

## Result 3.2

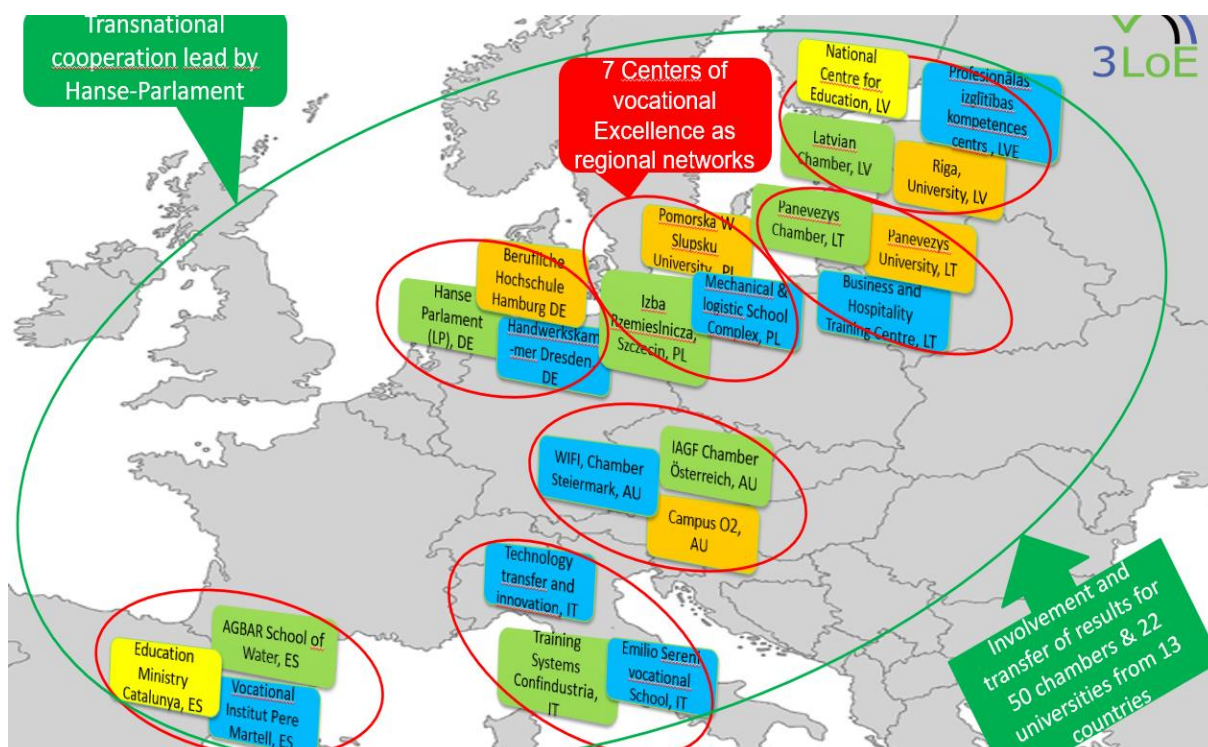
# Training program for teachers to conduct DVT



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## Partner



## Language

English

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## 1. Introduction

### 1.1 About the 3LOE project

Around 99% of all EU businesses are SMEs, creating up to 70% of all jobs. In general, SMEs have good growth prospects for the future and are particularly well equipped to solve environmental problems and to enhance the green economy. However, in most of the project countries, SMEs are confronted with a shortage of skilled workers and young entrepreneurs. This shortage of skilled workers is even more alarming taking into account that due to aging of current entrepreneurs, a large and growing number of companies will have to be handed over to the next generation. Furthermore, young specialists and entrepreneurs often lack the qualifications and skills needed in order to respond to contemporary developments in the fields of energy, climate and environmental protection. The following problems have been identified in SMEs working in the fields of green economy, energy and environmental protection:

- Blatant and growing shortage of skilled workers.
- Large qualification deficits, especially in the Green Economy.
- Loss of attractiveness and low qualification of school-based VET.
- Low rates of further training and insufficient orientation of offers to SME needs.
- Ageing of entrepreneurs and increasing shortage of young people (demographic change).
- Failure of business transfers and low rates of business start-ups.
- Low innovation rates and insufficient productivity.
- Not enough cooperation between universities and SMEs and a lack of teaching geared to SME needs.
- Comparably low internationalization of SMEs and vocational training providers.
- Lack of national level support for SMEs”.

To meet these challenges, work-based learning and new paths in vocational training must be provided through cooperation between educational institutions, economic chambers and SMEs. University graduates are often well-qualified in theory, but lack practical knowledge, skills and abilities that are crucial for SMEs. For this reason, VET reforms must also involve higher education, and should implement dual bachelor's degree programs that combine a bachelor's degree with vocational training and on-site work in companies.

In the 3LOE project, an innovative and complex project structure with 22 project partners from 7 countries as well as 60 associated partners from 13 countries was designed. In each country, centers of vocational excellence (COVEs) in Green Economy will be established, managed and their permanent continuation ensured. A transnational cooperation of the centers will be developed, extended to 60 education stakeholders from 13 countries and operated permanently in an institutionalized form. The centers will offer a wide range of dual education measures in vocational training, further education and higher education, that are being developed, tested and evaluated in the project. These educational measures on EQF levels 3-7 focus on Green Economy,

Digitalization and Entrepreneurship. Furthermore, vocational and educational consulting and innovation support for SMEs will be developed and implemented. In total, seven Train-the-Trainer programs will be developed and implemented permanently by the project partners. All results will be transferred to the 60 associated partners together with implementation advice.

