



LS4VET

Lesson Study

for VET - Teachers' Collaboration
for Improving the Quality of
Vocational Education and Training
2020-2023

LS4VET CURRICULUM

LESSON STUDY COURSE FOR VET TEACHERS AND SCHOOL LEADERS

"The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein."

AUTHORS

Lead partner: Pädagogische Hochschule Niederösterreich, ELTE Eötvös Loránd University

Editor & Author: HS-Prof. Mag. Dr. Claudia Mewald

Title	Lesson Study course for VET teachers and school leaders – LS4VET Curriculum
Outcome	IO2 LS4VET training course IO2 – A1: Designing the LS4VET training course
Last update	Version 2: 05.02.2022
File name	LS4VET_CPD_Curriculum_5_ECTS_version 2

Co-authors and contributors

Name	Organisation	Module
HS-Prof. Mag. Dr. Claudia Mewald	Pädagogische Hochschule Niederösterreich, Austria	Curriculum text & Module 1
Dr. Anne Khaled	University of Applied Sciences Utrecht, The Netherlands	Module 2
Dr. James Calleja	Universita ta Malta, Malta	Module 3
Prof. Dr. János Győri	ELTE Eötvös Loránd University, Hungary	Module 4
Mária Hartyányi	iTStudy Hungary Educational and Research Centre, Hungary	Module 5
Prof. Dr. Michaela Tscherne	Pädagogische Hochschule Niederösterreich, Austria	LS4VET Competence Map
Eszter Bükki	ELTE Eötvös Loránd University, Hungary	Reviewer

This text is published by applying the Creative Commons Free Culture Licence of Attribution 4.0 International (CC BY-SA)



This licence allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator. The licence allows for commercial use. If you

remix, adapt, or build upon the material, you must licence the modified material under identical terms.

TABLE OF CONTENTS

GENERAL INFORMATION	1
Overall goal	1
Target group, entry requirements, and selection criteria	1
Duration	1
EQF Level	1
INTRODUCTION	1
Needs analysis and specific goals	2
Competence profile	2
Qualification profile	3
Lesson Study as a contribution to support the inclusive development of VET schools	3
Modules	3
DESCRIPTION OF THE MODULES	4
Module 1: LS4VET Design - Focus on planning	4
Aim	4
Entry requirements	4
Content	4
Goals	4
Learning outcomes	4
Assessment	4
Duration of module, estimated workload and mode of delivery	5
Module 2: LS4VET Implementation - Focus on process	6
Aim	6
Entry requirements	6
Content	6
Goals	6
Learning outcomes	6
Assessment	6
Duration of module, estimated workload and mode of delivery	7
Module 3: LS4VET Sustainability - Focus on progress	8
Aim	8
Entry requirements	8

Content	8
Goals	8
Learning outcomes	8
Assessment	8
Duration of module, estimated workload and mode of delivery	9
Module 4: LS4VET Impact - Focus on leadership - optional module	10
Aim	10
Entry requirements	10
Content	10
Goals	10
Learning outcomes	10
Assessment	11
Duration of module, estimated workload and mode of delivery	11
Module 5: LS4VET - 21st century teaching methods - focus on learning and organisation in a digital world - optional module	12
Aim	12
Entry requirements	12
Content	12
Goals	12
Learning outcomes	12
Assessment	13
Duration of module, estimated workload and mode of delivery	13
TEACHING METHODS, MENTORING, AND LEARNING ENVIRONMENT	14
4.1 Learning environment	14
Virtual Learning Environment	14
Human resources in LS4VET	14
Supporting materials	15
FEEDBACK AND QUALITY MANAGEMENT	15
Quality management	16
Appendix	16
Assessment scale for the portfolio	16
Criterion oriented assessment scale	18

LS4VET CPD COURSE FOR VET TEACHERS & SCHOOL LEADERS

1. GENERAL INFORMATION

1.1 OVERALL GOAL

This curriculum frames an e-learning programme called “*LS4VET Continuous Professional Development course for VET teachers & school leaders*”. Its overall goal is to implement the Lesson Study (LS) methodology in the sector of vocational education and training (VET) through continuous professional development (CPD) in order to achieve sustainable impact on the quality of teaching and learning in VET schools, i.e., schools for intermediate vocational education, VET colleges of higher education, VET schools for apprentices, or pre-vocational schools.

