



# TRAINING METHODOLOGY



Author:

LUKASIEWICZ RESEARCH NETWORK – INSTITUTE FOR  
SUSTAINABLE TECHNOLOGIES (Łukasiewicz - ITeE)

Centre for Vocational Education Research and Innovation Management

This project has been funded with support from the European Commission. This communication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein. « Q4EDU- Quality for Digital Education Readiness in VET Project, project number: 2020-1-PL01-KA226-VET-095343.



# TRAINING METHODOLOGY

## PROJECT INFORMATION

**Project acronym:**

Q4EDU

**Project title:**

Quality for Digital Education Readiness in VET Project

**Project Number:**

2020-1-PL01-KA226-VET-095343

**Sub-programme or KA:**

KA2 - Cooperation for innovation and the exchange of good practices

KA226 - Partnerships for Digital Education Readiness

**Website:**

<https://q4edu.eu>

**CONSORTIUM:**

- Coordinator:
  - UNIWERSYTET LODZKI - UoL (Poland): [www.uni.lodz.pl](http://www.uni.lodz.pl)
- Partners
  - EUROPEAN DIGITAL LEARNING NETWORK (Italy) – [www.dlearn.eu](http://www.dlearn.eu)
  - SIEC BADAWCZA LUKASIEWICZ - Ł-ITeE (Poland): <https://www.itee.lukasiewicz.gov.pl/>
  - CITY COLLEGE (Greece): <https://york.citycollege.eu>
  - EMPHASYS CENTRE (Cyprus): [www.emphasyscentre.com](http://www.emphasyscentre.com)
  - ATLANTIS ENGINEERING (Greece): [www.abe.gr](http://www.abe.gr)



# TABLE OF CONTENTS

## Spis treści

<b>1. Introduction</b> .....	3
<b>2. Why Lean model?</b> .....	4
<b>3. Assumptions towards users of the training program</b> .....	5
<b>4. Didactic model and organization of the training process</b> .....	5
<b>5. Selection of content, tools, methods</b> .....	6
<b>6. Validation of learning outcomes</b> .....	7
Conclusion .....	7
References .....	8



# 1. Introduction

The main objective of this intellectual output is to prepare the curriculum and develop a novel methodology for specialized **training on the assessment of digital readiness in VET**. Thanks to that Q4EDU project supports the continuous improvement of VET centres and their personnel's performance.

The work within the IO2 ECVET profile and training methodology is divided into two activities:

- O2/A1: ECVET profile
- O2/A2: Training methodology

In the previous steps of the project (see Fig.1), the competence profile of the **Q4EDU Expert** and a curriculum of the course for the Q4EDU Expert were designed (IO2/A1). On the base of them, a training course, including content for specific modules helping VET trainers become Q4EDU Expert were developed (IO3/A1).

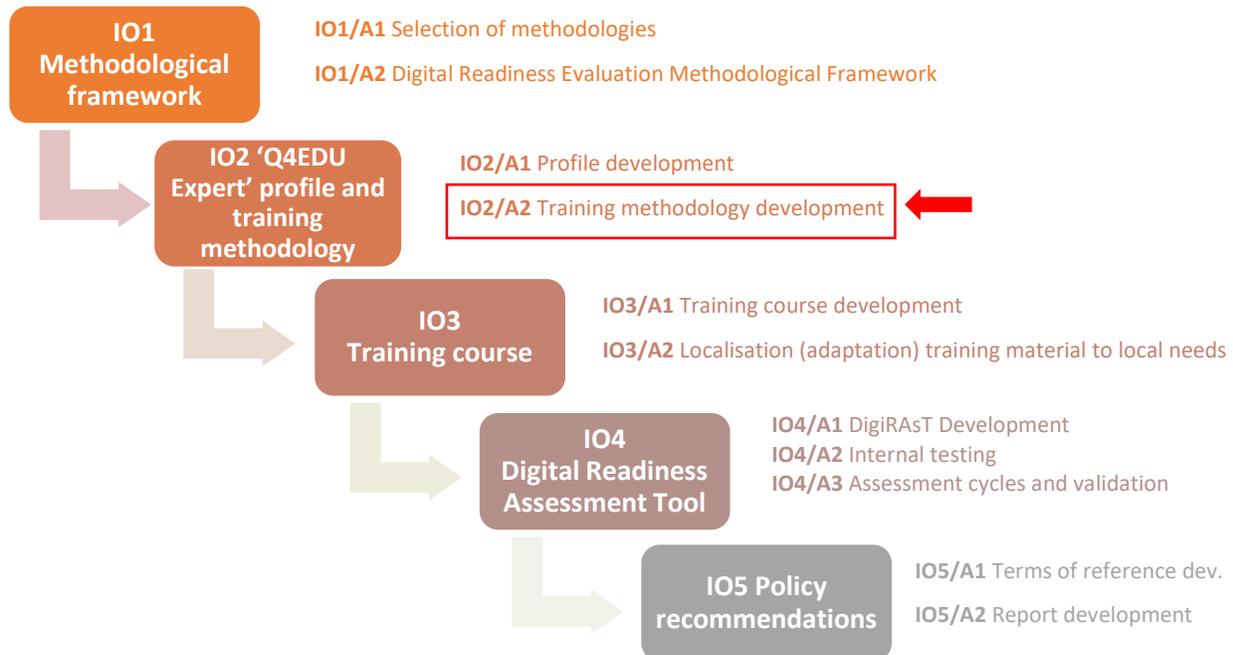


Fig.1. Q4EDU project procedure

This methodology is a set of principles, practices, procedures used by the co-creators of the programme and the content of the training modules for the Q4EDU Expert. At the same time, this methodology is recommended by the Q4EDU Project Partnership to all those who, in the future, will want to participate in the continuous development process of the training programme, according to the assumptions of the Lean model.



