



Erasmus+ project: Continuing professional development in digital education for VET

Digital Training Delivery in Vocational Education and Training

Curriculum

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Introduction

COVID-19 has created many challenges beyond the health sector. Our society needs to develop strategies and tools to respond at all levels. One of the most affected sectors is education, as it must not only effectively deliver content, but also ensure the safety of teachers and students. From schools to companies, including vocational training and universities, everyone is looking for tools that can help them achieve their educational goals without compromising the quality of education.

The education sector has found a clear answer to the current situation: the transition to digitalisation. It is important to clarify that digitisation and the use of information and communication technologies do not mean distance learning. Digitisation involves the application of new technologies to the educational process, which had already begun before the pandemic. The use of new technologies such as virtual classrooms, the internet in the classroom, virtual visits and gamification (using elements and principles of games to increase student engagement) does not mean that teachers and students have to be in different places.

Until recently, the presence of digital technology in the classroom was relatively minimal, as it was seen as a means of enhancing learning, but the current situation is rapidly accelerating this process, and not without considerable effort. It was introduced and used out of necessity during lockdown last semester and at this time seems to be the only viable solution to the current constraints.

The use of ICT in education not only facilitates the work of teachers but also helps students to develop their skills. Interaction with digital systems facilitates learning to use them and makes it easier to move in an increasingly technological world. The current crisis is not a challenge but an opportunity. The collapse of traditional education means that we finally have the opportunity to embrace ICT and make the most of it.

The technologies that can be applied are not limited to those we already know and use. Most of us are familiar with virtual classrooms and videoconferencing, but there are many others. You can create tools such as quizzes where students compete to answer questions and see each other's results, interactive presentations or virtual visits. The tools and their uses are endless.

This curriculum is one of several outcomes of the Erasmus+ project **named “Continuing professional development in VET”** and it was created to help teachers across Europe to address this challenging situation in VET.

All project outputs have been produced by seven partners from seven European countries working together:

ProEduca z.s., Czech Republic
Archivio della Memoria, Italy
Asociatia Pentru Sprijinirea Initiativelor Educationale, Romania
Solution Based Training & Consultancy (SBTC), Turkey
CEBEM FORMACIÓN PROFESIONAL SL (Daniel Castelao), Spain
TUS Midwest, Ireland
Northern Regional College, UK

Introducing a new (post-covid) VET teacher

We have asked ourselves: How today's teachers perceive their role?

We, the teachers, used to think that a big classroom full of busy students was the only place where we could be in our "element" as teachers. We liked being enthusiastic speakers who conveyed information in the way we wanted - in an engaging way. We asked questions and stimulated discussion, but looking back we realised that we did most of the talking. We spoke because we had to discuss certain material in each lesson. In the lesson plans, we prioritized the content we had to convey, so we had a big responsibility to use the lesson time to convey certain information to the students. We were classroom teachers and we wanted to make sure that we were effectively guiding students towards knowledge.

When we started teaching online, virtual classes gave us a different perspective on our role as teachers. In an online environment, we find ourselves leading, but in a different way. We are not so much teachers as mentors. We are not so much disseminators as facilitators. The students' learning depends not so much on us as on them.

We still enjoy working with students. However, it is obvious that in order to help students learn effectively at a distance, we have to take on a different role than we were used to. Moving from delivery to facilitation means adopting and applying new ways of working. There are many similarities between online and classroom teaching, but also many qualitative differences.

We have identified five roles that are specific to the online teacher. We believe that if these roles are actively taken into account, both teacher and students will have a better quality experience.

E-learning Designer:

It is important that an online course meet the same objectives and curriculum requirements as its on-campus counterpart, assuming there is one. However, merely replicating the course in an online setting by uploading lectures and slides is ineffective. The mediums of delivery are different; consequently, they require different approaches. The online instructor takes on an e-learning designer role and must re-conceptualize the course and design it for the online environment. For example, an online course typically involves autonomous interaction with course material and asynchronous participation in course-related activities (i.e., students and the instructor participating at different times). Additionally, a typical online course has a heavy, if not almost exclusive, emphasis on written text both in terms of how course content is presented and in how communication occurs between and among students and the instructor. As an e-learning designer, the online instructor is challenged to adapt (or develop new) the course in a way that considers these factors as well as achieves the learning objectives.