1.2 TARGET GROUP, ENTRY REQUIREMENTS, AND SELECTION CRITERIA

The e-learning programme addresses teachers at upper secondary and post-secondary level in VET education (teachers of theoretical subjects, vocational education subjects, or general education subjects), school leaders in VET education, and qualified teachers in pre-vocational schools.

For admission to the e-learning programme, applicants need to have completed teacher education in the field of secondary general or vocational education and/or hold active employment at a VET school. If there are more registrations than places, admission will be carried out in consultation with the school authorities.

1.3 DURATION

The e-learning programme will last for one semester.

1.4 EQF LEVEL

The e-learning programme aims at EQF levels 5 (Modules 1-5) and 6 (Module 6).

2. INTRODUCTION

This curriculum frames an e-learning programme called “*LS4VET CPD course for VET teachers & school leaders*”, which aims at innovation and change in VET through LS, a model of teacher professional development based on teacher collaboration. Moreover, it focuses on the improvement of student learning through developing VET teachers’ methodological competence.

This curriculum was developed within an ERASMUS+ key action 2 project called “*Teachers’ Collaboration through Lesson Study for Improving the Quality of Vocational Education and Training*” (LS4VET). Pursuing the assumption that teachers working collaboratively will develop a high level of professional capital, this course has been organised to establish LS teams as communities of practice which will create teacher learning based on professional collaboration. The target goal of the e-learning programme is to create sustainable collaborative professionalism implementing the LS method.

2.1 NEEDS ANALYSIS AND SPECIFIC GOALS

Increasing diversity of programmes and students in VET education, rapid changes in technology and in the labour market, as well as changing learning behaviours require personalisation and adaptive

learning opportunities optimised through collaborative planning in teams. LS can meet these demands by enhancing learning opportunities through identifying and responding to learner needs and it has the potential to develop individual and collaborative professionalism within VET. However, LS as a method has so far never been systematically adapted to its special context. Therefore, this e-learning programme implements the LS4VET model, a LS methodology developed specifically for the VET sector, with the goal to achieve sustainable LS practice in this field. Participation in this programme aims to encourage a positive impact on the quality of teaching and learning in the participants' schools and beyond.

The programme pursues a bottom-up development through which continuous professional development (CPD) is created by and with teachers in job-embedded processes of authentic teaching and learning, wherever possible in collaboration with the labour market. Thus, its genuine goal is to improve student learning through teachers' investigation of new teaching methods and their collaboration in the design, implementation, evaluation, and reflection of research lessons over an extended period of time.

2.2 COMPETENCE PROFILE

Upon successful completion of this course, participants are able to use and adapt the practices and related theories suggested by the LS4VET model¹, and to develop them in order to enhance learning processes in VET education.

The participants of this course will be able to

- develop LS4VET designs applying the key principles of LS,
- carry out pre-studies to design research lessons,
- establish LS teams at schools, with stakeholders from the VET sector, or within the professional VET community,
- plan LS research lessons collaboratively,
- include their learners as active participants with a voice in LS,
- develop and pilot observation schedules and interview plans,
- hold debriefing meetings and develop LS research lesson revisions,
- disseminate LS results within their school and beyond,
- implement case study research in the context of LS in VET, and
- develop collaborative professionalism and communities which cultivate LS in VET.

If the participants have selected the *optional module on leadership* (Module 4), they will be able to

- act as leaders who can support LS teams in each step of the LS cycle(s),
- identify organisational learning opportunities of schools,
- implement organisational development strategies collaboratively,
- develop institutional sustainability programmes for LS in VET contexts,
- become aware of the main professional concepts of LS, its roles in CPD, and opportunities for schools as learning organisations, and
- employ ways of using LS for educational innovations in school development.

Upon completion of the *optional module on 21st century skills* (Module 5), the participants will be able to

- prepare VET teachers for integrating innovative classroom management techniques and teaching methods into their daily practice through LS,
- use digital tools for increasing the responsibility of students for their own learning outcomes, and

1

https://ls4vet.itstudy.hu/sites/default/files/user-files/Intellectual_Outcomes/IO1-Model_for_LS4VET-UAS/Results/Uploaded/LS4VET%20Model_IO1_A5_Final%20Report_291021.pdf

- develop their 21st century skills including communication, collaboration, critical thinking, and creativity effectively in their academic and professional learning.

2.3 QUALIFICATION PROFILE

Upon successful completion of this course, participants are able to act as LS team members, LS knowledgeable others, and/or LS facilitators/organisers in LS projects.