The objectives and aimed outcomes of the 3LOE project can be summarized as following:

## **1. Foundation of a three-level Center in each project country**

1.1 Building the "Green Economy" skills alliance for qualifications in SMEs with educational and economic actors from the 7 project countries; development of information and cooperation tools.

1.2 Expansion of the skills alliance to the 60 associated partners from 13 countries, comprising chambers of commerce, SME associations, as well as universities of applied sciences/colleges.

1.3 Development, testing and evaluation of a curriculum and teaching materials for Train the Trainer courses for personnel and center management (vocational school-teachers, trainers in SMEs and lecturers in further and higher education institutions).

1.4 Evaluation of the construction and operation of the seven centers of Excellence and of the transnational cooperation.

1.5 Development of business and financing plans and ensuring the long-term continuation of the seven centres and transnational cooperation.

1.6 Development, consulting and introduction of political strategy program.

## **2. Implementation and realization vocational training**

2.1 Development and implementation of a tool for vocational and qualification counseling as well as a training for consultants and teachers to use the tool.

2.2 Implementation of the dual system, so that work-based learning is put into practice in the project countries.

Preparation and transfer of curricula and examination regulations for dual vocational training for different professions and implementations in Poland, Lithuania, Latvia and Spain.

Development, test and implementation Trainings for teachers to conduct dual vocational training as well as Training of trainers in SMEs.

2.3 Development political concept for the training and integration of young people with learning difficulties for young people with learning difficulties (EQF level 3).

Development, test and implementation of a dual vocational training "Specialist for Building Insulation".

2.4 Development, testing and evaluation of education programme, teaching materials and examination regulations for the provision of sector-specific qualifications already during the initial vocational training for stronger learners. Implementation in the dual system, so that work-based learning is put into practice in the project countries.

2.5 Development and implementation five-year technician training „Ecologic Solutions in Logistics”.

### **3. Implementation and realization of further vocational training**

3.1 Development and implementation of concepts and instruments for the management of continuing vocational training.

3.2 Development, test and implementation of a Train-the-Trainer program for teachers to conduct further training.

3.3 Development and implementation of a concept "SME-fair digitalization" as well as development, test and implementation of two train the trainer programs “Basic and advanced digital skills”.

3.4 Transfer and implementation of four further trainings Energy Saving and Renewable Energies.

3.5 Preparation, transfer and implementation of six further trainings in the Green Economy.

3.6 Development, testing and evaluation of different training programs and teaching material for owners, managers and qualified workers of SMEs (EQF level 5 and 6). The trainings are specifically tailored to SME needs and different qualification levels and combine the transfer of technical, professional and management know-how.

- Training Enterprise and Entrepreneurship in Green Economy
- Training Energy Service Manager
- Trainings vocational Master Carpenter and Electric
- Training Construction Technician
- Training Service Technician
- Training Sustainability in foodservice industry

3.7 Development of regulations for new continuing education occupational profiles with a focus on the green economy.

3.8 Development of an integration programme for the unemployed (EQF level 4) in order to be able to place the unemployed in permanent jobs through further training seminars and a further training qualification.

### **4. Implementation and realization of higher education**

4.1 Preparation and transfer of curricula, evaluation and examination regulations for two existing dual Bachelor degree programmes "Management of Renewable Building Energy Technology" and "Business Administration for SMEs”.

4.2 Development and beginning of implementation of new dual Bachelor degree programs

- Business Administration & Sustainable Management of SMEs
- Entrepreneurship and Innovation in Green Economy
- Logistics - Green Supply Chains



- Service technician

- Tutorial “Sustainable management Climate neutrality for companies”

4.3 Development, test and implementation of four study modules (EQF level 6) on SME management in the Green Economy sector, which will be carried out in the dual study system and integrated into existing Bachelor degree programmes.

4.4 Development and implementation of concept for innovation promotion Solutions for manageable R&D tasks of SMEs and conducting manageable R&D projects for SMEs-

4.5 Development, testing and implementation of Training program for university lecturers and SME advisors.

## **5. Dissemination, transfer and use of the project results**

5.1 Development of a concept and summary evaluation of the dissemination results of all partners

5.2 Transfer of all educational measures to 60 educational institutions in 13 countries and needs-oriented implementation consultations as well as realization of a bundle of measures for further dissemination of the project results.

5.3 Further dissemination activities such as presentations online, at third-party events, press releases and conferences.

5.4 Book with all results of the project and distribution via book trade.

For each of the three levels of educational measures there will be:

- Target-group-specific educational programs.
- Curricula, teaching materials, etc. developed in a leading role by the educational institutions of the respective level, whereby the educational institutions of the other levels (in particular universities) participate in an advisory and supportive manner.
- Representatives of the participant target groups involved in the development work.

All educational measures will be tested with the respective target groups under different national conditions in the countries, evaluated and completed on the basis of the evaluation results with application notes.

