgriNext Project co-funded by the EU Erasmus+ Programme, aimed to assess the consultants' background information, technical expertise, communication skills, and feedback mechanisms to identify areas for improvement.

Methodology

The survey was distributed to a diverse group of agricultural consultants in Ireland. The questionnaire included both quantitative and qualitative questions, covering key areas of background information, technical expertise, communication skills, and feedback and improvement.

A total of 25 responses were received and analysed to generate the insights presented in this report.

Key Findings

1. Education and Experience:

Almost half of the consultants (44%) hold advanced degrees (40% and 4% with a master's and doctorate, respectively) in agriculture or related fields, while 56% have bachelor's degrees. 64% of the consultants specialise in animal husbandry and dairy, 24% in crop production, 8% in agricultural economics and policy, and only 4% in agribusiness and financial planning.

48% of the consultants have more than 10 years of experience in the agricultural consultancy sector, indicating a mid-level of expertise and familiarity with the industry. 21% and 31% have 6-10 and 1-5 years of experience, respectively.

2. Technical Expertise



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Only 20% of the consultants provide consultancy on multifunctional agriculture, indicating a weak technical knowledge of farm diversification. The majority (80%) provide specialised agriculture consultancy. Consultants are well-versed in specialised agriculture.

16% of the consultants indicated their clients are interested in multifunctional agriculture enterprises, suggesting a low level of farm multifunctionality. The majority (84%) are interested in specialised agriculture.

3. Communication Skills

All the consultants (100%) transfer knowledge through one-on-one consultation, suggesting personalised consultation with clients is an effective technique to convey complex information.

76% of the consultants utilise additional knowledge transfer methods, including interactive workshops, training sessions, hands-on demonstration farms, and online resources.

Most (80%) consultants implement follow-up discussions and provide written summaries, charts/diagrams, and practical demonstrations to ensure clients understand the information they provide.

4. Feedback and Improvement

85% of the consultants measure the effectiveness of their knowledge transfer through direct feedback from client reviews and testimonials, while 15% conduct surveys and monitor client outcomes.

More than half (64%) of the consultants often review and update their consulting practices every year, 16% indicated sometimes (every 3-5 years), 8% (rarely), and 12% never review and update their consulting practices based on client feedback.

Recommendations

Continuous professional development through upskilling/reskilling in multifunctional agriculture is needed for consultants to upskill to provide knowledge transfer to clients.

Create awareness and promote multifunctional agriculture activities to attract clients, showcasing its roles in rural vitality and development.

Strengthen feedback mechanisms to gather more detailed insights into client needs and experiences and adjust advisory services accordingly.

Review and update consulting practices regularly to understand current happenings in the agricultural sector and upskilling for up-to-date knowledge transfer.

Conclusion

The survey has highlighted both the strengths and areas for improvement among consultants in Multifunctional Agriculture regarding knowledge transfer. By addressing the identified gaps and implementing the recommended strategies, consultants can enhance their effectiveness in supporting farmers and other stakeholders, ultimately contributing to rural vitality and development.

Appendix 6: Curriculum recommendations

Task 2.6 & Task 2.7

PRESETS FOR Curricula for the Training of the Teachers

This document concludes the analysis of VET-teachers' professional and pedagogical competencies gathered within the Task 2.6 and suggests new modules and titles for Task 2.7's development of curricula for teachers.

T2.6 Analysis of VET-teachers' professional and pedagogical competencies

We aim to carry out training activities related to the need for learners to acquire both vocational and key competencies through a high-quality provision that is underpinned by quality assurance, supported by continuous professional development of teaching and training staff, innovative pedagogies, mobility (Erasmus+ mobility, etc.) and internationalization strategies. Teaching and learning have to be in tune with new opportunities and fast-changing skill needs of the labor market and societal, technological and economic challenges. VET-partners will perform analyses of teachers VET competencies (in the field of MA) and their ability to adapt to the job market skill demands. Furthermore, partners will perform analysis of teacher's pedagogical competencies (including learner-centered teaching techniques and digital competencies - including using SELFIE tool).

Participants: BC Naklo, OnP, Coag Jaen, ES GG, CPI, Sloga, TUS, VUKA, SKINK

T2.7 Development of curricula

Based on the analysis findings partners will develop curricula for teachers, with a focus on upskilling their pedagogical and professional competencies in the field of MA.

Participants: BC Naklo, Coag Jaen, IES GG, CPI, ARCTUR, TUS, VUKA

Source: AgriNext Grant Agreement. Project: 101056023 — AgriNext — ERASMUS-EDU-2021-PEX-COVE

Deadlines:

ALL PARTICIPATING PARTNERS: Fill out the MS Forms until 5. 6. 2024

ALL PARTICIPATING PARTNERS: Finish curriculum for your specific model until 12. 6.

2024 BC Naklo will send out additional instructions for this task after 5. 6. 2024!

ALL PARTICIPATING PARTNERS: Develop final contents by 5th of August 2024

Choosing the name of the curricula:

The BC Naklo as the lead partner have prepared the following title options for the training, which will be developed within the next tasks and pilot tested in Karlovac in august 2024.



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1. Training of teachers' professional and pedagogical competences
2. Training of up-to-date competences for teachers
3. Training of competences reflecting the multifunctional agriculture job market, for teachers
4. Training... (suggest new title)

PLEASE, VOTE ON THE FOLLOWING LINK: <https://forms.office.com/e/f9shVM6cTQ>

Upskilling the teacher's professional and key competences linked to the constant monitoring of competences needed for the changing job market of multifunctional agriculture requires continuous education.

For this purpose, the educational Training of teachers' professional and pedagogical competences, based on the Analysis of VET Teachers' Professional and Pedagogical Competencies, SELFIE and Flexibilization of school system's report (AgriNext T2.4, T2.5), consisted of the next modules:



Proposed modules within the training:

BC Naklo has prepared 4 modules for this training - the process of developing and testing this will be like the work done in WP1 (for guidance service providers).

Training difficulty is EQF level 7 & is 35 pedagogical hours (45 minutes each) long.

Module Nr. 1: Flexible teacher

Or propose a new title...

(short description of the school systems in Croatia, Ireland, Slovenia and Spain, possibilities of the flexibilization - highlighting the teacher, mentor and organiser of practical work roll, teacher make alliances, ...)

Module Nr. 2: Innovative teacher

Or propose a new title...

(Trends in pedagogy and teaching methods, Methods and forms of work that support student-centred teaching; ask questions that encourage learning, self-reflection of students and peer-to-peer evaluation of students' products and services...)

Module Nr. 3: Up-to-date teacher

Or propose a new title...

(Meaning of various sources, documents, information, news, different sources and information for monitoring rural development, Various international strategy papers promoting rural and agricultural development Cap, Green Deal, Farm to Fork, Biodiversity..., Various sources and information for monitoring multifunctional agriculture; Network: international association or other form of organisation in multifunctional agriculture - pass on the experience I have gained, to learners, ...)

Module Nr. 4: Open teacher

Or propose a new title...

(Networking teacher - e-Twinning platform and collaborations with teachers from other European countries; EU platforms for learning and teaching, such as CEDEFOP (European Centre for the Development of Vocational Training), EPALE (online platform for adult learning in Europe); possibilities for Erasmus+ mobility and passing on the experience gained, to learners...)

In all modules transversal competences: green skills and digital competences emphasized as much as possible in practical way (handouts requiring green skills, digital skills in planning, assessment...)



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101056023

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Assessment of Professional and Pedagogical Competencies in Vocational Education and Training (VET) Teachers: Analytical Conclusions

Innovative and inclusive approaches to teaching. The one hundred and twenty-five (125) teachers answered this survey.

