



Upskilling Training for Teachers of Vocational Education and Training

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REACTI-VET CURRICULUM

Course Title	Preparing VET Students for Tomorrow's Labour Market:	
	Teaching Practices Revisited	
Level of learning outcomes	EQF Level 5	
	DigCompEdu Level B2-C2	
Web	https://rvet.itstudy.hu/	
Target group	up Teachers and trainers of Vocational Education	

Rationale

It is in our common interest to align graduate skills and competences closer to the labour market, to make it easier for employers to find suitably qualified workers, and to avoid graduates facing shortcomings in their first job. The ongoing transformation of vocational education and training (VET) is responding to the challenges by adopting a "demand-driven" approach, but this requires the active involvement of teachers. The modules of the course are as follows:

- Module 1: Data Collection and Analysis
- Module 2: 21st Century Teaching Methods
- Module 3: Open Educational Resources (OERs)
- Module 4: Virtual Learning Environments (VLE)
- Module 5: Project Management and Collaboration Online

What does the training offer?

- A change in attitude and practical teaching methodologies;
- Facilitating involvement of companies and other external stakeholders, expanding the professional network;
- Enriching the professional portfolio: experience of a collaborative international experiment;
- Project approaches in the classroom and at school level;
- Expanding the range of digital tools used for pedagogical purpose.

This Reacti-VET 'Upskilling Course for Teachers' will equip you with new knowledge and skills that are necessary for effective 21st century VET education. After completing the course, participants will have the opportunity to engage in a jointly designed experiment in close cooperation with employers, teaching staff and students. They can implement what they have learnt and develop, organize and deliver an upskilling course (over one semester, maximum 30 hours) for their own students – aimed at filling the knowledge and skill gaps as defined by the labour market.

What effort does it require?

The course includes five modules. Corresponding to 30 contact hours, the training can be completed in an online learning environment in 5-6 weeks, with 5-6 hours per week study with the support from trained mentors.

Mentors facilitate communication among participants, encouraging peer learning. Teachers from the same institute can perform most of the assignments with groups of two or three.



Participants responsibilities

The participants have to submit an assignment, to solve a practice-oriented task independently or in a collaboration with other teachers. The assignments will be evaluated by the mentor.

MODULE 1: DATA COLLECTION AND ANALYSIS

THE AIM OF THE MODULE

Effective quality improvement in vocational schools can only happen if there is regular contact with representatives of the labour market and other stakeholders, through which contacts changing requirements can promptly be identified, and fast responses can be provided. A process should definitely be established in VET institutes by which meaningful data and feedback is regularly collected from stakeholders, in relation to the strategic and other objectives that have been set. The collected data should be analysed and communicated to support effective decision making.

Nowadays there many online tools that can be used for data collection and analysis, the challenge really is the design of surveys providing reliable and meaningful data that can be used as a starting point for improvement actions.

The aim of this module is to provide teachers with knowledge, skills and tools supporting:

- an understanding of the importance of collecting, analysing and presenting data from relevant stakeholders (students, teachers, parents, companies),
- the knowledge of major methods of data collection and data analysis,
- the skills related to production and implementation of online questionnaires and analysis of results,
- the skills of using selected free online survey tools with confidence.

TOPICS

1. Reactive Teachers - adaptive vocational 2.4.2 Focus groups education

- 1.1 Labour market the demand side
- 1.2 Wanted: Creativity!
- 1.3 Vocational education the supply side
- 1.4 Who else can change if not teachers?
- 1.5 Start with data collection

2. From Data Collection to data analysis

- 2.1 Why collect data,
- 2.2 How get started?
- 2.3 What kind of data to collect?
- 2.4 Methods of data collection
- 2.4.1 Interviews

- 2.4.3 Strategies for discussion: the funnelling technique
- 2.4.4 Questionnaires
- 2.4.5 Benchmarking
- 2.5. Communication of the results

3. Online tools for data collection and analysis

- 3.1 Introduction
- 3.2 Google forms
- 3.2.1 Creating a form
- 3.2.2 Adding questions
- 3.2.3 Editing Questions
- 3.2.4 Sending your form
- 3.2.5 Response



European Qualification Framework Level 5			DigCompEdu Competences
Knowledge	Skills	Competence	Level: B2, C1, C2
Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems.	Exercise management and supervision in contexts of work or study activities where there is unpredictable change review and develop performance of self and others.	At the end of the Module participants will be able to apply digital competences on the area of:
At the end of the Module participants w			
 explain the importance of data collection and analysis, list several types of questions used in surveys, describe the core functionalities of online survey tools. 	 create online webforms, questionnaires, implement questionnaires online, conduct a survey online, analyse the results of a surveys, summarize and present the findings and recommenddations to decision makers 	 to take a leading role in establishing, operating and developing the institution's network of contacts. to initiate collaboration with their colleagues to identify labour market needs and keep contact with representatives of the labour market. 	Area 1 Professional engagement 1.1 Organisational communication 1.2 Professional collaboration 1.3 Reflective practice 1.4 Digital CPD (Continuous Professional Development) Area 2 Digital resources 2.1 Selecting 2.2 Creating and modifying 2.3 Managing, protecting and sharing Area 4 Assessment 4.1 Assessment strategies 4.2 Analysing evidence 4.3 Feedback & planning



MODULE 2: 21ST CENTURY TEACHING METHODS

The knowledge amassed by students is not only dependent on the learning content they study from, but also on their previous knowledge, interests and learning styles.