Technology Specialist:

Clearly, technology is an inherent part of online learning, and online teaching requires some level of technological savvy. Yet, the technical aspects of maintaining an online course are more considerable than might be apparent. The online instructor assumes a technology specialist role and must choose tools that are appropriate for learning goals and that are within the technical capabilities of

students. It is important that the instructor knows how to use the tools and be able to clearly describe their use to students. The role also includes handling the ongoing technological maintenance required of an online course. There is an abundance of links and tools that need continual monitoring to ensure they are functioning properly. Moreover, a good deal of time is spent regularly uploading, deleting, and editing files and web pages, and modifying site links and dates. As a technology specialist, the online instructor tackles these tasks so that all aspects of the course site are continuously running smoothly. Otherwise, technology can become a source of frustration or distraction for students, or be a hindrance to learning. When technical aspects of the course are running without issue, students can focus on learning.

Content Coach:

Just as it is in an on-campus class, course content is a hugely important part of the online learning experience. However, as opposed to lecturing about content during prescribed weekly class time, the online instructor plays the role of content coach and must devote time to mentoring students as they process the information presented to them. The onus to learn is more on the students, but not without the instructor guiding them through the process. The online instructor is challenged to find ways to ensure learning in the virtual classroom, perhaps by providing tips or concise snippets about content, pinpointing crucial areas upon which to focus, or offering critical thinking questions for consideration. Coaching may occur at the class level, but more often than not it involves mentorship at an individual student level.

Social Director:

When teaching a traditional on-campus course, contact between and among the instructor and students is more predictable. There are established times, typically weekly, when the class meets and social interactions naturally ensue. Breaking the ice, small talk, course updates, and questions about content generally can take place before, during, and after class meetings. A sense of community and a class culture tend to be organically established. For an online course, these things require a bit more effort and creativity. The online instructor becomes a social director and must purposefully establish a sense of community and modes of interaction among all participants. Through emails, discussion forums, chat rooms, videos, or other means, the virtual classroom is brought to life. It is also essential that the online instructor establish his/her own presence in the class from the start and throughout the semester. This may be done by way of personal introductions, chat rooms, timely responses to inquiries, and swift feedback on assignments. The goal is to help students and learners feel like part of the group and engaged in the course, thereby increasing feelings of connectedness and reducing feelings of isolation.

Managing Correspondent:

Online courses tend to be writing and reading intensive for students, but also for the instructor. The online instructor accepts the role of managing correspondent, and must create and organize all of the written resources that help students master content and complete requirements. The goal is to make the material manageable and understandable. In addition, the role entails spending a disproportionate amount of time providing feedback on written assignments and responding to all of the written inquiries and communications from students. The online instructor encourages, critiques

and, ultimately, uses his/her typed words to support students as they proceed through the learning experience. When done successfully, students feel confident and competent in their online course.

To understand what kind of competencies we need to teach online using technology, we need to distinguish between the two principally different kinds of instruction: remote instruction (when a F2F lesson has to be delivered online in a sudden crisis situation) and online instruction (when the lesson has been designed to be delivered online).

Remote versus online instruction

Remote instruction is usually a solution to facilitate the syllabus of the course when face-to-face instruction is interrupted (e.g. due to a planned absence, a snow day or an emergency). Teachers plan instruction as needed, often using teacher-preferred technology, to get the best course outcomes for the circumstances. Content and activities are usually developed gradually and are regularly added to as the course progresses. Delivering the course by distance learning in this way ensures continuity when face-to-face courses are not available. Where face-to-face instruction continues, technology can be used to a lesser extent to help students achieve the learning outcomes.

Online instruction is an education that takes place within a course that has been developed so that it can be delivered entirely online. Learning experiences are planned over a period of weeks or months, usually with the support of an instructional designer and a media services team. Learning experiences and learning objectives for an online course are usually developed before the semester begins. These courses use a variety of teaching strategies and instructional technologies that allow students to meaningfully interact with course content, the instructor, and fellow students, while still allowing for flexibility in the student's schedule.