Over half of the respondents consistently agreed with the following statements:

- The student is at the center of the teaching process.
- Time is taken to ensure students understand the expected goals and outcomes of

lessons. More than half of the respondents frequently agreed with the following statements:

- Recognition and consideration of students' prior knowledge in class planning and implementation.
- Planning and implementing diverse methods to differentiate the learning process and integrate theory with practice.
- Dedicating substantial time to ongoing student follow-up to identify prior knowledge, knowledge gaps, and provide constructive feedback.
- Encouraging self-reflection and peer-to-peer evaluation among

students. Only a few responses indicated these practices were rarely implemented.

Nearly half of the respondents expressed a strong interest in further training in the following areas (each respondent could choose 1 or 2 areas):

- Methods and forms of work that support student-centred teaching.
- Questioning techniques that encourage learning.
- The importance of providing frequent, constructive feedback.

Professional skills in multifunctional agriculture

More than half of the responses frequently indicated the following practices:

- Following rural development through various media and summarizing it for classroom discussions.
- Encouraging learners to utilize diverse resources related to rural development, encompassing economic, social, and environmental aspects.
- Encouraging reflection on new agricultural policies and principles focused on environmental protection and countryside preservation.

Around 20-30% of responses indicated these practices were always implemented:

- Keeping abreast of the Common Agricultural Policy (CAP) and integrating it into teaching.
- Collaborating with organizations and experts in agriculture and transferring this knowledge to learners.
- Encouraging reflection on international strategies such as the Green Deal and its Farm to Fork component.
- Sharing personal experiences of multifunctional agriculture in class.

Around 20-30% of responses indicated these practices were rarely or never implemented.

Areas of greatest interest for further training included:

- Different sources and information for monitoring rural development (66 responses).
- Various international strategy papers promoting rural and agricultural development (60 responses).
- Various sources and information for monitoring multifunctional agriculture (55 responses).
- Network of stakeholders involved in multifunctional agriculture (30 responses).

International Cooperation

Approximately 50% of the respondents consistently or frequently:

- Participated in international exchanges within the Erasmus+ mobility program and integrated the acquired knowledge and skills into teaching.

Around 10-20% of the respondents rarely or never:

- Registered on the e-Twinning platform or collaborated with teachers from other European countries.
- Used EU platforms for learning and teaching, such as Cedefop and EPAL.
- Actively participated in international associations or organizations to pass on gained experience to learners.

Green skills

Nearly 50% of the responses frequently and 30-40% always:

- Referred to topics and challenges related to sustainable development and climate change.
- Encouraged learners to address challenges from all aspects of sustainability (environmental, social, cultural, and economic).
- Encouraged learners to question their own and others' values and needs concerning the



- Approached sustainability issues systematically to understand causes, consequences, and key aspects.
- Encouraged learners to think about and work towards a sustainable future.
- **Promoted independent and collaborative actions to protect and conserve nature and biodiversity.**

Conclusions based on the SELFIE for TEACHERS

The AgriNext group of teachers achieved a score of 45% on the 100% scale, earning the title "INTEGRATOR".

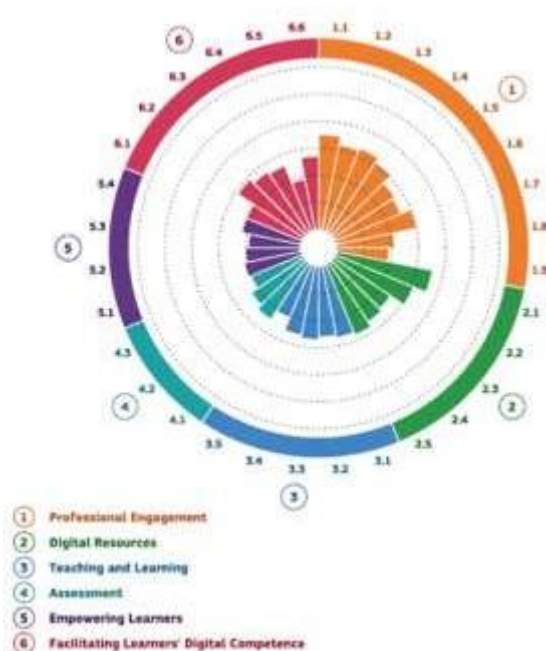


Figure 1: Skill distribution of the teachers within the AgriNext project consortium via the SELFIE tool.

Appendix 7: Results of the online voting on the name of the educational program and module preferred

T2.7 - Development of curricula

Results of the online voting (from 31. 5 to 5. 6. 2024) on the name of the educational program and module preferred.

Please, vote for the most appropriate title of the training.

Partner	Title of the training
TUS	Enhancing VET Teachers' Competencies for Multifunctional Agriculture Education and Workforce Readiness
COAG JAEN	Training of up-to-date competences for teachers in multifunctional agriculture
IES Galileo	Training of competences reflecting the multifunctional agriculture job market, for teachers
BC Naklo	Training of up-to-date competences for teachers
TUS	Competence based training for educators that reflects the multifunctional agriculture job market
VUKA	Training of up-to-date competences for teachers

Ranging the module (1- most preferring, 4 - not preferring)

Partner	M1 - Flexible teacher	M2 - Innovative teacher	M3 - Up-to-date teacher	M4- Open Collaborative teacher	Results
TUS	4	1	2	3	M2 - Innovative teacher
COAG JAEN	4	2	1	3	M3 - Up-to-date teacher
IES Galileo	2	1	3	4	M3 - Up-to-date teacher
BC Naklo	2	3	1	4	M4 - Collaborative teacher
TUS	2	1	3	4	M2 - Innovative teacher
VUKA	1	2	3	4	M1 - Flexible teacher
	VUKA	TUS	COAG JAEN, IES	BC Naklo	

Description of the Modules

Module 1: Flexible teacher

short description of the school systems in Croatia, Ireland, Slovenia and Spain, possibilities of the flexibilization - highlighting the teacher, mentor and organiser of practical work roll, teacher make alliances, ...

Module 2: Innovative teacher

Trends in pedagogy and teaching methods, Methods and forms of work that support student-centred teaching; ask questions that encourage learning, self-reflection of students and peer-to-peer evaluation of students' products and services...

Module 3: Up-to-date teacher

Meaning of various sources, documents, information, news, different sources and information for monitoring rural development, Various international strategy papers promoting rural and agricultural development Cap, Green Deal, Farm to Fork, Biodiversity..., Various sources and information for monitoring multifunctional agriculture; Network: international association or other form of organisation in multifunctional agriculture - pass on the experience I have gained, to learners, ...

Module 4: ~~Open~~ Collaborative teacher

Networking teacher - e-Twinning platform and collaborations with teachers from other European countries; EU platforms for learning and teaching, such as CEDEFOP (European Centre for the Development of Vocational Training), EPAL (online platform for adult learning in Europe); possibilities for Erasmus+ mobility and passing on the experience gained, to learners...

In all modules **transversal competences: green skills and digital competences** emphasized as much as possible in practical way (handouts requiring green skills, digital skills in planning, assessment...) and **practical examples in the field of multifunctional agriculture**.

Appendix 8: AgriNext TPM Presentation - Development of curriculum



Results of the online voting (from 31. 5 to 5. 6. 2024) on the name of the training program and module preferred.