## **1.2 About the Training for teachers to conduct dual vocational training**

Within the framework of the 3 LOE project, vocational training was designed according to the dual system in all participating countries. The basis for this is the German dual system, which were transferred and adapted to the national conditions and specifically designed in the individual countries. The introduction of dual vocational training requires extensive preparations by the vocational schools and their teachers as well as by the companies and their trainers. For this purpose, appropriate train-the-trainer programs have been developed and implemented.

Project partner Tadeusz Tanski Mechanical and Logistics School Complex has taken over the development of the training for vocational schoolteachers. This vocational school has successfully introduced dual VET with the support of an EU project<sup>1</sup> from 2017 to 2020 and thus has relevant experience and know-how. In order to prepare the teachers for dual vocational training of the CoVEs, a special training program for teachers to conduct dual vocational training has been developed, tested and evaluated within the 3LoE project. In the following, the curriculum, the implementation report as well as the evaluation is summarised.

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<sup>1</sup> Hanse-Parlament, Establishment of two-stage industry competence centers of vocational education and training” (ICC4VET), 2017 - 2020



## 2. Curriculum for the Train the Trainer Program<sup>2</sup>

### 2.1 Objective of the training

The main objective of the training is to raise qualification of vocational schoolteachers, who have so far been training young people in school, to carry out dual vocational training with 70-75% in-company training and 25-30% in vocational school.

Dual vocational training is an important tool to ensure the generation of skilled workers in their own companies. The success of dual training depends on the competence and commitment of the vocational schoolteachers and trainers in the companies. Task for instructors is technically and pedagogically competent involve the youth in the operating and economic environment and to professionally qualify. Not only technical know-how at a high level, but also vocational qualifications are decisive for the quality of the education. Teachers of dual vocational training in the school play a key role.

Today, the challenges of successful education exceed the mere teaching of knowledge and skills more than ever before. Especially the cooperation with small craft enterprises is to emphasize personal and temporal commitment of teachers. Just as important are the educational requirements of the teachers. Because they are not only confronted with a heterogeneous level of education of the trainees but must also adjust to changed values and behaviors of young people. In order to implement and realize a dual system of vocational training it is critical, that exist in the school's teachers with appropriate educational qualifications. The realization of the course therefore aims to prepare for the understanding and introduction of dual vocational systems. Thus, teachers receive targeted competencies to vocational training for young people and are well prepared for their tasks as training partners in the dual system.

Participants in the course will be prepared to:

- independent planning and the training organization with trainees according to principles of dual vocational training,
- to prepare curricula and training regulations in dual vocational training,
- competent preparing trainees for the productive work-based learning and cooperating in the team,
- getting to know and adapting requirements and manners of the work to their possibility, the possessed knowledge and a skill,
- to correct announcing oneself with trainees,
- applying methods of the work developing the activity and the self-reliance of trainees,
- preparing and organize cooperation with companies and continuous exchange of experience during the entire training course,
- to do selection of tasks, forms and methods of the teaching supporting the further professional development,
- competent acquainting trainees with the organization in companies,
- motivating trainees to the knowledge exploitation and the ability in implementing innovative solutions on-the-fly.
- to teach educations the given profession according to program documentation being in force in the given profession,

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<sup>2</sup> Prepared by Zespół Szkół Mechanicznych i Logistycznych im. inż. Tadeusza T

- to shape appropriate attitudes towards the work and the process and products of the work,
- to formulate questions and directed problems to trainee into the bright, logical and understandable way,
- to organize and to conduct practical classes in accordance with applicable rules and provisions in the workplace,
- to show advantages of the profession by appealing e.g. to authority in the given profession, whether being published of public aspects in the given profession,
- to organize training positions in the own workroom,
- to use modern technical means in the own work and the teaching.

## 2.2 Duration of the training and Participants

The training usually lasts two to two and a half days. The duration is designed according to national conditions and the previous knowledge of the participants and should comprise at least one and a half days.

The training is dedicated for following type of participants:

- Vocational schoolteachers
- Within the framework of the project 37 participants (schoolteacher and project manager)

The course was conducted at a workshop in Vienna as well as stationary at the school for the practical training instructors and our teachers and employers.

## 2.3 Content of the training

MODUL	SUBJECT	LEARNING CONTENT
<b>I INITIATION</b>	<ul style="list-style-type: none"> <li>• Greetings</li> <li>• Objectives and execution of the training</li> <li>• Self-presentation of the participants</li> <li>• Determination of the participants' previous knowledge</li> </ul>	Introduction
<b>II SYSTEMS OF DUAL VOCA- TIONAL TRAINING</b>	<ul style="list-style-type: none"> <li>• Comprehensive presentation of dual vocational training</li> <li>• Advantages and disadvantages of dual vocational training</li> <li>• Tasks of the partners and cooperation</li> </ul>	Structures and interfaces of the VET system. Classification of the vocational training system in the German education system. Occupational training requirements and basic conditions of training.