## 2. Why Lean model?

The Lean model has its roots in the manufacturing sector. Its essence is to give employees a sense of commitment to continuous quality improvement.

Despite the limited application of the Lean model in education to date, its core principles of respect for people, commitment, awareness, the ability to cooperate and share knowledge is a welcome approach in vocational education and training. It is a time- and resource-efficient approach, making it the right choice for a rapid and effective return to normality after a period of covid-19 crisis.

Cost efficiency is achieved by replacing activities that do not bring value in the eyes of both the internal and external customer (commonly called waste in Lean terminology) with value-adding activities.

Improved product and/or process quality is achieved by involving conscious employees in a continuous problem-solving process. The appropriate use of knowledge, experience and skills of employees in combination with appropriate tools and methods of Lean management makes it possible to eliminate the root causes of problems, leading not only to a permanent improvement in quality, but also directly to a reduction in costs (less effort needed for quality control and dealing with problems) and less time needed for corrections, improvements, etc.

The following principles provide the foundation for the Lean concept<sup>1</sup>:



- Defining value from the internal and external customer's point of view. Elements that are not relevant to value are considered wasteful.
- Value Stream Mapping (VSM) is the creation of a value flow map that takes into account possible waste while suggesting possible solutions to problems.
- Creating a continuous flow of value in which there is no room for interruptions, disruptions or downtime, no time for so called *muda* (wastefulness, uselessness), *muri* (unevenness, non-uniformity, irregularity), *mura* (excessiveness, impossible or unreasonableness).
- The creation of a pull system in place of the traditional push system. It allows work to be done when there is demand for it.
- Continuous pursuit of perfection. Implementing lean management is not a one-off change. It requires a continuous search for improvement using the small steps method (Japanese kaizen conception).

<sup>1</sup> <https://www.planettogether.com/blog/five-principles-of-lean-manufacturing> [18.02.2022]



The solution proposed in the project, i.e. comprehensive support for users in planning and developing the quality of teaching and learning processes in the post-COVID era of digitization of education, fits into the above characteristics of the Lean model.

By tailoring the training offer to individualised needs diagnosed with the use of the DigiRAsT tool (IO4), it guarantees efficiency in terms of human resources, time and, consequently, cost.

### **3. Assumptions towards users of the training program**

The target group (potential users) of the training program for Q4Expert are trainers of CVET institutions, who want to learn the principles of providing high-quality remote / blended education. Indirect target groups include consultants, managers of CVET institutions, who will acquire the ability to evaluate the digital readiness of their organization.

The training offer is not restricted to any group of teachers/trainers representing a specific level in the education system (primary education, secondary education, higher education, formal and non-formal lifelong education), nor to a specific industry sector in the case of vocational education. It is designed in such a way that all users, regardless of their level of digital competence, can take full advantage of it.

For a better understanding of some source materials or demonstrated tools, knowledge of English may be helpful. However, it is not an absolute condition, but only a recommendation.

### **4. Didactic model and organization of the training process**

The overarching objective of this training program is to support educational and training institutions in their digitization processes and building readiness to provide remote education, while focusing on ensuring the high quality of teaching processes, especially in the post-COVID era.

The program and training materials are prepared primarily for use in the self-education processes of the above-mentioned target group. However, the possibility of using them during traditional stationary classes is not excluded.

The program and training materials are Open Educational Resources (RES), available to anyone interested in the issues of digitization of education and ensuring the quality of education.

The training content will be made available using Virtual Learning Environment (VLE) technology, which is a web-based platform.

To take part in the training and obtain a certificate, candidate will be required to register using the appropriate form also available through VLE.

Access to and use of the developed training materials does not require special software from users. All that is required is a computer (tablet, smartphone or other mobile device) connected to the Internet, with a web browser and an office software package.

The structure of the program is modular. The volume of training materials corresponds (estimated) to about 5 clock hours of classes carried out in a stationary manner for each of the 7 modules, which gives a total of about 35 hours on the scale of the entire training.



The time dimension mentioned above should give the user the opportunity to fully familiarize himself with the content both contained directly in the materials and contained in the external source materials to which the user is referred (external tools, media, platforms, videos, databases, articles, etc.).

The basic form of visualization of training content is a Power Point presentation (pptx, ppt), also available as pdf file, which provides ease and freedom of use on any device (including mobile).

It was assumed that the volume of each module should be in the range of 50 slides (about 20 slides/hour).