Partner	Titel of the training
TUS	Enhancing VET Teachers' Competencies for Multifunctional Agriculture Education and Workforce Readiness
COAG JAEN	Training of up-to-date competences for teachers in multifunctional agriculture
IES Galileo	Training of competences reflecting the multifunctional agriculture job market, for teachers
BC Naklo	Training of up-to-date competences for teachers
TUS	Competence based training for educators that reflects the multifunctional agriculture job market
VUKA	Training of up-to-date competences for teachers

Page 2

Analyse of the survey of professional and pedagogical competences of vocational teachers

2. The country where I teach

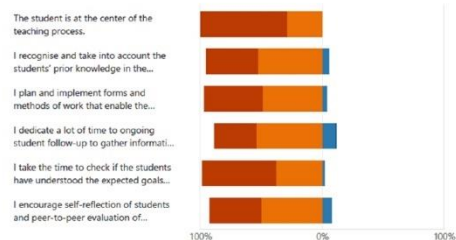


The hundred and twenty-five (125) teachers answered this survey.



4. INNOVATIVE AND INCLUSIVE APPROACHES

■ always ■ often ■ rarely ■ never

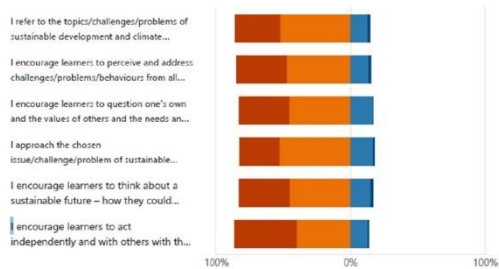


Page 3

Green skills

6. I am empowering learners with green skills by:

■ Always ■ Often ■ Rarely ■ Never

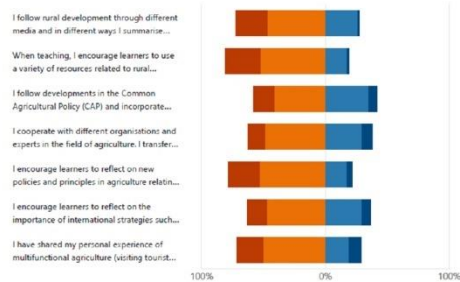


Professional skills in multifunctional agriculture



7. Question

■ Always ■ Often ■ Rarely ■ Never



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International activity

9. Question

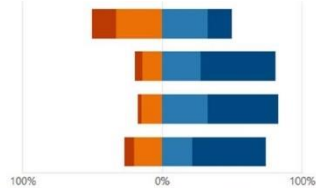
Always Often Rarely Never

I participate in international exchanges within the Erasmus+ mobility programme...

I am registered on the e-Twinning platform and collaborate in various ways with...

I use the Commission's EU platforms for learning and teaching, such as Cedefop...

I am an active member of an international association or other form of organization...

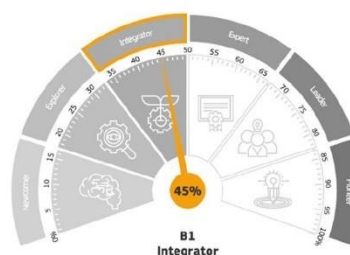


Analyse of SELFIE

Number of participants: 11

AgriNext

Overall results



Page 5

Ranging the modules per partner (1- most preferring, 4 - not preferring)

Partner	M1 - Flexible teacher	M2 - Innovative teacher	M3 - Up-to-date teacher	M4 - Open Collaborative teacher	Results
TUS	4	1	2	3	M2 - Innovative teacher
COAG JAEN	4	2	1	3	M3 - Up-to-date teacher
IES Galileo	2	1	3	4	M3 - Up-to-date teacher
BC Nakió	2	3	1	4	M4 - Collaborative teacher
TUS	2	1	3	4	
VUKA	1	2	3	4	M1 - Flexible teacher
VUKA		TUS	COAG JAEN, IES	BC Nakió	

Description of the modules

AgriNext

Module 1: Flexible teacher

short description of the school systems in Croatia, Ireland, Slovenia and Spain, possibilities of the flexibilization - highlighting the teacher, mentor and organiser of practical work roll, teacher make alliances, ...

Module 2: Innovative teacher

Trends in pedagogy and teaching methods, Methods and forms of work that support student-centred teaching; ask questions that encourage learning, self-reflection of students and peer-to-peer evaluation of students' products and services...

Module 3: Up-to-date teacher

Meaning of various sources, documents, information, news, different sources and information for monitoring rural development, Various international strategy papers promoting rural and agricultural development Cap, Green Deal, Farm to Fork, Biodiversity..., Various sources and information for monitoring multifunctional agriculture; Network: international association or other form of organisation in multifunctional agriculture - pass on the experience I have gained, to learners, ...

Module 4: Open Collaborative teacher

Networking teacher - e-Twinning platform and collaborations with teachers from other European countries; EU platforms for learning and teaching, such as CEDEFOP (European Centre for the Development of Vocational Training), EPAL (online platform for adult learning in Europe); possibilities for Erasmus+ mobility and passing on the experience gained, to learners...

Page 6

Transversal (Horizontal) Ccompetences



In all modules transversal competences:

- **green skills**
- **digital competences** emphasized as much as possible in practical way (handouts requiring green skills, digital skills in planning, assessment...) and

Practical examples in the field of multifunctional agriculture reflecting the job market needs.

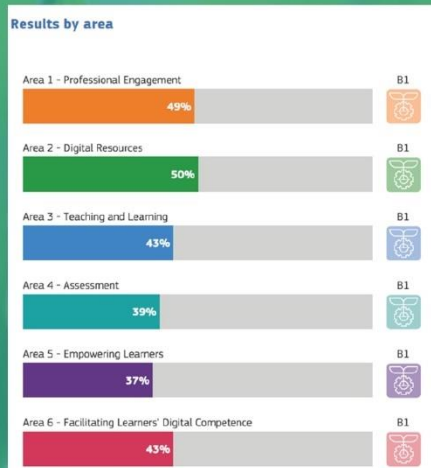


Source: Jošt Gantar/arhiv STO, online: <https://www.kmetijskizavod-celje.si/aktualno/trendi-v-turizmu-ki-so-v-prid-turisticnim-kmetijam-2020-11-17>

Pilot training: **two (2) or three (3) workshops (activity handouts) per module**

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SELFIE



<https://education.ec.europa.eu/selfie-for-teachers>

Integrator (B1)



You experiment with **digital technologies** in a variety of contexts and for a range of purposes, integrating them into your practices.

You creatively use them to enhance diverse aspects of your professional engagement.

You are eager to expand your repertoire of practices.

You will benefit by increasing your understanding about which tools work best in which situations and on fitting digital technologies to pedagogic strategies and methods.

Try to give yourself some more time for reflection and adaptation, complemented by collaborative encouragement and knowledge exchange, to reach the next step, Expert.

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Professional Engagement

1. Use a variety of digital technologies according to your communication goal, target or context, so as to meet your organisational communication needs (e.g. email or instant messaging, individual chat or group discussion forum).
2. Administer online learning environments in line with ethical considerations and data management strategy in compliance with the main principles of the General Data Protection Regulation (GDPR) (e.g. consider administration features, describe a policy on managing content and students' data, edit privacy settings).
3. Analyse and select digital technologies for effective collaboration and interaction based on their affordances and limitations (e.g. use online collaborative spaces to engage with peers in the joint production of teaching resources that each of you can refine for their purposes and thus learn from each other, or implement a joint project where your students interact with students from different contexts).
4. Use digital technologies to meet your professional practice needs (e.g. use an online learning management system, use tablets for students to work on a project).
5. Start trying different methods to support your reflection on your teaching practice and reflective learning with the use of digital technologies (e.g. use online self-reflection tools, keep a reflection diary, explore reflective digital story telling).
6. Recognise possible risks and threats for you and your school's reputation relating to your digital activity (e.g. personal data and content shared or published without your consent).
7. Identify your learning needs and define your learning goals so as to analyse and select the resources and activities that best suit them (e.g. reflect on your learning needs and look for a webinar, an online community or a repository that can satisfy them).
8. Start trying professional learning opportunities on the use of digital technologies in education to support your professional practice (e.g. micro-teachings, hands-on workshops, online courses).