**III  
CURRICULA  
AND TRAIN-  
ING REGULA-  
TIONS**

	<p>Personnel planning and training needs. Legal framework conditions of the education in particular vocational training act, handicraft regulations, youth work protection law. Selection of training occupations. Origin and list of officially recognized training occupations. Training opportunities in the company. Suitability for training. Personal and professional suitability, training obstacles. Administrative offenses and withdrawal of the training authorization. Advantages and benefits of dual vocational training. Importance of training for young people, the economy and society. Benefits and costs of training for the business. The dual system of vocational training: structure, responsibilities, tasks, control. Essential requirements for the education system: in particular equal opportunities, transparency, transparency, equivalence. Structure, functions, goals of training regulations. Eligibility criteria of the training center. Out-of-school training and network training. Tasks of the craft organizations (chamber, guild) in support of the training</p>
<ul style="list-style-type: none"> <li>• Framework curricula for the school education part</li> <li>• Training regulations for the in-company training part</li> <li>• Dovetailing of school-based and</li> </ul>	<ul style="list-style-type: none"> <li>○ Advantages and benefits of company training.</li> <li>○ Planning and decision making with regard to the operational training needs based on the law, collective agreements and operational framework.</li> <li>○ The structures of the VET system and its interfaces represent.</li> </ul>

**IV  
TRAINING  
COUNSEL-  
LING AND  
REGISTRA-  
TION**

**V  
COOPERA-  
TION WITH  
COMPANIES**

<p>in-company vocational training</p> <ul style="list-style-type: none"> <li>• Training locations: school, company and supra-company training workshop</li> <li>• Alternative forms of organization and implementation</li> </ul>	<ul style="list-style-type: none"> <li>○ Apprenticeships for the operation to select and justify.</li> <li>○ The qualification of the company for the training in the targeted professional training.</li> <li>○ Consider whether and to what extent training content through measures outside the training premises, in particular training in association, inter-company and external training can be taught.</li> <li>○ The possibilities of using preparatory to the professional training measures to assess.</li> <li>○ During operation match the responsibilities of the training participants, taking into account their functions and qualifications.</li> </ul>
<ul style="list-style-type: none"> <li>• Advice before starting the training and aptitude assessments</li> <li>• Registration and supervision of training contracts</li> <li>• Accompanying advice during the entire training and resolution of conflicts</li> <li>• Possible sanctions</li> </ul>	<ul style="list-style-type: none"> <li>○ Creating on the basis of training regulations a company training plan, which is geared particularly toward professional typical work and business processes.</li> <li>○ The possibilities for interactivity and participation to take account of employees' representations in VET,</li> <li>○ The need for cooperation to identify and in content and organization with the cooperation partners, in particular the vocational school.</li> <li>○ Criteria and procedures for selecting trainees to apply taking into account their diversity.</li> <li>○ The vocational training contract prepare and to cause the registration of the contract with the competent body.</li> <li>○ The possibilities to consider whether parts of the training can be carried out abroad.</li> </ul>
<ul style="list-style-type: none"> <li>• Recruitment of training companies</li> <li>• Training of trainers in companies</li> <li>• Helping to recruit young people</li> </ul>	<ul style="list-style-type: none"> <li>○ Creating professional project of training between the school and the enterprise adapted for needs of both sides.</li> </ul>

**VI  
IMPLEMENTATION OF  
THE TRAINING**

<ul style="list-style-type: none"> <li>• Cooperation and continuous exchange of experience during the entire training course</li> <li>• Consulting of companies</li> </ul>	<ul style="list-style-type: none"> <li>○ Creating the contract / agreements - formalized document of the cooperation among the enterprise and a vocational school, or between the enterprise, a vocational school and the pupil.</li> <li>○ Defining practice - course of practice performed by the pupil. Model disadvantaged areas: <ul style="list-style-type: none"> <li>• duties to do,</li> <li>• production area in which practice will take place, including tools and machines, which are supposed to be applied while undergoing practice,</li> <li>• particular needs or requirements associated with undergoing practice.</li> </ul> </li> <li>○ Monitoring of progress of the pupil - monitoring progress of pupils in the productivity and attitudes - different of pattern of reports.</li> <li>○ Introducing various possibilities of the further cooperation to the pupil after finishing practice.</li> </ul>
<ul style="list-style-type: none"> <li>• Shortening or extending the training period</li> <li>• Change of training company</li> <li>• Training network of several companies</li> <li>• Instruments of cooperation</li> </ul>	<ul style="list-style-type: none"> <li>○ Creating conditions conducive to learning and a motivating learning culture, to provide feedback.</li> <li>○ The trial period to organize, make and evaluate.</li> <li>○ Developing of the company training plan and the typical professional work and business processes company learning and work tasks and shape.</li> <li>○ Training methods and media target groups selected and situation-specific use.</li> <li>○ Apprentices to assist them in learning difficulties through individual design of training and learning advice to use training support aids if necessary and the possibility to extend the training period to examine.</li> <li>○ Trainees to make additional training opportunities, in particular in the form of additional qualifications, and the possibility of</li> </ul>

**VII  
ORGANISATION OF EXAMINATIONS**

- Examination regulations
- Intermediate tests
- Final examination
- Repetition of examinations
- Examination pedagogy

- shortening the length of training and to consider the premature admission to the final examination.
- To recognize the social and personal development of students to promote, problems and conflicts in good time and to work towards a solution.
- Services determine and evaluate performance appraisals evaluate third parties and examination results to lead assessment interviews, to draw conclusions for the further trainings.

- Apprentices on the contract or trade test preparation, taking into account the exam dates and the training to lead to a successful conclusion,
- For registration of trainees to provide for audits by the competent body and these draw attention to implementing relevant particularities,
- Contribute to the creation of a written testimony on the basis of performance appraisals.
- To inform trainees about occupational development paths and vocational training opportunities and advice.