Unlimited time availability of materials is assumed, i.e. no requirements have been introduced as to the time in which learning outcomes should be validated (from the moment of starting self-education).

## 5. Selection of content, tools, methods

In accordance with the adopted methodological framework<sup>2</sup>, both the competence profile of the Q4Edu Expert and the DigiRAsT tool allowing to diagnose his needs in the field of competence to assess the readiness of an educational / training institution to provide high-quality remote education services are based on the DigiComOrg model<sup>3</sup>. Therefore, the selection of training content that responds to the diagnosed needs also corresponds to the structure of this model (seven modules corresponding to seven key areas in the DigiComOrg model).

The training content of the individual modules provides support to users (CVET teachers/trainers) in achieving indicators describing the state of excellence for each of the seven key areas.

The training content for each of the modules, in addition to the original material, also contains references to external sources that can serve to achieve the objectives of the Q4Edu Expert training. There are, for example, educational platforms and applications, educational materials available on social media and private resources of Internet users, databases and others. In each case, their substantive correctness has been verified.

All requirements regarding copyright and types of licenses under which external resources are made available have been maintained.

The authors have made every effort to make the content useful, attractive, innovative for users.

External materials and tools should not constitute more than 50% of the time allocated to the implementation of the training content of a given module (i.e. about 2.5 hours).

It was assumed that among the materials and tools made available as external resources, there should be mainly free, universal solutions (3 for each of the modules). However, references to commercial solutions that have been recognized by the Project Partnership as valuable and useful in achieving the objectives of the Q4Edu Expert training (no more than 2 for each module) are not excluded.

---

<sup>2</sup> <https://q4edu.eu/en/results/> [15.04.2022]

<sup>3</sup> <https://ec.europa.eu/jrc/en/digcomporg> [15.04.2022]



The content of the training has been prepared in several European languages (EN, PL, GR, IT), with the original (base) version being considered to be the English version. It contains universal content applicable to users, regardless of their country of origin.

Other language versions of the training materials may contain content or references (links) to external sources that are specific to national conditions (e.g. relevant system solutions, applicable laws, etc).

## 6. Validation of learning outcomes

Each of the modules contains an element of validation of learning outcomes developed and made available to users using Ms Forms.

According to the idea of micro credentials<sup>4</sup>, training users can collect confirmations for each of the 7 modules (step by step) and doesn't have to take the whole course (only selected modules). In order to confirm the learning outcomes for a given module, the user must provide correct answers to 10 questions drawn from a pool of 15 related to the subject of a given module.

To obtain the **"Q4Edu Expert" Certificate**, a positive test result is required to complete each of the 7 modules.

At the completion of the participation in the training, the user will be issued a certificate, confirming the number and titles of modules completed and/or obtaining the "Q4Edu Expert" credentials (in case of completion all of the 7 modules).

The choice of validation methods is conditioned by the possibility of conducting it remotely and automatically checking the correctness of the response. The possibility of using the following types of questions has been accepted:

- Multiple Choice,
- True/False,
- Put in Order,
- Complete Words.

The certificate confirming the competence of the "Q4Edu Expert" is issued by the institution of the Q4EDU project coordinator, i.e. the University of Lodz.

## Conclusion

The presented methodology of Q4Edu expert training is part of a broader concept of supporting CVET institutions in the processes of planning and quality development of both external services and internal processes. It is complementary to the results obtained both at the earlier and subsequent stages of the project (see Fig. 1). In particular, it complements the curriculum and training course for Q4EDU Expert.

---

<sup>4</sup> <https://education.ec.europa.eu/sites/default/files/document-library-docs/european-approach-micro-credentials-higher-education-consultation-group-output-final-report.pdf> [25.04.2022]



The methodology allowed to implement a course for a pilot group of Q4Edu expert within the Q4EDU project. Based on the obtained feedback, it has been modified and presented in this document.

It is hoped that this methodology will contribute to increasing the popularity of the Q4Edu expert course among teachers and trainers of CVET institutions, and thus to a deeper understanding of the importance of quality of online/distance/blended learning and to realistically address the issue of institutional readiness for the implementation of digitised education.

## References

- A European approach to micro-credentials. Final report. Publications Office of the European Union, 2020.
- Balle M., Jones D., Chaize J., Fiume O.: Strategia lean kultura uczenia się kluczem do budowania przewagi konkurencyjnej, MT biznes, 2019.
- Digital Readiness Evaluation Methodological Framework; <https://q4edu.eu/en/results/> [15.04.2022].
- Eaton M.: Lean Practitioners Handbook, Kogan Page, 2013.
- Integrated Qualifications System; <https://kwalifikacje.gov.pl/en/> [25.04.2022]
- KAMPYLIS P., PUNIE Y., DEVINE J.: Promoting Effective Digital-Age Learning. A European Framework for Digitally-Competent Educational Organisations; JRC Science Policy Report, 2015.
- PlanetTogether blog: <https://www.planettogether.com/blog/five-principles-of-lean-manufacturing>, [25.04.2022].
- Redecker C.: European Framework for the Digital Competence for Educators. JRC Science Policy Report, 2017.