Digital resources



1. Use various online tools and portals to search for a wide and diversified set of digital resources. Consider involving yourself in networks and learning communities which can help you locate resources which are engaging and appealing to your student and that respond to educational needs.
2. Use various digital technologies, based on their affordance, so as to create digital educational resources that meet learners' need. This includes using interactive and engaging formats such as multimedia presentations, games and online activities that can be realised within the constraints of your educational setting.
3. Find opportunities to use a variety of digital technologies based on their affordances to modify and repurpose digital resources so as to meet teaching and learning aims. For example, you can customise content for an online lesson, use e-book editors to change pictures/readings mirroring students' context and experience.
4. Use various digital tools systematically to store, organise and facilitate access to educational digital content. Choosing a logical and consistent way to organise your digital content allows you and others to easily locate and use them.
5. Share digital resources choosing the most appropriate channels for private, limited or public use. Consider main issues when using copyrighted material for your teaching and learning activities, including how to determine whether a work is copyrighted, whether you will need to ask permission for a particular use or understanding if fair use conditions for education purposes apply.

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Teaching and learning

1. Extend your teaching and involve your students in more digital activity based on software programs and suites, mobile apps and tools, online and cloud-based resources, and / or if possible, use instructional and interactive technologies such as whiteboards. A good starting point is to think about using the tools you are currently using in different ways and whether you can integrate other digital tools, for example mobile phones or other personal devices, into your teaching and their learning.
2. Work to provide students with feedback and opportunities for reflection on their learning, in real-time and/or asynchronously. A non-intrusive presence will allow you to learn about your students and their individual challenges and problems and to tailor guidance and feedback accordingly.
3. Explore the possibilities of using various digital technologies to support and enhance your students' collaborative learning in face to face and/ or online settings. For instance, co-authoring on a team-based task where individuals take on complementary roles and responsibilities. Tasks focused on researching and investigating set topics that involve collaboration to document, present, and otherwise share findings can work well.
4. Explore the possibilities of encouraging your students to plan their own learning using digital tools that support planning work, scheduling using digital calendars, goal setting and recording progress using digital journals. Investigate how they can use digital tools that support planning and scheduling learning using digital calendars, and how they can start building capability for personal goal setting and recording progress using digital journals. For example, ask them to identify how a particular learning goal can be reached and to design a plan to reach it, thinking about how technology can assist in the process.
5. Consider exploring how emerging technologies such as virtual and augmented reality or AI can be used to provide students with novel learning experiences and new kinds of learning to foster the development of useful transversal skills, as well as a strong sense of the ethical aspects of accessing and using such technologies.

Assessment



1. Start trying using digital technologies to enable and enhance your assessment of your students' learning. Consider, for example, how digital technologies can be used to support assessment, either formative or summative or both. This could involve exploring the value of online quizzes, games, digital forms, mobile apps, assessment platforms as well as asking your students to use such tools to self-assess their learning, in class or at home.
2. Explore how technologies can be used to gather evidence on your students' individual and/or group learning activities. This can include using digital quizzes, online polls, learning surveys, and various types of learning analytics as integral elements of the assessment process. The focus of this should be to gather and analyse evidence of learning and to identify any learning difficulties.
3. Consider exploring how digital technologies can be used to support the integration of feedback and reflection on students' learning into their practice. This could involve using blogs, wikis, video-based feedback or other digital annotation on assignments in order to help students see how they can improve.

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Empowering learners

1. Explore students' digital context and start using available resources and tools. Aim to assign tasks that best reflect their reality providing examples of available digital technologies.
2. Start trying different digital learning activities for students who need additional support (e.g. adapting the levels of difficulty in assessment activities, analyse with students activities not solved correctly).
3. Start exploring digital technologies that engage your students and get them to explore their learning pathway. You can ask them for example which digital tools they use, how they search for information, how they evaluate the accuracy of what is brought to them, how they index the available information and finally how they present it.
4. Start analysing the characteristics of the available technologies and adapt them to different situations. You can start applying one at a time, keep notes with your experiences and share them with colleagues in a digital diary.

Facilitating learners' digital competences



1. Implement learning activities requiring students to compare the accuracy of sources. You can, for example, present your students with a website or audio-visual content taken from the internet on a topic they have just studied and ask them to identify inaccuracies, missing information or bias by cross-checking it with other sources.
2. Develop learning designs which support students to communicate and collaborate respecting behavioural and communication norms. This may include encouraging students to document their communication and collaboration rules and to reinforce them among themselves; and even challenging their rules by integrating tasks or variations that require different collaboration strategies or norms for communication.
3. Ask your students to express and convey their ideas creatively by using digital tools. This may include using digital tools and devices to create visualisations, simulations or digital stories.
4. Start trying learning activities that foster students' awareness of the benefits and drawbacks of using digital technologies. This could include asking students to identify online behaviour (of their own or of others) that makes them happy or sad, or discussing existing data protection rules to ensure they are aware of them.
5. Start trying learning activities that foster students' understanding of legal and ethical implications when using digital technologies. This could include planning activities in which they are required to understand the traces they leave when they are online/their digital footprint, how to protect their digital identity and how to avoid disclosing personal information.
6. Start trying learning activities that encourage students to use digital technologies to employ strategies for understanding and solving problems (e.g. brainstorming, mapping, visualisation tools, etc. to analyse a problem and develop a possible solution).

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Developing Contents/Modules

- Common technical standards
- Ensuring visibility of content
- Text of the module
- Inductive approach
- Interactivity
- Methodological-didactic relevance is needed
- Links and references

Scheduling Activities



Activity	Date
Curriculum prepared	
Contents/Modules prepared	
Pilot training in Karlovac	From 26th to 30th of Auguste 2024

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Appendix 9: Template for AgriNext Curriculum T2.7

AgriNext

Name of the training course:

Special Part of Curriculum for

Part 1

- Name of MODULE 1:
- Duration: 8 hours up to 45 minutes (6 hours face to face training , 2 hours preparation)
- OVERVIEW
- LEARNING OBJECTIVES

Knowledge:

Skills:

Attitudes acquired:

Pedagogical contents/learning units

Unit 1: name of the unit

Unit 2: ...

Unit 1/Outcomes:

KNOWLEDGE	SKILLS	ATTITUDES
Student is able to: classify describe interpret name select evaluate compare outline solve recognize differentiate plan circle compare...	Student is able to: adjust draw interact operate practice demonstrate employ locate organize manipulate chart establish rearrange collect measure...	Students is able to: accept challenge evaluate model specify adopt characterize formulate persuade value choose judge approve criticize justify...