**VIII  
PEDAGOGY**

- Vocational and work pedagogy
- Methods, instruments and experience

- Analysis of objectives contents, methods, principles and forms of organizational processes of educating and them psychological and social conditioning.
- Basic concepts of didactics, system structure teaching, the methodology of teaching, teaching centers and the evaluation of teaching results.
- Methodology of teaching in classes of the practical apprenticeship:
  - The process of teaching, conditions of its correct accomplishment, the awareness of the purpose, the concomitance principle, the competent labor



**IX  
COMPLETION**

	<p>organization, the joint responsibility of participants and the teaching staff,</p> <ul style="list-style-type: none"> <li>- Organizational forms, an educational system of graduates, legal documents governing the vocational training, job classification of vocational education.</li> <li>o Chosen teaching methods: the definition of the method, general selection criteria of teaching methods, methods simple and activating folded methods, methods of cases and situational methods.</li> <li>o Planning the teaching work: school curriculum, content of the program, professional characteristics of the graduate, content of the teaching, decomposition of material, structure of the lesson of the practical apprenticeship, cells of the lesson, detailed script of the lesson – analysis of timetables.</li> <li>o Analysis of school curricula.</li> <li>o Drawing up model summaries.</li> <li>o The control and the evaluation in the education.</li> </ul>
<ul style="list-style-type: none"> <li>• Materials for everyday use</li> <li>• Contacts for assistance</li> <li>• Feedback</li> </ul>	<p>Conclusions</p>

## 3. Conducting and evaluation of the training with project partners

### 3.1 Conducting<sup>3</sup>

The training for vocational schoolteachers was held on 19 and 20 May 2022 in Vienna with the project partners. 37 project managers and teachers from all project partners participated. The training was facilitated by Barbara Zakrzewska and Mateusz Weiland, Tadeusz Tanski Mechanical and Logistics School Complex. The following training programme was carried out.

<b>Thursday, May 19<sup>th</sup> 2022</b>		
<b>Part I: INITIATION</b>		
09:00 – 09:30	Welcome and introduction	PP5 ZSML
<b>Part II: SYSTEMS OF DUAL VOCATIONAL TRAINING</b>		
09:30 – 10:30	<p><b>Systems of dual vocational training</b></p> <p>System, essence, advantages and disadvantages of the dual vocational training.</p> <p>Preconditions for implementation of dual vocational training, duration and differentiations in vocational training, tasks of the partners</p> <p>Questions</p>	<p>PP1 HP</p> <p>All</p>
<b>10:30 – 11:00 Coffee break</b>		
11:00 – 11:30	The dual system in Poland	PP5 ZSML, Barbara Zakrzewska
11:30 – 13:00	<p>Work in 5 groups: AU, ES, IT, LT, LV</p> <p>Dual system in the project countries</p> <p>Legal conditions</p> <p>Regulations, rules, EQF Levels</p>	<p>Moderation: PP5 ZSML</p> <p>All</p>

<sup>3</sup> Prepared by Zespół Szkół Mechanicznych i Logistycznych im. inż. Tadeusza T

	<p>Duration of training and time shares for vocational schools and companies</p> <p>Possibilities and perspectives for further development and improvement or for the introduction of dual vocational training. Realizations during the project term</p>	
<b>13:00 – 14:00 Lunch at Ambassador Hotel</b>		
<b>Part III: IMPLEMENTATION, CURRICULA AND TRAINING COUNSELLING</b>		
14:00 – 16:00	<p>Framework curricula for dual vocational training in vocational schools. Training regulations for the in-company training. Organizational changes during the training.</p> <p>Intersection of school-based and in-company vocational training and alternative forms. Corporations: Schools, Enterprises, Chambers. Training Counselling.</p> <p>Mediation and conflict resolution in teaching</p> <p>Questions and Discussion</p>	<p>PP1 HP</p> <p>PP5 ZSML</p> <p>All</p>
<b>16:00 – 16:30 Coffee break</b>		
<b>Part IV: COOPERATION WITH UNIVERSITIES</b>		
16:30 – 17:30	<p>Model of cooperation between university and vocational school for smooth transmission of dual education</p> <p>Training of trainers in companies, ongoing training of teachers and training language teachers to teach a specialized foreign language through universities</p>	PP6 APS
17:30 – 18:00	Discussion and summary with general conclusions	<p>All</p> <p>Moderation: PP5 ZSML</p>

19:00 Dinner

<b>Friday, May 20<sup>th</sup> 2022</b>		
09:00 – 09:15	Welcome and introduction to day two	PP5 ZSML
<b>Part V: COOPERATION WITH COMPANIES</b>		
09:15 – 10:30	Tele-conference with employers from Poland	PP5 ZSML
<b>10:30 – 11:00 Coffee break</b>		
<b>Part VI: PEDAGOGY</b>		
11:00 – 12:00	Innovative teaching methods in school and entrepreneurship education.  Vocational and work pedagogy. Methods, instruments and experience.	PP5 ZSML
<b>Part VII: ORGANISATION OF EXAMINATIONS</b>		
12:00 – 13:00	Examination regulations and organisation  Short reports on examination procedures in AU, DE, ES, IT, LT, LV	PP5 ZSML  ALL
13:00 – 13:30	Discussion and wrap up of the training  Evaluation	PP5 ZSML  PP1 HP
<b>13:30 – 14:30 Lunch and farewell</b>		
<b>14:30 – 16:30 Bilateral consultations with individual 3LOE partners</b>		

## 3.2 Evaluation Concept<sup>4</sup>

### 3.21 Introduction

<sup>4</sup> Prepared by Hanse Parliament.