In short, remote learning occurs when an instructor transfers a course from the campus to an online course. However, the online course is intentionally designed for online learning according to the principles of e-learning design. The following table shows some of the differences between these methods of teaching:

	Remote	Fully Online
Design philosophy	By Instructor with some support; learning experience varies depending on the instructor's level of expertise with learning technologies.	Instructor as content author supported by instructional designer and media support; various technologies are considered to facilitate a self-directed learning experience.
Development framework	Often developed week-by-week, with consideration of the overall course plan.	Fully developed at the start of the course; may go through multiple iterations before development is considered complete.
Delivery of instruction	Asynchronous (i.e. recorded lectures) OR synchronous (i.e. real-	Primarily asynchronous; some synchronous components.

	time classes in the web conferencing applications).	
Student preparedness	Students may be less technologically prepared, with access to a mobile device only and limited connectivity in their homes; instructional planning should reflect these limitations.	Students know from the onset that all instruction will happen online, so likely have access to the technology that enables them to actively engage in the learning experience.
Learning Management System use	General use of the system to communicate with students, relay course content, and administer assessments and grades.	Advanced use of tools and components to facilitate social interaction of class and learning activities.
Instructor presence	Mirrors expectations of face-to-face instruction.	Students are expected to be self-directed with regular check-ins by the Instructor to monitor progress and provide feedback.
Interactions with classmates	Periodic; often instructor initiated.	Interaction is built into learning activities; addition of defined spaces within the learning environment for social interaction.

Curriculum purpose and general description

This training programme is based on the results of a comprehensive analysis of the needs of VET teachers in relation to online learning. As VET educators need to move towards online teaching, virtual classrooms offer a different perspective on the role of educators as trainers. Lecturers have already noticed that in order to effectively help students succeed in remote or online learning, online teaching requires the lecturer to take on some different roles than before. Moving from dissemination to facilitation means adopting and applying new ways of working. While there are still many similarities between online and classical teaching, there are many areas of qualitative difference.

The survey results (IO1) as well as the consequent literature review have confirmed the transition to the above-mentioned new roles of the trainer as an online trainer. An active implementation of these roles, both the instructor and the students will gain a better-quality experience.

Competences and training goals

Based on the thorough analysis of the available researches and surveys, for the purpose of this training we have identified the following list of competencies vital for the VET teachers to design and deliver engaging online lessons:

1. Digital competence, use of ICT tools for teaching and learning in VET
2. Online collaboration, synchronous and asynchronous (exchange of ideas, communication...),
3. Analysis of skills in general and the participant's own skills,
4. Critical adoption of general e-learning principles and specific solutions in their context,

5. Designing engaging online courses for individual or group work according to the learning outcomes,
6. Creating and managing (publishing, selecting, reusing, sharing, and evaluating) audiovisual teaching/learning materials in line with learning outcomes,
7. Facilitating, inspiring and motivating participants in an e-learning environment to achieve learning outcomes,
8. Metacognition (awareness and critical reflection on one's own teaching and learning skills).

After completing this training program, teachers will be able to develop an e-learning course in the VET field with exercises and elements of an online teaching strategy, using a variety of tools and teaching methods chosen specifically to meet the training goals. In particular, the teachers should be able to:

- assess their current skills;
- demonstrate their skills based on their work (after each module);
- be able to design an e-learning course;
- be able to deliver an e-learning course;
- perform the tasks in the successive modules.

CPD program: Digital Training Delivery in VET

The CPD program developed in the COVET project consist of three independent parts:

1. Training modules
2. Instruction set of sample online lessons
3. Guide to the CPD training program

1. Training modules

The three training modules offer eight training units:

Module 1: Competences of the VET Teacher

Unit 1.1: Understanding Competence and Digital Competences

Unit 1.2: Defining the role of the facilitator

Competencies gained: at the end of this Module the learner (a VET teacher) will be able to:

- understand the meaning of competency in and for VETs;
- know what competencies do modern vocational teachers need;
- use the concept of competency in a true manner;
- apply the competencies in to the field to effectively prepare and develop VET teachers;
- understand the tasks and competencies of an online course instructor;
- know how to evaluate your own facilitation skills;
- use and organize the facilitation of an e-learning course;
- apply and visualize data about your own progress.