For this reason, it is critically important that teachers adequately devise a strategy to create the ideal learning environment for students. Modern classroom management approaches provide many innovative opportunities for active learning and developing the competences that are essential for the 21st century labour market.

THE AIM OF THE MODULE

The aims of the module are to:

- present innovative classroom management methods and alternative teaching practices.
- emphasize the essential role of student-centered, active learning.

The module will prepare teachers to:

- develop the knowledge and skills necessary for differentiation.
- be flexible and able to switch between strategies that best suit the situation.
- be able to develop students to a higher cognitive level.
- improve critical thinking in students.
- organize classroom lessons that develop not only knowledge, but the skills important for 21st century competences.

TOPICS

1. Technology transforming education

- 1.1 Introduction
- 1.2. Access to information
- 3. Labour market needs
- 4. Learning attitudes
- 5. Changing methods in education active learning
- 6. Changing role of teachers

2. 21st century teaching methods - active **learning**

- 1. Introduction
- 2. The Flipped Classroom method
- 2.1. Key features
- 2.2. Benefits
- 2.3. Challenges
- 2.4. Flipped Classroom in practice
- 2.5. Lesson planning consideration
- 2.6. Flipping in Reacti-VET
- 3. Project-based learning
- 4. Problem-based learning
- 5. Research-based learning





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At the end of the Module participants will/will be able to/will be			1.3 Reflective practice1.4 Digital CPD (Continuous Professional Development)Area 2 Digital resources	
 be familiar with the challenges that educators face in the 21st century; have insight into the main characteristics of innovative teaching methods; see the difference between traditional and student-centered classroom management; have an understanding of the possible practical application of the Flipped Classroom model. 	 choose the most effective learning methods for a specific lesson, topic, age group and other factors; create opportunities for active learning for their students. 	 initiate collaboration with their colleagues open to share their own developed digital learning material with other teachers. change from the traditional frontal teaching to active learning/teaching methods. 	1.4 Digital CPD (Continuous Professional Development) Area 2 Digital resources 2.1 Selecting 2.2 Creating and modifying 2.3 Managing, protecting and sharing Area 3 Teaching and Learning 3.1 Teaching 3.2 Guidance 3.3 Collaborative learning 3.4 Self-regulated learning Area 4 Assessment 4.1 Assessment strategies 4.3 Feedback & planning Area 5 Empowering learners 5.2 Differentiation & personalisation 5.3 Actively engaging learners Area 6 Facilitating learners' digital competence 6.2 Communication 6.3 Content creation 6.5 Problem solving	



MODULE 3: OPEN EDUCATIONAL RESOURCES

THE AIM OF THE MODULE:

- to motivate teachers to use existing educational resources, to remix them and to produce new ones sharing the remixed and their own resources,
- to provide teachers with the necessary skills to produce, remix and share learning resources.

The module aims at providing teachers with:

- knowledge of the different types of educational resources and the understanding of how digital technology enables their improvement and transformation,
- knowledge of the meaning of Open Educational Resource (OER),
- an understanding of the importance of re-using educational resources,
- knowledge of copyright rules, of Creative Commons licences and other licenses for free-use or partially free-use of content,
- knowledge of OERs and partially-free content repositories,
- skills for searching and evaluating re-usable resources,
- the skills to produce, modify and share documents, presentations, interactive images, videos and interactive videos, tests and quizzes, online surveys, mind and geographical maps, simulations, storytelling and learning games.