The evaluation concept is based on best practices from evaluations of the Satakunta University of Applied Sciences, compiled by Dr Kari Lilja and Dr Sirpa Sandelin, Innovative Entrepreneurs and Innovation Support for SMEs: Knowledge Alliance “Human Resources and Organizational Development”, 2020

Evaluating the training, teaching and learning has been an emerging issue in the 1980's when it was actively researched within several disciplines like education, pedagogics, psychology and organizational sciences. During the 1990's the enthusiasm flagged, but the interest woke up again in parallel with the waves of refugees and immigrants arriving to the Europe. The needs to include newcomers to the hosting society, to teach local culture, habits and language, and to train professional skills to comply with the local requirements have highlighted the importance of developing new teaching and training methods. These new methods and tools in teaching and training should be compatible with the requirements set by cultural diversity of both the refugees and immigrants, and the societies more or less voluntary receiving the incomers.

Furthermore, during the past two decades the western countries have met - in addition to enormous flood of settlers - another phenomenon that challenges the education system: The post-war baby boom generation reaches age of retirement. This has two consequences, both requiring the answers from school systems. Firstly, the western countries should have a capability and capacity to educate and train more and more nursing personnel to cover both the vacuum left by those retiring, and to answer to the needs of ageing population. Secondly, these countries should be capable to renew their education systems to be able to satisfy the needs of business, to be able to train skilled labor and to be able to educate more persons that are both capable and willing to create their career as entrepreneurs and to continue the work of retiring entrepreneurs. If this fails, the consequences for European economy might be fatal or even disastrous.

This challenges not only schools and universities or teachers and trainees, but also those developing the courses and teaching and training methods used in the courses. Evaluating the learning of trainees, used methods and the impact of these methods on the learning would help teachers, designers and analysts to improve the methods.

### 3.22 Goals

As a rule, the evaluation has the following goals:

1. It has to provide objectified knowledge about the progress (quantity and quality) of processes.
2. It serves the control of such processes and helps capturing the strong and the weak points. Therefore, it is an instrument of quality assurance.
3. It serves the legitimization. In other words, a successful evaluation is evidence of competence of the person responsible for the process being evaluated.
4. Transparency, in order to make a dialogue possible.

In order to achieve these goals, the evaluation was performed in a process-related and summative manner: process-related (also formative, development-related) in order to evaluate the quality of the project progress and if necessary to make changes. The summative evaluation or evaluation of results serves the evaluation of the specified objectives within the framework of the project, final evaluation of impact and efficiency of the project lecturers management, of cooperation and transfer.

The aims and targets of the evaluation are context dependent issues. Thus, in ideal world, the courses, the methods used in the courses and the means to evaluate the outcome of the course, the learning of trainees and the efficacy and success of the methods should be designed together so that the whole course is seen as main process inside which the training and evaluation are parallel subprocesses. This would be the best way to ensure that exactly those goals set to this unique program are measured during the evaluation. In this case “Train the Trainer” -training program has been planned parallel with the planning of the evaluation.

### 3.23 Education Program

Train the Trainer Program for instructors of vocational trainings. The aim is

- to constantly provide a sufficient number of qualified teachers who are able to conduct dual initial and vocational training in an appropriate manner.
- Teachers in higher education to instruct, so that in the future they will implement the Train the Trainer program on a permanent basis in order to permanently provide a sufficient number of qualified teachers for vocational dual education.

This Train the Trainer program has been developed to respond to the challenges faced by those who introduce and sustain a high level of initial dual vocational training. At the same time, teachers should be able to accompany, advise and support companies as training partners in dual vocational education. Skills for the high-quality implementation of dual vocational training, the use of specific tools, organizational and procedural processes as well as communication and cooperation skills are trained. The focus is also on conveying best practices, sharing experiences and practicing in role plays and group work.

The target groups of the program are director and teachers of vocational schools. After testing, evaluation and finalization of the training program, it will be transferred to twenty colleges and universities from all Baltic Sea countries, which will carry out the training permanently in the future. The participation of university teachers in the training program will qualify them to implement the training program at a high-quality level.

The planned duration of course is 2 days, 8 lessons per day. The planned duration of course may vary depending to the educational level and purposes. Each lesson lasts 45 minutes. Methods used in lessons will be lectures, teaching talks, working in small groups, case studies and examples from real world. Material used during the teaching consists of e.g. information material (basics & backgrounds, thematic introductions etc.), presentations, questionnaires, question guides, checklists, analysis results, good practice examples and so on. Course should contain at least following issues:

1. Basics/overview of essential tasks and contents of dual vocational training.
2. Getting to know the framework curricula for the school education part and the training regulations for the in-company training part
3. Training counselling and cooperation with companies
4. How is the introduction of dual vocational education prepared and how is it implemented?
5. Clarification and practice of specific topics in vocational and work pedagogy as well as Methods, instruments and experience.