2.4 LESSON STUDY AS A CONTRIBUTION TO SUPPORT THE INCLUSIVE DEVELOPMENT OF VET SCHOOLS

This curriculum has been developed with the goal to help its participants provide equal learning opportunities for the diverse educational needs of VET students through LS. Creating education as free from barriers of learning and participation as possible for a highly heterogeneous student population is a challenging goal. For this reason, this programme and the LS4VET model aim to respond positively to diversity in that they encourage differentiated and adaptive teaching and learning which are responsive to the needs of all VET students.

2.5 MODULES

This e-learning programme comprises five modules to be completed within two semesters. Modules 1-3 are compulsory components of the course, while modules 4 and 5 are options. One option has to be completed, but both can also be selected.

Module	Weeks	ECTS
1. LS4VET Design - focus on planning	3	1
2. LS4VET Implementation - focus on process	6	2
3. LS4VET Dissemination - focus on the development of shared knowledge	3	1
4. LS4VET Sustainability - focus on leadership	3	1
5. LS4VET - 21st century teaching methods - focus on learning and organisation in a digital world	3	1

3. DESCRIPTION OF THE MODULES

3.1 MODULE 1: LS4VET DESIGN - FOCUS ON PLANNING

3.1.1 AIM

The goal of this module is to familiarise the participants with the development of effective LS4VET designs applying the key principles of Lesson Study as a cross-boundary collaboration through inquiry in the context of VET (Vocational Education and Training). This process requires participants to be able to carry out pre-studies to plan research lessons in collaboration with Lesson Study team colleagues, knowledgeable others from various fields and/or Lesson Study facilitators, as well as with their learners as active participants with a voice in a responsive way. At the end of the module, the participants will be able to set up Lesson Study teams and to design Lesson Study cycles in alignment with negotiated Lesson Study goals.

3.1.2 ENTRY REQUIREMENTS

None

3.1.3 CONTENT

- Cross-boundary collaboration and learning through collaborative practitioner research in VET
- Theories, resources, and strategies in Lesson Study design
- Knowledgeable others, Lesson Study facilitators, and stakeholders in Lesson Study
- The LS4VET model

3.1.4 GOALS

The participants...

- understand the key principles of cross-boundary collaboration and learning through inquiry in VET and are able to apply them in effective Lesson Study designs.
- know resources and strategies to carry out pre-studies to design Lesson Study research lessons based on a theoretical understanding appropriate for VET target groups.
- know the various roles of knowledgeable others and Lesson Study facilitators and are able to establish collaboration with stakeholders from schools/higher education institutes/the industry to create better learning opportunities for students.
- are able to plan Lesson Study cycles and collaboratively implement them in LS4VET research lesson designs.

3.1.5 LEARNING OUTCOMES

The participants...

- know and analyse the role of Lesson Study as cross-boundary collaboration and learning through inquiry in VET.
- identify and make use of appropriate resources and strategies in pre-studies in alignment with research lesson goals/questions.
- justify the application of selected strategies to involve VET learners as active participants with a voice in a Lesson Study design.
- establish cross-boundary collaboration with knowledgeable others and/or facilitators from education and/or the industry to create better learning opportunities for students.

3.1.6 ASSESSMENT

Successful completion of the module requires the participants to

- create a Lesson Study research design in context of their own VET:
 - a) in alignment with selected research lesson goals/questions.
 - b) in collaboration with education and/or industry, and
 - c) with learners as active participants (group work, 50%)
- participate actively in e-learning and complete course tasks (individual and group work, 50%)

Assessment is based on a 4.0 criterion-oriented scale (see Appendix).

3.1.7 DURATION OF MODULE, ESTIMATED WORKLOAD AND MODE OF DELIVERY

3 weeks

1 ECTS

40 % e-learning and self-study

40 % digital face-to-face collaboration

20% analog or blended face-to-face collaboration

3.2 MODULE 2: LS4VET IMPLEMENTATION - FOCUS ON PROCESS

3.2.1 AIM

Successful Lesson Study is a collaborative act with all members participating on equal terms. Therefore, this module engages course participants in planning and implementing Lesson Study research lessons collaboratively.

At the end of this module, they will have implemented Lesson Study research lessons and observation as well as interview/feedback schedules. Moreover, they will have held debriefing meetings to create Lesson Study research lesson revisions based on evidence and team consent taking a responsive approach towards the participation of VET students in Lesson Study and learning.

3.2.2 ENTRY REQUIREMENTS

Completion of Module 1.