TOPICS

1. Production, sharing and reuse of OERs: What & Why

- 1.1 OERs: What & Why
- 1.2 Active didactics, continuous update and sustainability
- 1.3 Open Educational Resources
- 1.4 Copyright vs Copyleft
- 1.5 OERs: the key for innovation in Vocational Education

2. Learning resources

- 2.1 Multimediality & interactivity
- 2.2 The SAMR model

- 2.3 Types of educational resources
 - 2.3.1 Documents
 - 2.3.2 Presentations
 - 2.3.3 Videos & interactive videos
 - 2-3.4 Interactive images
 - 2.3.5 Maps
- 2.4 Learning games
- 2.5 Simulations
- 2.6 Quizzes

3. Search and evaluation of resources in the web

- 3.1 What to look for & how to evaluate
- 3.2 How and where to search
 - 3.2.1 Search engines
 - 3.2.2 Directories & repositories
 - 3.2.3 Tools for producing and modifying digital resources





	DigCompEdu Competences		
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Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems.	Exercise management and supervision in contexts of work or study activities where there is unpredictable change review and develop performance of self and others.	At the end of the Module participants will be able to apply digital competences on the area of:
At the end of the Module participants will/will be able to/will be			Area 1 Professional engagement 1.2 Professional collaboration
 describe the effectiveness of sharing and re-using open learning contents, describe the SAMR model for creating and re-creating resources, list different types of educational resources, describe the Creative Commons licences, list the main directories and repositories of OERs and reusable contents, list free-use web apps for producing, modifying and sharing educational resources/learning objects. 	 search and evaluate usable resources, create and share presentations (e.g. Google Slide or Prezi), create and share interactive images (e.g. Thinglink or Genially), create a video or video tutorial (e.g. Apowersoft or Screencast O'Matic), make a video interactive by inserting questions (e.g. EdPuzzle), publish a video on YouTube, create a YouTube channel and playlist, draw and share a mind map (e.g. Coggle or Mindmap or Popplet), draw and share geographic maps (Google maps), create and share tests, quizzes and online surveys (e.g. Quizlet, Google form and Kahoot!), create and share storytelling (e.g. Atavist, Adobe Spark Page, Powtoon, Toondoo), create and share learning games (e.g. Learning apps, Quizlet, H3P) 	 Selecting digital resources open to share their own developed digital learning material with other teachers. change from the traditional frontal teaching to active learning/teaching methods. 	Area 2 Digital resources 2.1 Selecting 2.2 Creating and modifying 2.3 Managing, protecting and sharing Area 3 Teaching and Learning 3.1 Teaching 3.3 Collaborative learning. Area 5 Empowering learners 5.2 Differentiation and personalization 5.3 Actively engaging learners. Area 6 Facilitating learners' digital competence 6.3 Content creation





MODULE 4: VIRTUAL LEARNING ENVIRONMENT (VLE)

THE AIM OF THE MODULE

The aim of this module is to prepare teachers for, and make them aware of the possibilities for, designing and delivering online courses via contemporary virtual learning environments. The goal is to be able to design and develop courses that are able to support the use of learning objectives and outcomes, mapped on to the competencies in the DigCompEdu and other frameworks.

This will be inherent in the two planned Reacti-VET courses – the upskilling course for the teachers, and the upskilling course for students - as these courses will address the capacity building issues identified as necessary for the digital transformation of education and learning, and for the changing requirements on skills and competences to meet employability.

Learning objectives

The module is aimed at providing teachers and students with:

- an understanding of how to design and develop an online pedagogy to match the aims of the European Digital Competence Framework (DigComp) and its application to educators (DigCompEdu) and educational organisations (DigCompEdu);
- an approach for making effective use of the competency frameworks for Digital Competence;
- an understanding and appreciation of the role of learning outcomes, and their relationships to competencies, skills and knowledge;
- a methodology and toolkit for structuring syllabi and assessments to match competency frameworks;
- an in-depth appreciation of the features and functions of, and pedagogical support provided a flexible learning environment.

TOPICS

1. VLE - Basic concept

- 1.1 Introduction
- 1.2 Main services of VLEs
- 1.3 How to choose a VLE?
- 1.3.1. Learning Management Systems
- 1.3.2. Cloud-based, mashup VLEs
- 1.3.3. Pedagogy surely
- 1.3.4. Choosing right learning environment
- 1.3.5 Summary

2. Course design

- 2.1 Introduction
- 2.2 Where to start?
- 2.3 The right choice
- 2.4 Learning Objectives versus Learning Outcomes
- 2.5 Competence-based design

2.6. Competence Frameworks

3. Teaching-learning in Moodle

- 3.1 Moodle as a VLE
- 3.2 Moodle e-learning framework
- 3.3 Entering the platform
- 3.4 Registering on the platform
- 3.5 Teachers in Moodle platform
- 3.6 Handling users
- 3.7 Communication with the students
- 3.8 How to handle topics
- 3.9 9. Adding learning content
- 3.10. Assignments
- 3.11. Quiz





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 describe the effectiveness of sharing and re-using open learning contents, describe the SAMR model for creating and re-creating resources, list different types of educational resources, describe the Creative Commons licences, list the main directories and repositories of OERs and reusable contents, list free-use web apps for producing, modifying and sharing educational resources/learning objects. 	 develop a fit-for-purpose online pedagogy; make use of learning objectives, learning outcomes and competencies; structure a course syllabus to meet the needs of the learning outcomes; design an online pedagogy and functionality to support the required learning; implement a motivational online learning course. 	integrate social & reflective activities to facilitate cooperative learning;	•	





MODULE 5: PROJECT MANAGEMENT AND COLLABORATION ONLINE

THE AIM OF THE MODULE

The aim of the module is delivering an upskilling course outside the framework of a pre-defined curriculum and traditional classroom lessons certainly careful planning.