Module 2: E-Learning for VET Teachers

Unit 2.1: Exploring E-Learning Environment

Unit 2.2: Developing e-learning resources

Unit 2.3: Digital Learning Technologies for VET Teachers

Unit 2.4: Assessment Process in E-learning

Competencies gained: at the end of this Module the learner (a VET teacher) will be able to:

- understand what e-learning is;
- analyse the different elements of e-learning courses;
- explore different possibilities of e-learning;
- adapt the provided contents to your needs;
- evaluate and develop your learning resources;
- create simple video contents and publish them online;
- gain skills in developing core learning resources;
- discover free tools for content development;
- understand the online learning environment;
- make informed decisions about which digital tools to use in your own context;
- design and facilitate online discussions;
- manage the discussion forum feature in an online environment;
- understand best practices for assessment and feedback in your context;
- apply best practice principles of assessment in your module;
- decide what assessments are best to use in your module;
- know how to develop and use grading rubrics.

Module 3: Online Resources & Activities

Unit 3.1: Online Resources: (Re)use and Evaluation

Unit 3.2: Design of Online Activities

Competencies gained: at the end of this Module the learner (a VET teacher) will be able to:

- to identify and analyse O.E.R.;
- to identify and differentiate online repositories;
- to evaluate online resources;
- to use and reuse online resources;
- design an online activity;
- identify appropriate online tools for your activity;
- differentiate between the 5 stages of the instructional model presented;
- develop an online lesson in a better way.

2. Sample lessons

As a complementary teaching and training material to the training program we are providing a set of **36 sample lessons** describing the transformation process from offline to online training delivery.

The lessons cover a wide range of various topics from several professional families:

Handrafts

- Handcrafts – Crocheting

Engineering

- Sand Casting
- Unconventional Machining Methods
- Reading and Assigning of Manufacturing Drawings
- General Tolerances
- Density and Melting Points of Metals and Their Alloys
- Connecting Direct-Current Sources

- Unconventional Machining Methods 2
- Basic Angles on Machine Tools
- Tool Materials
- Revision for Final Exams

English language

- Other Countries of the Commonwealth

ICT

- How to Use Charts in LibreOffice Writer Application
- How to create a selection in GIMP image editor application
- Remote Development
- User's Accounts
- Home automation
- Flipped Classroom Explained Using Nearpod

Media

- Creating Web Pages Using Word
- Multimedia - What Does a Photo Editor Do?
- Visual Communication and Semiotics: Album Covers
- Digital Cultural Mapping
- Storyboard
- Video Editing

Economics

- Health & Work
- How to Calculate a Payroll
- Personal Income Tax
- Organisation of the Spanish State
- Loans and Amortisation System
- Expiration of Employment Contract
- Labour Law

Career counseling

- Applying for a Job & Interviewing
- Career Counseling - Employment Interviewing
- ICT – Using collaborative resources in online counseling
- Career Counseling – Time Management
- Career counseling – Self-awareness

Each lesson provides a unique step-by-step process depicting the thinking and decision process of the VET teacher who designed the lesson:

- Description of the original (offline) version of the lesson (lesson plan)
- Description of the things that needed modification for the shift towards the online delivery.
- List of items to be modified and reasons for it.
- List of application or tools required
- List of apps, tools, competencies that were necessary to learn
- List of apps, tools needed to obtain or purchase

- Feedback from the trial run of the online lesson, which of the choices stated above were successful, which were not, and lessons learned.
- Description of the final result – a new online lesson

3. Guide to the CPD training program

Final part of the CPD training program is a Guide for the users providing detailed information about the web page where all training materials can be found and downloaded from. It also gives instructions about the training structure and how to proceed during (any) CPD training and individual career and education management.

Entire CPD training program can be accessed on: <https://www.covet-project.eu/>

Conclusions

Continuing Professional Development enables learning to become conscious and proactive, rather than passive and reactive. It involves an individual documenting and keeping a record of the increasing skills, knowledge and experience they gain throughout their career.

CPD combines different methodologies to learning, which includes training courses, seminars, workshops, conferences and events, webinars and online eLearning programs. CPD can also include sharing best practice techniques, thoughts and ideas, all focused towards an individual improving within the work environment.

The COVET CPD training program introduced in this document combines the best practice of organizing the learning process by utilization of sound pedagogical methods and available digital tools that help the enrichment of the learning process.

The CPD training program: Digital Training Delivery in Vocational Education and Training has been designed for VET teachers and trainers within the European Union.



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