3.2.3 CONTENT

- Lesson Study research lesson design
- Observation and student voice in Lesson Study
- Dialogic reflection in Lesson Study
- Revising Lesson Study research lessons
- Lesson Study reports

3.2.4 GOALS

The participants...

- are able to develop Lesson Study research lessons in alignment with pre-study research findings, including the exploration of learner needs and interests.
- are able to develop and implement observation and interview/feedback schedules in alignment with the objectives/questions of Lesson Study research lessons.
- are able to use findings from Lesson Study to identify and create new learning opportunities.
- are able to integrate their findings into Lesson Study reports.

3.2.5 LEARNING OUTCOMES

The participants...

- create Lesson Study research lesson plans.
- develop observation and interview/feedback schedules.
- implement Lesson Study research lessons in two cycles.
- discuss observed learning and learner feedback.
- create revisions of initial Lesson Study research lesson plans.
- write descriptive Lesson Study reports.

3.2.6 ASSESSMENT

Successful completion of the module requires:

- active participation in e-learning and completion of course tasks (individual and group work, 50%)
- three compulsory portfolio entries summarised in a collaborative Lesson Study report including
 - a) Goals

- b) Observed performances and results from interviews/feedback (group work, max. 500 words) and
- c) Summary of findings (group work, max. 500 words, 40%)
- One optional component demonstrating any other outcomes from the Lesson Study (individual work, approx. 200 words, 10%)

Assessment is based on a 4.0 criterion-oriented scale (see Appendix).

3.2.7 DURATION OF MODULE, ESTIMATED WORKLOAD AND MODE OF DELIVERY

6 weeks

2 ECTS

40 % e-learning and self-study

40 % digital face-to-face collaboration

20% analog or blended face-to-face collaboration

3.3 MODULE 3: LS4VET SUSTAINABILITY - FOCUS ON PROGRESS

3.3.1 AIM

Successful Lesson Study is sustainable, and its innovative impact goes beyond the actual study and its immediate outcomes.

This module enables course participants to disseminate Lesson Study within their school and beyond, so that its outcomes will become impulses for next projects in Vocational Education and Training (VET). At the end of the module, course participants will have implemented case study research in the context of Lesson Study in VET and communicated its results in collaboration with a knowledgeable other and/or a Lesson Study facilitator to a wider VET community. Thus, their Lesson Study will have developed collaborative professionalism within their Lesson Study teams and schools. They will have established a community to cultivate Lesson Study in VET and to promote continuous knowledge creation and sharing.

3.3.2 ENTRY REQUIREMENTS

Completion of Modules 1&2.

3.3.3 CONTENT

- Strategies of dissemination
- Case study research
- Collaborative professionalism
- Lesson Study communities
- Sustainable Lesson Study

3.3.4 GOALS

The participants...

- write short reflective reports documenting its process and outcomes in collaboration with knowledgeable others and/or Lesson Study facilitators.
- disseminate Lesson Studies within VET schools and beyond and to share the results of Lesson Studies to encourage others to take up Lesson Study in VET.
- develop collaborative professionalism within Lesson Study teams and schools, and support others to learn about this process.
- understand how Lesson Study can become sustainable over time and are able to implement strategies to build a teacher professional development culture through Lesson Study.

3.3.5 LEARNING OUTCOMES

The participants...

- share Lesson Study practices with colleagues.
- write a report to communicate and disseminate work on Lesson Study.
- disseminate the benefits of collaborative professionalism.
- describe strategies to cultivate Lesson Study practices.

3.3.6 ASSESSMENT

Successful completion of the module requires:

- active participation in e-learning and completion of course tasks - 25%
- 3 portfolio core entries:
 - a) reflection on their collaborative professionalism and its benefits to learning about lesson study (individual work, max. 200 words), and
 - b) reflection on disseminating Lesson Study practices (individual work, max. 200 words) - 25%

- 1 report (group work, max. 1000 words) - 50%

Assessment is based on a 4.0 criterion-oriented scale (see Appendix).

3.3.7 DURATION OF MODULE, ESTIMATED WORKLOAD AND MODE OF DELIVERY

3 weeks

1 ECTS

20 % e-learning

50 % self-study

15 % digital face-to-face collaboration

15 % analog face-to-face collaboration

3.4 MODULE 4: LS4VET IMPACT - FOCUS ON LEADERSHIP - OPTIONAL MODULE

3.4.1 AIM

Although Lesson Study is based on the voluntary collaborative work of teachers, the role of the school is also very important in this process. The school provides the organisational context for the Lesson Study cycle(s), supports teachers in their work, and at the same time strives to develop as an institution which learns from Lesson Study activities.