From the beginning you will have to communicate regularly and intensively, including with people outside of your school. You will have a goal to reach, a deadline to keep, and the learning content to be put together with your team comprising colleagues, employers and students. You will have to guide your students through the learning process, motivating them whenever needed. You may face a variety of risks, and consequently have to be ready to change your original plan.

At first this might sound quite daunting, but with careful and detailed planning, a well-established team, regular communication and monitoring, your project can be successful. As a result students will be able to develop the skills that are essential in their job market.

To assist you in planning the design and delivery of a course involving various stakeholders, this module will introduce you to the basics of Project Management but in a practical way. It will also discuss the functionalities and benefits of freely available online project management tools, presenting one in some detail.

The aims of this module are to provide teachers with:

- basic project management practices applicable in a VET context;
- a guide to easy-to-use free online project management tools.

Learning objectives

The module is aimed at providing teachers with:

The module is aimed at providing teachers with:

- an understanding of the necessity and importance of regular and meaningful communication with stakeholders (students, teachers, companies, parents);
- the recognition of the importance of exchanging and sharing knowledge, experience and good practice;
- knowledge of contemporary project management tools and agile project management methodologies;
- an understanding of how to plan and lead projects;
- information on free online project management tools and platforms;
- skills to utilize the potential of the 21st century technology for building and driving communities, for communication and for the improvement of own digital pedagogical practices.



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At the end of the Module participants will/will be able to/will be			1.3 Reflective practice 1.4 Digital CPD (Continuous Professional Development)	
 describe the importance of communication and the means of data and information exchange; establish communicative space with the help of online tools and use it for organisation, management, collaboration and communication with an online community; describe the core steps of project management; understand the functionalities and benefits of online project management tools. 	 plan and manage small-scale projects; use a selected free online project management tools (e.g. MeisterTask, Trello) with confidence. 	Elaborate a project plan for planning and delivering upskilling training for students in a collaboration with relevant stakeholders (teachers, students,companies) to cover skill-gaps indetified on the special field of the qualification;	· · · · · · · · · · · · · · · · · · ·	



PROJECT BACKROUND

VET schools simultaneously have to meet two opposing requirements: to remain true to tradition, delivering stable, tested knowledge approved by relevant parties in society and the economy; and to equip students with a set of skills and competencies relevant to newly emerging demands.

Despite great efforts by national and European policy makers to drive VET schools into 'rethinking' their curricula and teaching methods, changes have been slow to keep up with labour market requirements. In most European countries VET qualifications are based on standard curricula that precisely define what is taught, leaving little freedom for teachers and schools to train for just-in-time labour market demands. Most systems also have lengthy and complex accreditation procedures, so the approval of a new curriculum - or even the modification of an existing one – can take a long time.

AIMS & OBJECTIVES

The project aims to provide effective and necessary training and support for VET teachers to enable them to identify and respond to skill-gaps in the labour market, but also involving other relevant stakeholders - students, parents, teaching staff, and particularly employers experiencing difficulties finding skilled workers to fill vacancies.

TARGET GROUP

Teachers and trainers in Vocational Education

Beneficiaries: VET students, industrial partners, companies

PROJECT BASICS

Title: Teachers for Reactive and Responsive Coordinator: iTStudy Hungary

Vocational Education Project manager: Mária Hartyányi

Acronym: Reacti-VET Contact: maria.hartyanyi@itstudy.hu

Program: Erasmus+ KA2 In Estonia:

Project type: strategic partnership BCS Koolitus AS, Triin Kagur: Triin.Kangur@bcs.ee

Participant countries: Hungary, United Kingdom, In Italia

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Start date: 1 September 2018. JAC:

Finish date: 28 February 2021. Web: <u>mailto:international@fondazionejobsacademy.org</u>

http://reactivet.itstudy.hu/ In the UK: CAPDM Ltd: kwc@capdm.com

PROJECT PARTNERS

iTStudy Hungary Ltd. (Hungary) - coordinator,

AICA - Associazione Italiana Informatica e Calcolo Automatico (Italy)

Fondazione ITS per le nuove tecnologie del Made in Italy – JobsAcademy (Italy)

BCS Koolitus AS (Estonia)

SZÁMALK-Szalézi Szakgimnázium (Hungary)

Veszprémi Szakképzési Centrum Öveges József Szakgimnáziuma, Szakközépiskolája és Kollégiuma (Hungary) CAPDM (United Kingdom