Transversal skills
Digital skills email or instant messaging, individual chat or group discussion forum, describe a policy on managing content and students' data, edit privacy settings, implement a joint project where your students interact with students from different contexts, using an online learning management system, using tablets for students to work on a project, using online self-reflection tools, keep a reflection diary, explore reflective digital storytelling, reflecting on your learning needs and look for a webinar, an online community or a repository that can satisfy them...
Green skills Cognitive competencies (for example, environmental awareness and a willingness to learn about sustainable development, systems and risk analysis, skills to assess, interpret and understand both the need for change and the measures required, innovation skills to identify opportunities and create new strategies to respond to green challenges;) Interpersonal competencies (for example, coordination, management and business skills to facilitate holistic and interdisciplinary approaches that encompass economic, social and ecological objectives, communication and negotiation skills for discussion of conflicting interests in complex contexts, marketing skills to promote greener products and services) Intrapersonal competencies (adaptability and transferable skills that help workers learn and apply new technologies and processes required to green their jobs, entrepreneurial skills to capture opportunities presented by low-carbon technologies) <ul style="list-style-type: none"> • Quantification and monitoring (waste, energy, water) • Management systems (waste, energy, water) • Procurement and selection • Material use and impact quantification • Impact and use minimisation • Impact assessment • Risk management Source: https://greenskillsresources.com/category/generic-green-skills

Implementation plan of pedagogical activities (Scheme of work / Session plan)

The pedagogical activities must achieve the outcomes of the Unit/lesson

Date:		Location:		Duration:	
Description of participants: guide service providers					
Expected number of learners: 25					
No. of Activity	Timing	Training Methods / Activity		What I do	What they (participants) do
A 1.1	15 min	Ice breaking methods: storytelling, introduction interviews.			Pick the photo and present yourself,

No. Of Unit



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		icebreaking polls, sharing expectations, snowball fight, flying challenges, two truths and a lie, human bingo. Lecture, presentation, seminar, discussion, hand-on, presentation of video, demonstration, associations,		Listen, write down, talk, hand-on, give associations, discuss, present, answering, video watching and comment
A 1.2	30 min	Group work, individual task, role-play, brainstorming, design thinking method, an interview		Make a group and take the roles, make the report, make a mind map, make a graph, table..., take the role...peer work
A 1.3	120 min	Project, problem solving, research		Make a sketch, draft, process, work packages, errors detections, predicting consequences, make a commercial, script for a short film
A 1.4	120 min	Practical work, Case study, research		Improving the process, the product, make a criteria for..., evaluate the..., make a plan,...
Material (What I need to have prepared): Pens, Paper, Ball, Ribbon, Projector, Powerpoint Presentation, Activity Sheet with its number, Flipchart and Markers, Sign-in sheet, Boombox to play music, Laptop and Screen, etc.)				
References/Sources:				
Other notes:				

Unit 2/Outcomes:

KNOWLEDGE	SKILLS	ATTITUDES
Student is able to:	Student is able to:	Students is able to:



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Transversal skills		
Digital skills		
Green skills		

Implementation plan of pedagogical activities (Scheme of work / Session plan)

The pedagogical activities must achieve the outcomes of the Unit/lesson

Date:		Location:		Duration	
Description of participants: guide service providers					
Expected number of learners:					
No. of Activity	Timing	Training Methods / Activity	What I do	What they (participants) do	
A 2.1					
A 2. 2					
Material (What I need to have prepared):					
References/Sources:					
Other note:					

Part 2

Assessment Quiz

Provide the six (6) multiple-choice questions of the module for assessment of the participants! Look at the following examples.

1. First question? (Just one answer is correct).

- a. Yes
- b. No
- c.

2. Second question (More than one answers are correct).

- a. Yes
- b. I don't know
- c. Maybe
- d. Definitely

Correct answers should be marked with bold.



Part 3

Activity Handout / Activity Sheet

The activity should match the implementation plan and learning outcomes. The template can be adapted to your activities.

Example for template

Unit title	
No. of Activity:	Duration:
Learning outcomes:	Look at the unit/outcomes
Aim of activity	
Name of activity	Look at implementation plan
Material Required:	
Step-by-step instructions of activity	<p>Case Study Title</p> <p>Tell the story of the case study example.</p> <p>Follow-up Questions. Set of questions for reflection</p> <ul style="list-style-type: none"> • Question 1... • Question 2... • Question 3...
References/ Sources	

Appendix 10: AgriNext Agenda for Pilot Testing in Karlovac



<i>Pilot training for GSPs in MA</i>			
26.8.2024.			
Time	Duration	Lead partner	Activity
All day		/	Travel day to Karlovac
27.8.2024.			
Time	Duration	Lead partner	Activity
9:00-9:30	30 min		Breakfast
9:30 - 9:45	15 min	BC Naklo	Introduction & overview of activities
9:45 - 10:30	45 min	TUS	M2 - Inovative teacher
10:30 - 10:45	15 min		Coffee break
10:45 - 12:45	120 min	TUS	M2 - Inovative teacher
13:00 - 14:00	45 min		Lunch break - OPG Kovač
14:15 - 15:00	45 min	VUKA	OPG Kovač: Farm and oil production tour
15: 30 - 16:15	45 min	VUKA	OPG Fanjek: organic farm (hazelnut cream spread production tour)
			Dinner
28.8.2024.			
Time	Duration	Lead partner	Activity
8:00-8:30	30 min		Breakfast
8:30 - 9:00	30 min	VUKA	Ivana Varičak and Majda Šavor



9:00 - 10:30	90 min	VUKA	Economics and marketing in multifunctional agriculture Integration of digital technologies in agriculture
10:30 - 10:45	15 min		Coffee break
10:45 - 11:45	60 min	VUKA	Interactive workshop
12:00 - 14:00	120 min	VUKA	Flexible Education and the Job Market
14:00-14:45	45 min	VUKA	Lunch break
15:00-19:00	240 min		Presentation Upper Course of the Mrežnica River: A Natural Monument
19:45-21:30			Dinner; Mrežnička kuća
29.8.2024.			
Time		Lead partner	Activity
8:30 - 9:00	30 min	VUKA	Breakfast
9:00 - 10:30	90 min	BC Naklo	M4 - Collaborative teacher
10:30 - 10:45	15 min		Coffee break
10:45 - 12:15	90 min	IES GG	M3 - Up to date teacher
12:15 - 13:00	45 min	COAG Jaen	M3 - Up to date teacher
13:00 - 14:00	60 min	VUKA	Lunch break
14:00 - 15:00	60 min	BC Naklo	M4 - Collaborative teacher
15:00 - 16:00	60 min	ARCTUR	Trailer - dissemination material for WP2
17:00-19:00	120 min	ARCTUR	Trailer - dissemination material for WP2
19:30 - 21:00			Dinner
30.8.2024.			
Time		Lead partner	Activity



All day		/	Travel day back home.
Location: Karlovac, Croatia.			



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Appendix 11: Sign in Sheets for Pilot testing in Karlovac (from the 27th to the 29th of August 2024)

27.08.2024.
VELEUČILIŠTE U KARLOVCU

Pilot training for teachers in MA

RD.BR.	IME I PREZIME	INSTITUCIJA	MAIL	POTPIS
1.	TIBOR BEJAR	BC NAKLO	tibor.bear@bc-naklo.si	
2.	JERNEJA ROZMAN	BC NAKLO	jernija.rozman@bc-naklo.si	
3.	MILUŠ VRLIČANIN	CP1	milus.vrljcin@cp1.si	
4.	TANJA LEŠKOVAR	CP1	tanja.leskova@cp1.si	
5.	NEJKA ČOP	CP1	nejka.cop@cp1.si	
6.	ANDREJ ŽERENČIČ	IES GORICA	andrej.zerencic@iesgorica.si	
7.	JOSIP KONČAR	Onirojekt	j.konc@onirojekt.si	
8.	ADRIAN ČERVENČIČ	TUS	adrian.cervencic@tus.si	
9.	ANJA ČERVENČIČ	TUS	anja.cervencic@tus.si	
10.	ANJA ČERVENČIČ	MSERTS	anja.cervencic@mserts.si	
11.	ANJA ČERVENČIČ	TUS	anja.cervencic@tus.si	
12.	MILUŠ VRLIČANIN	UVEIA	milus.vrljcin@uveia.si	
13.	MILUŠ VRLIČANIN	IES GC	milus.vrljcin@iesgc.si	
14.	ANJA ČERVENČIČ	IES GC	anja.cervencic@iesgc.si	



AgriNext











VELEUČILIŠTE U KARLOVCU
Karlovac University of Applied Sciences



AgriNext



VELEUČILIŠTE U KARLOVCU
Karlovac University of Applied Sciences

15.	Barthelme, Jovana	IES G. G.	bjuric@ gmail.com	
16.	JUAN CARLOS MUÑOZ FLORES	COAG-JAÉN	PRODRANAS-EUROPOS@COAGJAEN.COM	
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Pilot training for teachers in MA