The aim of this optional module is to familiarise the participants with the possible organisational aspects of Lesson Study. The module enables the participants to develop and utilise their leadership abilities in their Lesson Study teams. It prepares them to collaborate with the school leaders who can secure the organisational support for the introduction and sustained use of Lesson Study and who can support Lesson Study teams to identify the organisational learning opportunities of the school and to collaboratively implement organisational development strategies. The module also enables the participants to develop the institutional sustainability of Lesson Study in Vocational Education and Training (VET) contexts.

3.4.2 ENTRY REQUIREMENTS

None for Part 1. Completion of Modules 1-3 for Part 2.

3.4.3 CONTENT

- LS, team and school level leadership/management and
- processes and challenges of organisational adaptations and implementation (Part 1)
- collaboration, communication and conflict resolution at team and organisational level (Part 1)
- types and functions of school leadership/management (Part 1)
- processes and challenges of internalisation and sustainability (Part 2)
- learning organisation, school improvement and educational innovations (Part 2)

3.4.4 GOALS

The participants...

- are able to create development plans on implementing the principles, general concepts, and processes of LS4VET in the context of a learning organisation.
- are able to identify stages in team development and challenges for team and school leadership/management in enabling VET teachers to initiate, implement, internalise and sustain Lesson Study with necessary local adaptations.
- know strategies to support VET teams in the implementation of Lesson Study in the school and in the broader VET community to detect relevant factors in change agent success, and to establish and support a learning culture of collaboration in VET.
- know leadership principles of Lesson Study which support change and reflect on how to embed new structures, beliefs, and values into existing VET cultures.

3.4.5 LEARNING OUTCOMES

The participants...

- develop a Lesson Study strategy (concept plan of adaptation and implementation: organisational processes and tasks and ground rules) in collaboration with the school leaders.
- develop a collaboration, communication, and conflict resolution plan for LS teams and school leaders.
- develop a concept plan of the internalisation and sustainability of Lesson Study in the school as/for a learning organisation.

- develop a plan on the continuous Lesson Study dissemination activity of the school.
-

3.4.6 ASSESSMENT

Successful completion of the module requires:

- active participation in e-learning and completion of course tasks (individual and group work, 50%)
- 4 portfolio entries (50%): 1-1 page plans for
 - the adaptation and implementation of Lesson Study in the school
 - team level collaboration, communication and conflict resolution
 - Lesson Study school-wide sustainability
 - the continuous Lesson Study dissemination activity of the school

Assessment is based on a 4.0 criterion-oriented scale (see Appendix).

3.4.7 DURATION OF MODULE, ESTIMATED WORKLOAD AND MODE OF DELIVERY

3 weeks

1 ECTS

70 % e-learning and self-study

30 % digital face-to-face collaboration

3.5 MODULE 5: LS4VET - 21ST CENTURY TEACHING METHODS - FOCUS ON LEARNING AND ORGANISATION IN A DIGITAL WORLD - OPTIONAL MODULE

3.5.1 AIM

The rapid changes in technology and labour market as well as the learning needs and attitudes of students require a shift towards learner-centred, active teaching methods in VET. Closed sets of professional knowledge and skills are no longer enough, companies of the digitalised economy need workers with a wide range of skills and the ability of life-long-learning. Vocational schools are forced to respond quickly to upcoming demands, which requires them to change traditional knowledge transfer and assessment practices into learner-centred, participatory learning-teaching activities supported by digital tools and open educational resources (OERs).

The goal of this module is to prepare VET teachers for integrating innovative classroom management techniques and teaching methods into their daily practice through Lesson Study. They will be able to use digital tools for increasing the responsibility of students for their own learning outcomes and develop their 21st century skills including communication, collaboration, critical thinking, and creativity effectively in their academic and professional learning.

3.5.2 ENTRY REQUIREMENTS

Completion of Modules 1-3.

3.5.3 CONTENT

- Active learning/teaching methods in the VET classroom
 - Virtual learning environments in VET
 - Open Educational Resources in VET
 - Pedagogical potential of digital tools for VET
-

3.5.4 GOALS

The participants...