6. Organization of examinations: Examination regulations, intermediate tests, final examination, repetition of examinations and examination pedagogy.

### 3.24 Train the Trainer

Evaluation of courses including gained results and found problems is essential to be able to develop further the existing training programs as well as to consider the experiences gathered from these programs when building new curricula. The evaluation process of each course has been designed hand in hand with the course itself. When evaluating courses, the goals and real results should be compared. This is not always possible or fair and just. The evaluation should be targeted only to such measurable issues on which the designer, teacher, facilitator or student himself has an impact. Evaluating the impacts of training programs against the presented main goals would require large societal research including the recording of the initial situation before

#### Common steps of evaluation



Figure 1: Evaluation process

starting the programs and the long-term follow-up research in which the conducted interventions and actions (In this case new forms of training and education) and their impacts on change of variables is followed). The final conclusions can be drawn just after some years or after decades. In this project this is not possible and the whole evaluation process must be rethought and simplified.

The most important variables, on point of view of achieving the goals set, are the motivation of student, the support he gets, the relevance of issues in curricula, the quality material and training and the ability of facilities to support training and learning. Although most of the variables presented above are so called soft variables, which can't be measured directly by targeting the measurement tool to some point or phase in the process, they can be assessed indirectly by assessing the feelings and comments of participants and other stakeholders.

The assessment of feelings and comments can be done with many alternative tools, e.g. surveys, interviews and follow-up studies in which a researcher follows lessons and training in practice and observes the students and teachers collecting comments and registering e.g. the atmosphere in the classrooms and during the training in the workplaces.

In this case the experiences and comments of participants will be surveyed by simple questionnaire with questions approaching the common impressions, the applicability of facilities, the relevancy and importance of each issue and the experienced quality of each lesson and material used.

### 3.25 Evaluation concept

The objective of the evaluation is to determine whether the goals of the program will be achieved in the implementations evaluated, and how the program has impact on student's career and opportunities.

The type of the evaluation follows standard course evaluation methods, i.e. formative, process and outcome evaluation, the latter only partial:

- The formative evaluation will provide feedback to the curriculum designers, developers and implementers to ensure that designed and implemented courses really meets the needs of the intended audience, i.e. assure or improve the quality of program. Formative evaluation and analyses will answer to the following questions:
  - Were the goals and objectives suitable for the audience?
  - Were the training methods and course materials appropriate for the audience?
  - Should the program or some part of it be developed further and if, how?
  - Furthermore, formative evaluation also provides information that benefits the development of the program, facilities and timing.
- The process evaluation will provide information concerning the training and lectures, like asked questions and verbal feedbacks.
  - Process evaluation answers the question “What did you do?”
  - It focuses on procedures and actions used to produce results.
  - Process evaluation takes place during the training delivery and at the end of the training.
  - The co-organizer (Responsible for the course)
    - monitors the training,
    - describes the training process as a whole, and
    - records the findings into the written report.

- The outcome evaluation tries to find out how the knowledge, attitudes, and behaviors of the audience developed. It takes a long time to find out the outcomes of the education and training, so in this stage only the main topics participants are able to do at the end of training, will be assessed.

### 3.26 The evaluation process

1. Semi-structured questionnaires will be created for the participants (Appendix A)
2. Time for the survey (approx. 15 minutes) will be allocated in the end of the course
3. In the beginning of the course the co-organizer (Responsible for the course) will inform participants about the evaluation and its importance for further development actions
4. The co-organizer (Responsible for the course) distributes the questionnaires to the participants to be filled in before leaving the course. The purposes of the questionnaire and how the data will be used should be explained clearly to the participants. This will help to improve the response rate and encourage them to make comments that can be useful to improve future programs.
5. The participants complete the questionnaires and return them to the co-organizer.
6. A questionnaire will be created for the lectures of the Train the Trainer Seminar (see Appendix B). Lectures complete this survey form directly after the seminar.
7. The co-organizer collects the questionnaires from the participants and from the lectures and deliver them to the evaluator.
8. The evaluator compiles all feedbacks and summarizes written analysis on the evaluations and developed recommendations for curriculum and future use.

The evaluation approach will be based on a combination of qualitative and quantitative methods. The Microsoft Excel package will be used to transcribe the feedbacks and interviews. Open questions will be categorized, and qualitative analysis of the groups will be done.

The final evaluation report will discuss the following issues:

- Did the curriculum reach the targets?
- How well was the knowledge creation and sharing realized?
- Did the participants assimilate knowledge and tools?
- Was the venue and equipment appropriate for the training course?
- What kind of further development will be needed, if any?

The schedule of the evaluation should be matched to the phases of the curriculum. There is no sense to evaluate the course before the students have a true and fair view

of the course, its phases and contents. Thus, the survey will be conducted in the end of the course.

### 3.27 Questionnaire for participants of the Train the Trainer course “Conducting dual initial vocational training”

#### TRAINING EVALUATION FORM FOR PARTICIPANTS

Dear Participant,

Please fill out all the boxes and note any observations you made during the training. Your answers provide valuable information for raising the level and efficiency of the training, and attractiveness of further trainings. The questionnaire is anonymous. To fill out it takes you only a few minutes.