28.08.2024.
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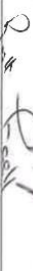
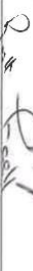
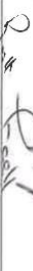
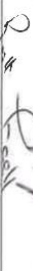
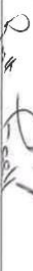
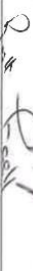
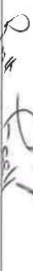
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Pilot training for teachers in MA

27.08.2024.
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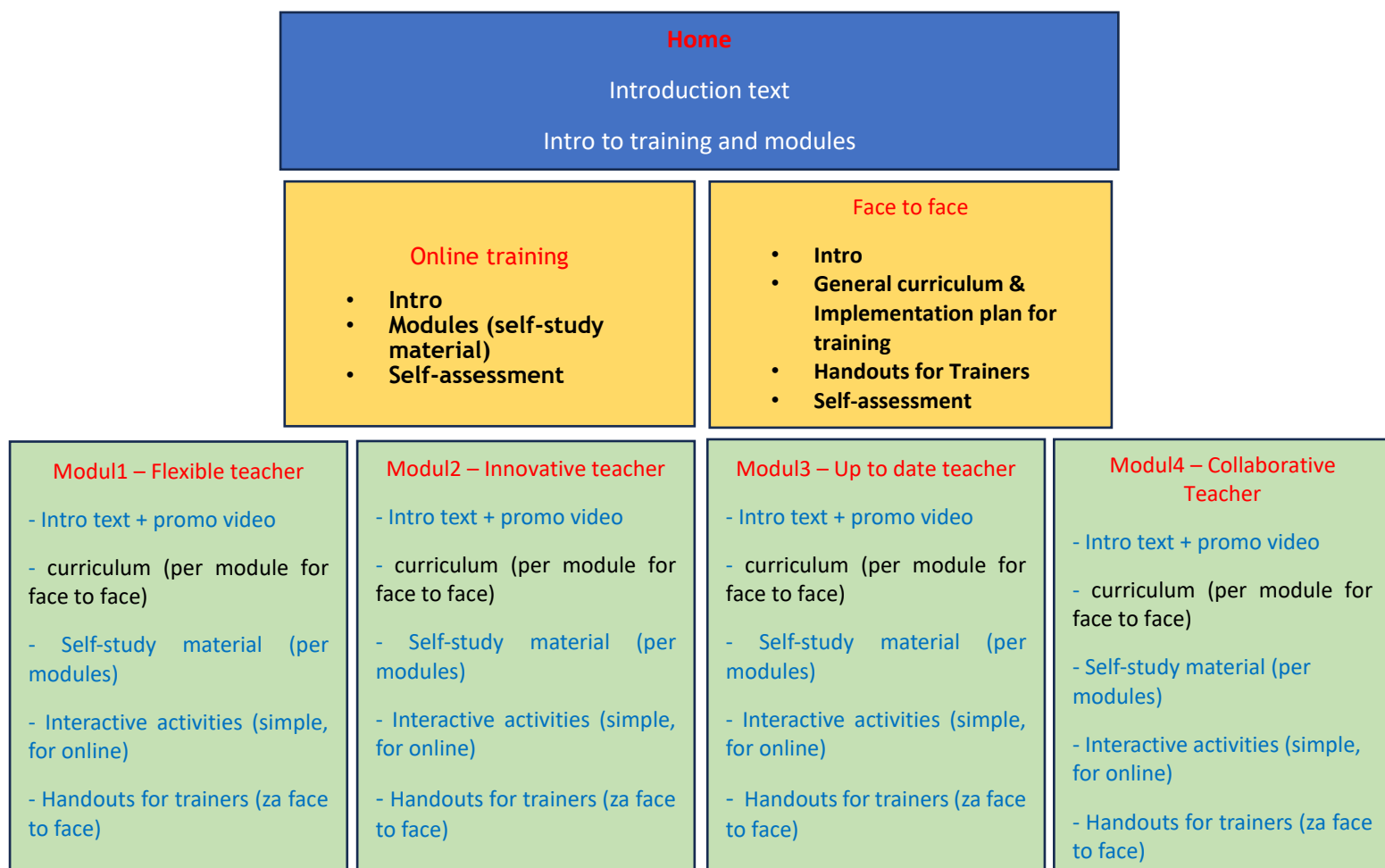
Appendix 12: Concept and explanation of the Online structure of the Training for Up-to-date Competences for Teachers in Multifunctional Agriculture

Training for up-to-date competences for teachers in Multifunctional agriculture (PROVIDED online - training for teachers)

Home page

- 1.1. Online training
- 1.2. Face to face training

STRUCTURE



HOME PAGE - Training for teachers

**Important Note: The Online Training for Up-to-date Competences for Teachers in Multifunctional Agriculture provides an introductory glimpse into the structure and format of the training modules. In this version, the "action learning" activities developed and currently accessible online represent an initial phase of the digitization of learning materials, with basic interactive functionalities. These materials are set to be upgraded and fully integrated into the AgriNext IT platform. The AgriNext platform will create a comprehensive virtual learning environment, aiming to significantly enrich the learning experience by facilitating more interactive features. The platform is currently under construction and will be publicly available in 2026.*

Training for Up-to-date Competences for Teachers in Multifunctional Agriculture (MA)

The aim of the Training Up-to-date Competences for Teachers in MA is continuous teachers' empowerment of professional and pedagogical competences as a response to the agriculture job market changes. The target group is teachers in VET agriculture schools, both those who teach and train professional modules and those who teach general subjects, with the goal being aware of the importance of rural development and up to date on the agriculture sector. As a transversal competence, the training aims to improve teachers' digital and green competences.

The training consists of four modules:

- M1 – Flexible Teacher
- M2 – Innovative Teacher
- M3 – Up to date Teacher
- M4 - Collaborative Teacher

The training is designed in two forms (2x link to internal webpage):

- Online training (Self-paced),
- Face-to-face training,

Curriculum: General Curriculum (link to pdf)

1.1 Online training (Self-paced)

Short Introduction to Online Training

The Online Training for Up-to-date Competences for Teachers in Multifunctional Agriculture is the prototype of the online format. The website provides a limited version and will be upgraded to achieve Action Learning experiences.

The distance learning program for teachers in agriculture VET schools is designed as self-paced learning. The participants do not have a fixed timetable and are free to choose the time, pace, method, and scope of their learning. This type of learning is less stressful for participants but requires more discipline and motivation.

For self-paced learning, the AgriNext website provides interactive content covering the four modules, interactive tasks, a self-assessment test and a link to the course curriculum.

Guidelines for learners: [Self-Paced Learning Guidelines for Learners](#) - tega tokrat ne bo, ker nima pomena, če bo potem prilagojeno izobraževanj

Self-assessment: [Online assessment form](#)

Modules



MODULE 1: Flexible Teacher

The module “Information and Communication Channels within the GSM for MA” will present analyses of four already existing GSMs, examining the systems of the different institutions needed for guiding students, job seekers, and the unemployed.

[go to module](#)



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MODULE 2: [Innovative Teacher](#)

The module “Opportunities in Multifunctional Agriculture (MA) for Rural Development” will explain the pivotal role of multifunctional agriculture in fostering rural development. It will explore diverse job prospects within this domain and highlight available funding opportunities.

[go to module](#)



MODULE 3: [Up to date Teacher](#)

The module “The Process of Consulting” will improve Guidance Service Providers’ (GSPs) knowledge and skills in career counselling and counselling in general and give them basic tools and skills in carrying out steps in the counselling process.