- are able to create a plan for a Lesson Study research lesson with the goal to analyse the effectiveness of one of the active learning/teaching methods in the VET classroom.
 - are able to define the concept of virtual learning environments (VLE), to explain their key features and services and to analyse their support for teaching and learning in VET schools.
 - are able to develop a concept for using Open (or integrating) Educational Resources (OER) and relevant resources and to describe how they can be reused in VET classroom work for promoting digital equality.
 - are able to describe the pedagogical potential of digital tools, to explain how they are used to achieve the didactic goals of Lesson Study research, teaching, and learning in VET contexts, and to analyse their effectiveness in inclusive learning.
-

3.5.5 LEARNING OUTCOMES

The participants...

- describe advantages and challenges of active learning methods and explain new roles of VET teachers.
- know 21st century teaching and assessment methods relevant to the age group, subject/topic, and the didactic aims of the lesson.
- develop research lesson plans collaboratively by applying selected 21st century teaching methods.
- describe advantages of using virtual learning environments with students in case of face-to-face analog and digital classroom work.

- know national and European (online) OER databases and search for OERs for the subject/topic of the lesson.
- know digital tools for making classroom work more effective aligned with the learning goals and didactic aims of the lesson.

3.5.6 ASSESSMENT

Successful completion of the module requires:

- active participation in e-learning and completion of course tasks (individual and group work, 30%)
- draft concept of a research lesson plan applying a selected active learning method (group work, 40%)
- selection and/or development and implementation of digital tools and OERs (group work, 30%)

Submission of the assignments will be based on a well-structured template with rubrics to fill out and questions to be answered in group work.

Assessment is based on a 4.0 criterion-oriented scale (see Appendix).

3.5.7 DURATION OF MODULE, ESTIMATED WORKLOAD AND MODE OF DELIVERY

3 weeks

1 ECTS

20 % e-learning

50 % self-study

15 % digital face-to-face collaboration

15 % analog face-to-face collaboration

4. TEACHING METHODS, MENTORING, AND LEARNING ENVIRONMENT

The programme consists of four modules: Modules 1-3 are compulsory and modules 4 and 5 are options with at least one option to be selected and the possibility to choose either. The workload is represented in credit points according to the European Credit Transfer System (ECTS). One credit point corresponds to a time expenditure of 25 working hours. The programme comprises 5 ECTS credit points, which can be acquired over a period of one semester. The participants are continuously accompanied and supported by professional experts, also when they carry out Lesson Studies at schools.

The structure of the programme corresponds to a blended learning framework involving e-learning, self-study, as well as digital and analog collaboration. Self-study may be individual or collaborative and it may include in-depth literature study, preparation of research lesson plans with accompanying teaching and learning materials, the development of observation and interview schedules, etc.

E-learning supports self-study, the exchange of information in forums, and the peer-review of assignments by using virtual workspaces, web conferencing platforms, and an e-portfolio system. All course modules are interlinked in terms of content and methods, and they establish room for collaboration and reflection.

The participants deal with LS in theory and practice during face-to-face and e-learning sessions focusing on collaborative research-based learning. They reflect on their previous teaching activities in the context of LS and share their experience with other participants through forming peer teams and in developing portfolios in collaborative processes. Peer feedback and reviews promote the quality of learning outcomes before presentation and assessment.

To establish a strong link between teaching and research, the participants are encouraged to participate in international conferences and to present their research results in the LS community.

4.1 4.1 LEARNING ENVIRONMENT

4.1.1 VIRTUAL LEARNING ENVIRONMENT

The LS4VET virtual learning environment (VLE) is a multilingual web application for running online learning-teaching activities based on the open-source Moodle (Modular object-oriented dynamic learning environment) including digital resources such as videos, animations, or educational web 2.0 applications, e.g., LearningApps.

4.1.2 HUMAN RESOURCES IN LS4VET

The e-learning programme “*LS4VET Continuous Professional Development course for VET teachers & school leaders*” is delivered by professional experts (course tutors), who support the participants' learning activities in collaboration with administrative/technical staff.

An e-learning administrator guarantees the proper functioning of the virtual learning environment, manages the registration of participants on Moodle, ensures access to the modules of the course, and responds to technical problems within one working day following their notification.

The professional expert(s) (course tutors) act as LS4VET facilitators and/or e-tutors. They coordinate online collaboration and knowledge sharing on the module forum, evaluate assignments, provide feedback, and facilitate Lesson Studies.

4.1.3 SUPPORTING MATERIALS

Course and module information

The participants are provided with detailed information about the course and the modules, including aims, learning goals, content, learning outcomes, entry requirements, assessment, duration, and workload on Moodle.