[go to module](#)



MODULE 4: [Collaborative Teacher](#)

This module focuses on the importance of teachers networking and cross-sector collaboration using different methods and tools in the pedagogical process and emphasizes acting towards the successful collaboration with pedagogical staff, school management, and agriculture sector (job market, researchers...) on the local, regional, and international level.

[go to module](#)

[← back](#)

Vsak od modulov ima svojo podstran na kateri je zajeto: naslov, opis, intro video, link do učnega materiala (Self Study Material) ter do nalog (TASKS) (Each module has its own sub-page with: title, description, intro video, link to Self Study Material and TASKS.)

Za video M4:

In this module, you will

- Interpret the objectives and meaning of networking and intersectoral cooperation between teachers, trainers, employers, stakeholders... and use different methods and tools for cooperation in the pedagogical process.
- Define a strategy and act to successfully collaborate with pedagogical staff, school management and the agricultural sector (labour market, researchers...) at local, regional and international level.
- Use digital tools and AI to design collaborative projects and interdisciplinary teaching and interact on international networking sites for teachers such as ESEP, EPALE, Cedefop.
- Accept collaboration as a competence required in the new pedagogy and emphasise collaboration without prejudice, regardless of gender, race, religion...



1.2. FACE TO FACE TRAINING

A brief introduction to traditional classroom-based Face-to-face learning.

This type of learning is designed for a group of VET agriculture schools' teachers and trainers and takes place in a classroom setting with one or more training providers. It is designed to be dynamic, applying a variety of pedagogical approaches and methodologies, with an emphasis on group work and different activities (exercises) linked to the modules.

The AgriNext website contains various documents dedicated to training providers. These include a course curriculum for Training for Up-to-date Competences for Teachers in Multifunctional agriculture (MA), as well as presentations of the contents and activities for the participants linked to the individual modules. Participants can access the course material and the self-assessment test via a web link.

General Curriculum: [General Curriculum](#)

Self-assessment: [Online assessment form](#)

Modules

M1 - Flexible Teacher

M2 - Innovative Teacher

M3 - Up to date Teacher

M4 - Collaborative Teacher

Vsak od modulov ima svojo podstran na kateri je zajeto: naslov, opis, ter link do *(Each module has its own sub-page with: title, description, intro video, link)*

Curriculum: [Curriculum Module 1](#)

Activity Handout: [Activity Handout Module 1](#)

Learning Material: [Module 1](#)

Appendix 13: Document with additional information for D2.3 - Relevant knowledge skills and competences of MA job market

Relevant knowledge skills and competences of MA job market

Reporting organisation: Skink d.o.o, TUS, COAG Jaen, KGZ SLOGA KRANJ Z.O.O.

For the deliverable D2.3 we require some more information about the job market needs. Please insert below in the first table, the current Knowledge, Skills and Competencies for a functioning and successful MA job market needed by the labour force. In the second table insert future predicted Knowledge, Skills and Competencies for a functioning and successful MA job market.

Knowledge refers to the theoretical or factual understanding of a subject, such as the process of photosynthesis or principles of vertical farming.

Skills are the practical abilities to perform specific tasks, like operating hydroponic systems or managing crop growth.

Competences combine knowledge, skills, and attitudes, enabling individuals to apply them effectively in real-world contexts, such as designing and managing a sustainable vertical farm or leading a team in implementing agricultural solutions.

Current:

Knowledge	Skills	Competences
Skink d. o. o.		
Knowledge on drip irrigation and water-conserving technologies, renewable energy and bioenergy; Knowledge on agricultural reuse of organic residuals and integrated pest management in plant protection.	Sustainable practices skills	Implementing eco-friendly methods to protect the environment while maintaining high yields.
Knowledge on climate; Knowledge on plant species and their cultivation needs.	Adaptability (to climate change) skills	Adjusting the production to new farming techniques (such as choosing crop species and/or varieties that are better resilient to droughts/temperature oscillations)
Knowledge on common pests and diseases on plant species; Knowledge on pest and disease control (chemical, biological, integrated)	Pest and disease management skills	Understanding the impact of pests and diseases on crops and implementing the effective control measures.

Knowledge of speaking and listening effectively, interpreting gestures, body language, and emotions and being able to use the right communication on the right occasion; Knowledge of foreign languages	Communication skills	Managing the team on the farm and negotiating with buyers and suppliers; Fostering collaboration between parties (stakeholders, suppliers, institutions, government agencies, and consumers) and providing critical information about food productivity
TUS		
Classify farming and non-farming enterprises for MA	Operate/launch new farming and non-farming MA businesses	Justify crop diversification, livestock integration, and non-farming MA businesses e.g., agritourism, farm shop.
Recognise alternative crops and livestock and their management	Establish high-value cropping and alternative livestock systems	Evaluate the environmental impacts of farming and adhering to sustainability practices.
Compare the impact of regenerative, organic, and precision conventional farming	Employ ecological farming and digital technologies to improve productivity, profitability, and sustainability	Adopt sustainable farming methods like organic farming, regenerative agriculture, and precision agriculture.
Describe innovative farming technologies and marketing tools like soil sensors, drones, and data analytics to optimise resource use.	Operate farm management software, precision agriculture technologies, and e-commerce platforms.	Formulate business plans, branding, digital marketing of farming and non-farming enterprises and products.
Outline climate change impacts on farming and non-farming businesses and develop strategies to mitigate economic and environmental risks.	Organise workshops to promote sustainable practices to the community.	Characterise market opportunities and connect with buyers for niche products like farm tourism, specialty crops, or organic produce
Analyse government programmes and incentives that support multifunctional agriculture	Interact with industry stakeholders, policymakers, and potential customers.	collaborate with stakeholders, including researchers, advisors, and policymakers.
KGZ SLOGA KRANJ Z.O.O.		
Collection of produce	Proper treatment of stakeholders in the chain to cover all factors	Timely response to all market needs
Procurement	Timely processing of customers and contractors	Trained staff for agricultural work
Branding	Market penetration and visibility skills	Capacity to provide advice

Knowledge from practice and transfer of knowledge to producers		Getting certified
Continuous awareness-raising of the general public on the current state of the market, namely all stakeholders in the system		Mentoring

Future

Knowledge	Skills	Competences
Skink d. o. o.		
Knowledge of sustainable practices and technologies (such as organic farming, agroecology, crop diversification, sustainable resource use, etc.)	Sustainable practices skills	Usage of the tech to reduce water and energy usage, minimise waste, and promote biodiversity.
Knowledge on how to interpret and use data	Data analysis skills	Use of data to improve decision-making and increase farm productivity.
Knowledge of precision technology; Knowledge of programming, machine learning, and mechanical repair.	Robotics (robot and drone technology) and automation skills	Operating and maintaining machines.
Knowledge on how to troubleshoot tech issues; Knowledge on how to interpret data	Problem-solving skills	Making strategic decisions based on the relevant information (data interpretation and tech issues).
TUS		
Describe business model for income streams from MA, including value-added products and services	Operate innovative farming techniques, such as vertical farming, hydroponics, and aquaponics	Justify the integration of biodiversity conservation, waste management, and circular economy practices into MA businesses
Analyse emerging consumer demands, such as organic produce, plant-based diets, and local food systems	Employ advanced tools like drones, IoT sensors, and precision farming equipment, AI for decision-making, and e-commerce platforms and digital marketing for selling farm products	Formulate contingency plans to handle uncertainties and challenges, such as pest outbreaks, water scarcity, or market volatility
Differentiate certification schemes like organic labeling,	Demonstrate entrepreneurial expertise to develop diversified income streams, e.g. agritourism	Accept commitment to lifelong learning and staying updated on