Learning materials

The participants can access learning materials (core learning content, self-evaluation questionnaires, practice quizzes etc.) and submit assignments on Moodle.

VLE guide for participants and for tutors

Course participants and tutors are provided with an electronic Moodle guide-book which helps them to navigate, communicate, collaborate, learn, and teach in the virtual learning environment.

5. FEEDBACK AND QUALITY MANAGEMENT

The participants experience a feedback culture guided by adequate theories and appropriate to the LS methodology as well as the diversity of the group. Feedback is made explicit through the participants' active experience and application of self-evaluation, peer-evaluation, and feedback strategies in a learning community.

The different models of professional feedback are reflected with the participants on the meta-level and through their active application in their roles as LS team members, LS knowledgeable others, or LS facilitators. Collecting and providing feedback is observed and reflected in simulations and, if possible, in the active implementation of LS.

Successful completion of the programme is guaranteed by fulfilling the following requirements:

- active participation in four e-learning modules and completion of course tasks
- presentation of a portfolio in teams of 3-6 LS team members covering the design, implementation, and dissemination of a LS at a VET school

A successful portfolio contains:

- all core entries or other learning outcomes according to the module descriptions
- at least two options

The portfolio entries are submitted within 4 weeks after the last course meeting and assessed on the basis of a 4.0 criterion-oriented scale within 4 weeks (see Appendix).

All materials in the portfolios will be published on the LS4VET website.

5.1 QUALITY MANAGEMENT

Quality management involves the continuous systematic review of the curriculum in terms of its content, sequence, duration, and workload. Educational provision is taken to maintain and improve the quality, equity, and efficiency of the curriculum. In doing so, it encompasses institutional self-evaluation in that the project partners seek feedback from participants and professional experts (course tutors).

In an ongoing process of curriculum development, a piloting cohort of three teachers estimate the potential of the course material to deliver the learning outcomes described in the curriculum. Moreover, they evaluate the feasibility and meaningfulness of course work and the core entries for the portfolio and the match of the criterion-oriented assessment scale with the closure input and the expected output.

First adaptations are made after analysing the data collected in the pilot.

Before, during, and after the first implementation of the course, all course participants are asked to describe their expectations, experience, and learning.

Final adaptations are made after analysing the data collected throughout the first course.

6. APPENDIX

6.1 ASSESSMENT SCALE FOR THE PORTFOLIO

This 4-point assessment scale is based upon a common understanding of the criteria we expect a portfolio to fulfil. It demonstrates what the expected learning outcomes are like at the *PROFICIENT LEVEL* (3.0), the *ADEQUATE LEVEL* (2.0), *BEGINNING LEVEL* (1.0), and the *EXPERT LEVEL* (4.0). If the *BEGINNING LEVEL* has not been reached by a performance, 0.0 is awarded.

The list of criteria addresses the essential indicators of Modules 1-3 (items 1-x) and 4 or 6 (items y-z).

Essential Indicators and items	Expert Level (4.0)	Proficient Level (3.0)	Adequate Level (2.0)	Beginning level (1.0)
Essential indicators of knowledge and skill are listed as criteria which break down into items, which are numbered.	In addition to the 3.0 performance, in-depth inferences and applications provide evidence of knowledge and skill that go beyond what was taught.	The 3.0 rubric descriptors describe the quality of portfolio entries that students are expected to produce to reach the level of proficiency. The portfolio entries are thus representations of the student's knowledge and skills acquired during the course.	At 2.0 level, there are no major errors or omissions regarding the expected knowledge and skills, but there may be errors or omissions in the complex processes of learning and application.	At 1.0 level, a partial understanding of some of the simpler details and processes of learning and application becomes visible in the portfolio entries.
In a self-assessment scenario, the grades mean the following:	I know and can do it (e.g., LS) well enough to make connections that were not taught.	I know and can do everything that was taught without making mistakes.	I know and can do all the easy parts, but I do not know and cannot do the more complex parts yet.	I know and can do some of what was taught.

In converting scores into grades, we use the following transfer rule by Stiggins, R., Arter, J., Chappuis, J., & Chappuis, S. (2006) published in "Classroom Assessment for Student Learning":

If the student's profile of ratings on the 4-point scale is:	The grade is:
At least half the ratings are 4s and the rest are 3s.	90-100% (midpoint 95%)
$\frac{2}{3}$ of the ratings are 3s or 4s and the rest are no lower than 2	80-89% (midpoint 85%)
At least 40% of the ratings are 3s or 4s and the other 60% are no lower than 2	70-79% (midpoint 75%)
At least half the ratings are 2 or above	60-69% (midpoint 65%)
More than half the ratings are 2 or below	50-59% (midpoint 55%)
Midpoints are used when combining rubric scores and other numerical scores (e.g., from active participation or course work) to determine a final grade.	

For example, a portfolio with 7 items to be assessed will be graded according to the following conversion scheme:

Number of items: 7	ratings	level	remaining ratings	level	no ratings in level(s)
90-100% (midpoint 95%) = top grade	4 ratings in	4.0	3 ratings in	3.0	2.0, 1.0, 0.0
80-89% (midpoint 85%)	5 ratings in	3.0 or 4.0	2 ratings in	2.0	1.0, 0.0
70-79% (midpoint 75%)	3 ratings in	3.0 or 4.0	4 ratings in	2.0	1.0, 0.0
60-69% (midpoint 65%)	4 ratings in	2.0	3 ratings in	1.0	0.0
50-59% (midpoint 55%) = lowest grade/fail	3 ratings in	2.0	4 ratings in	0.0 or 1.0	

6.2 CRITERION ORIENTED ASSESSMENT SCALE

Portfolio Assessment	4.0	3.0	2.0	1.0
<p>Formal aspects</p> <p>(1) Completeness</p> <p>(2) Organisation</p> <p>(3) Register, style & linguistic accuracy</p>	<p>(1) The portfolio includes all compulsory and optional elements.</p> <p>(2) The organisation makes the portfolio accessible and easy to read.</p> <p>(3) Register, style, and accuracy are correct throughout.</p>	<p>(1) The portfolio includes all compulsory and optional elements.</p> <p>(2) The organisation of the portfolio makes it accessible and easy to read.</p> <p>(3) Register, style, and accuracy are mostly correct.</p>	<p>(1) The portfolio includes all compulsory and most optional elements.</p> <p>(2) The organisation of the portfolio is not completely accessible and makes it difficult to understand.</p> <p>(3) Register, style, or accuracy are often inadequate.</p>	<p>(1) The portfolio lacks some compulsory or optional elements.</p> <p>(2) The portfolio lacks structure and is not accessible</p> <p>(3) Register, style, or accuracy are mostly inadequate</p>

<p>Sources of Learning</p> <p>(4) References relevant to learning outcomes</p> <p>(5) Experiences relevant to learning outcomes</p>	<p>(4) The portfolio adequately documents learning tied to appropriate academic literature and frameworks.</p> <p>(5) It adequately documents learning tied to several reflected experiences during the collaborative process based on a research diary.</p>	<p>(4) The portfolio documents learning tied to appropriate academic literature and frameworks mostly correctly.</p> <p>(5) It documents learning tied to some reflected experiences during the collaborative process based on a research diary.</p>	<p>(4) The portfolio documents learning tied to generally appropriate academic literature and frameworks.</p> <p>(5) It attempts to document learning tied to some reflected experiences during the collaborative process.</p>	<p>(4) The portfolio attempts to document learning tied to academic literature and frameworks.</p> <p>(5) It scarcely attempts to document learning tied to reflected experiences.</p>
--	--	--	--	--

<p>Integration of theory into practice (6) Knowledge & Skills</p> <p>(7) Application of Learning</p>	<p>(6) The portfolio entries demonstrate that the participant has acquired all the necessary knowledge and skills to plan LS effectively.</p> <p>(7) The portfolio entries provide evidence that the participant can implement and analyse LS as well as observed change in teaching and learning.</p>	<p>(6) The portfolio entries demonstrate that the participant has acquired all the necessary knowledge and skills to plan a well-structured LS.</p> <p>(7) The portfolio entries provide evidence that the participant can implement and analyse LS and reflect on possible change in teaching and learning.</p>	<p>(6) The portfolio entries demonstrate that the participant has acquired most of the necessary knowledge and skills to plan a mostly well-structured LS.</p> <p>(7) The portfolio entries provide evidence that the participant has implemented and analysed LS outcomes with an attempt to reflect on possible change in teaching and learning.</p>	<p>(6) The portfolio entries demonstrate that the participant has acquired enough knowledge and skills to plan a LS which may still lack structure.</p> <p>(7) The portfolio entries provide evidence that the participant has implemented and analysed LS outcomes but may require support in noticing necessary change measures.</p>
---	--	--	--	--