regenerative and biodiversity-friendly farming standards	and value-added products, including financial literacy and market analysis and risk assessment.	emerging trends and technologies in MA.
Recognise funding opportunities, venture capital, and grant-writing for MA businesses	Demonstrate creativity to identify and develop new farm diversification opportunities under changing conditions, ensuring sustainable farm operations.	
Compare policies, subsidy programmes, and regulation for MA	Establish project management skills for planning and executing MA business initiatives.	
Compare circular economy (waste-to-value) approaches such as biogas production, composting, and renewable energy integration.	Demonstrate leadership qualities to motivate teams, drive innovation, and implement change effectively, including time management to handle multiple MA activities.	
COAG Jaen		
Precision agriculture	Operating drones	Leading a multicultural team of workers
Sensorisation of agricultural and livestock processes	Managing Decision Support Systems (DSS)	Putting land into cultivation under less-than-optimal conditions for farming practices
Software applications, especially those using artificial intelligence	Setting up and operating automatic irrigation systems	Adapting cultivation techniques to changing environmental conditions
Software applications, especially those using artificial intelligence	Setting up and operating automatic irrigation systems	Adapting cultivation techniques to changing environmental conditions
Specific legal aspects (agricultural cooperatives, recruitment of migrant labour, etc.)	Using specific computer applications for the control of agricultural tasks.	Developing integrated offers that combine production activities (agricultural or livestock) with other complementary services, such as agrotourism, direct sales on the farm or care farming
Regenerative farming techniques	Cultivating plant varieties better adapted to high temperature and water scarcity contexts	Finding new markets for the commercialisation of agricultural and livestock products
	Cultivating higher yielding plant varieties	Reducing greenhouse gas emissions caused by agricultural activity
	implementing more sustainable farming practices, more rational	Adapting to the arrival of new crop pests due to climate change

	and efficient in terms of input use and less dependent on fossil fuels (cover crops, minimal tillage, etc.)	
	implementing circular farming systems	Cooperating with other local producers
	Using advanced agricultural machinery	
	Exploiting currently under-utilised agri-food resources (insects, other plant species)	
	Maximising efficiency in all agricultural and livestock processes.	
	Adapting and offering customised solutions that address the diversity, ecological and social, of each territory and farm	
	Using biostimulants to increase crop productivity	
	Applying regenerative agriculture techniques	
KGZ SLOGA KRANJ Z.O.O.		
eBusiness skills	More focus on existing skills and additional training on the subject	Further involvement in training on agricultural improvement and other related skills to continue existing activities
Robotics		

Appendix 14: Evaluation tools used for the pilot testing of the training.

Pilot training focus group with participants to the Pilot Training in Karlovac.

A specific evaluation session was organised to assess the training held in Karlovac with participants. This evaluation was an important milestone in the evaluation of the contents and gathered the opinion of 4 participants per country belonging to the primary target group of the training. This evaluation was carried out using an interactive digital tool (Metimeter) that allowed real-time evaluation showing the results and enabling different rounds to comment on the results. This semi-structured evaluation was organised in

- What is your general perception on the program (in a single word)?
- What are the strengths of this program? What did you like the most?
- What would you change? What would you improve?
- Which contents are you missing in the training for teachers on Multifunctional Agriculture?
- Evaluate the training programme o how it:
 - o Provides up-to-date competences and knowledge
 - o Encourages collaboration
 - o Provides innovative methodologies
 - o Promotes flexibilization

Pilot training evaluation questionnaire with participants to the Pilot Training in Karlovac.

An **evaluation questionnaire** was also distributed to collect the opinions of participants in the pilot training in a structured and detailed way. The evaluation questionnaire has the following structure:

Profile of the participant:

- Which country are you from? (Slovenia, Croatia, Ireland, Spain)
- Which area are you teaching in? (Open answer)

SECTION I: Overall Evaluation of the Training

- 1.1. How would you rate the overall organisation of the training? (1-5 linear scale)
- 1.2. How well did the training meet your expectations? (1-5 linear scale)
- 1.3. How relevant was the content of the training to your role as a teacher? (1-5 linear scale)
- 1.4. How effective were the training materials provided (presentations, documents, etc)? (1-5 linear scale)
- 1.5. How would you rate the quality of the trainers' facilitation? (1-5 linear scale)
- 1.6. Did the training provide adequate opportunities for interaction and discussion? (1-5 linear scale)



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- 1.7. How confident do you feel about applying what you learned in your own teaching practice? (1-5 linear scale)

SECTION II: Working Methods

- 2.1. Please rate the working methods of the training (multiple choice grid from strongly disagree to strongly agree)
- Teaching methodologies used during the training were appropriate (e.g., lecturers, group work, practical exercises)
 - The training incorporated a variety of teaching methods coming from different learning styles
 - Practical exercises and activities supported your understanding of the content
 - There was a good balance between theoretical contents and practical application
 - The contents were innovative and brought fresh ideas
 - Lecturers/trainers adequately integrated the experience of the participants
 - The programme raises new questions and encourages further education
 - Time was managed correctly
 - Duration of each module and activity was balanced and sufficient

SECTION III: Evaluation of the activities

3.1 Introductory session (1-5 linear scale)

- The introduction session clearly outlined the objectives and agenda of the training
- The introduction session was engaging and answered participants questions on the programme
- Access to agenda and training materials was provided

3.2 Modules presentations (1-5 linear scale)

- Presentations covering key points of each module were effective and clear
- Contents of each module were introduced providing knowledge and understanding of the topics covered
- The contents covered all relevant topics

3.3 Interactive workshops and group activities (1-5 linear scale)

- Interactive workshops and group activities were useful for understanding the course content
- These activities enhanced your engagement and participation in the training

3.4 Feedback, discussions and closing session (1-5 linear scale)

- Feedback and discussions activities were beneficial for your learning
- You felt comfortable sharing your thoughts and feedback during open sessions



- Closing sessions effectively summarised the key takeaways of the training

SECTION IV: Logistics and support

- 4.1 How would you rate the venue/facilities used for the training? (1-5 linear scale)
- 4.2 How adequate was the support provided from the host organisation throughout the training? (1-5 linear scale)
- 4.3 How would you rate the overall organisation and coordination of the training event? (1-5 linear scale)

Each question included an open question to provide specific examples or comments to explain the evaluator's rating.

Evaluation questionnaires to assess the online training contents

Four evaluation questionnaires have been designed and distributed among external evaluators (4 per country) to assess the contents of the online training. The evaluation covered the following materials per training module:

- Curriculum
- Module
- Activity handout
- Self-assessment activities

Each module evaluation questionnaire was structured by the following sections and questions:

SECTION I: Content Evaluation

- 1.1 How clear was the module's content?
- 1.2 How relevant do you find the module content for innovative teaching tailored to agriculture education?
- 1.3 Did the module cover the topics you expected?

SECTION II: Structure and Delivery

- 2.1 How would you rate the structure of the module?
- 2.2 Do you think the pacing (adequacy of the content load in relation to the estimated duration) of the module is appropriate?
- 2.3 How effective are the teaching methods used in this module (e.g., lectures, practical exercises)?

SECTION III: Learning outcomes

- 3.1 How well do you think the module's learning objectives align with the needs of learners?
- 3.2 How do you assess the potential of the module to achieve its training objectives?

SECTION IV: Engagement and interaction



- 4.1 How engaging did you find the module activities and contents?
- 4.2 How would you rate the opportunities for interaction both between learners and between learners and teacher?

SECTION IV: Suggestions for improvement

- 5.1 What aspects of the module could be improved?
- 5.2 Are there any additional topics you would like to see included?
- 5.3 Any other comments or suggestions?

Each question included an open question to provide specific examples or comments to explain the evaluator's rating.