I. Please mark with a cross where applicable

Gender	Female		Male	
Age	<50		>50	
Workplace	Education		Business	

II. Please mark with a cross where applicable – only one answer possible

II. Evaluation of the usefulness of training for the participant				
		Yes (4-5)	Partly (3-4)	No (1-2)
1.	Did the training meet your expectations?			
2.	Did the training meet the set goals?			
3.	Were the topics for the training well chosen?			
4.	Did the training improve your didactic competence and skills?			

5.	Did the training improve your knowledge from energy technical aspects?			
6.	Did you acquire enough abilities to work with students or trainees?			
7.	Will the skills acquired during the training be useful in your daily work?			
8.	Is it possible to implement this training in your country?			
9.	Is it possible to use full program of the training in your country?			

III. Please mark with a cross where applicable – only one answer possible

III		Evaluation of the teachers and the organization of the training				
		Excellent (5)	Good (4)	Fair (3)	Poor (2)	Very poor (1)
	<b>How do you evaluate...</b>					
1.	... the professional knowledge of teachers?					
2.	... communication of the teachers with the group?					
3.	... proportion of practical examples in the training?					

4.	...theory and practice ratio?					
5.	... work and learning organization?					
6.	...the presented material?					
7.	... working environment (tools, equipment, etc.)?					
8.	... the organization of practical exercises?					
9.	... available time for individual questions?					
10.	... overall atmosphere of the training?					
11.	<p>What would you suggest doing better or change in the training program or organization of the training in the future?</p> <p>.....</p> <p>.....</p> <p>.....</p>					
12.	<p>Any other comments?</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>					

**Thank you for fulfilling the evaluation sheet.  
It will be helpful to improve the training.**

### 3.28 Questionnaire for lectures of the Train the Trainer course “Conducting dual initial vocational training”

TRAINING EVALUATION FORM FOR TRAINERS

Date and location (date and place) .....

Organize by (name of organization) .....



Name of trainer .....

Was time length appropriate for the training? Yes/no? Can you please give any constructive and helpful comments to make improvements?

.....  
.....  
.....  
.....

How do you evaluate the trainees learning, activity, participation?

.....  
.....  
.....  
.....

What else would you suggest?

.....  
.....  
.....

Other remarks

.....  
.....  
.....

**Thank you for fulfilling the evaluation sheet.  
It will be helpful to improve the training.**

## 3.3 Evaluation Report<sup>5</sup>

### 3.31 Introduction

In the following, the results of the evaluation of the “training for teachers to conduct dual vocational training” developed by PP5 ZSML are presented. The training program was tested on May 18<sup>th</sup>-19<sup>th</sup>, 2022 in Vienna.

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<sup>5</sup> Prepared by Hanse-Parlament

In order to evaluate the training program, an online survey (Attachment I) was created that was shared with the training participants at the end of the training. 20 people responded to the feedback survey.

### 3.32 Results

#### 1. General Assessment

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	TOTAL	WEIGHTED AVERAGE
The overall training organisation was good	70.00% 14	30.00% 6	0.00% 0	0.00% 0	0.00% 0	20	1.30
The facilities were suitable for the training	50.00% 10	35.00% 7	10.00% 2	5.00% 1	0.00% 0	20	1.70
The duration and the schedule for the training were appropriate	45.00% 9	40.00% 8	15.00% 3	0.00% 0	0.00% 0	20	1.70
The training met my expectations	35.00% 7	60.00% 12	5.00% 1	0.00% 0	0.00% 0	20	1.70
The overall atmosphere of the training was encouraging	90.00% 18	10.00% 2	0.00% 0	0.00% 0	0.00% 0	20	1.10
The training was useful for my work	35.00% 7	60.00% 12	5.00% 1	0.00% 0	0.00% 0	20	1.70
I would recommend the training	31.58% 6	68.42% 13	0.00% 0	0.00% 0	0.00% 0	19	1.68

#	COMMENTS	DATE
1	The sessions held at the Ambassador, cooped up in a small room with the windows closed due to the road works, made me feel a bit uneasy about the Covid situation.	5/24/2022 7:22 PM
2	It has been more a best practice presentation than a train-the-trainers aimed at transfer tools and methods.	5/20/2022 12:39 PM

The overall organisation of the training was mostly assessed well. The facilities could have been better, i.e. a bigger room with more air circulation. The fact that there was construction work going on outside was unfortunate. Mostly the training expectations of the participants were met and it was useful for the participants so that they would recommend the training. Especially the encouraging atmosphere was rated very high. In the comments it was noted that the training seemed more like a best practice presentation rather than a train-the-trainer with transfer of tools and methods.

## 2. Content and Methods

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	TOTAL	WEIGHTED AVERAGE
The training content met my expectations	25.00% 5	70.00% 14	5.00% 1	0.00% 0	0.00% 0	20	1.80
The topics and addressed issues were relevant for me	40.00% 8	55.00% 11	5.00% 1	0.00% 0	0.00% 0	20	1.65
The content was well organised and easy to follow	60.00% 12	35.00% 7	5.00% 1	0.00% 0	0.00% 0	20	1.45
The training material was helpful	35.00% 7	50.00% 10	15.00% 3	0.00% 0	0.00% 0	20	1.80
I gained valuable knowledge from lessons and examples presented during the training	35.00% 7	65.00% 13	0.00% 0	0.00% 0	0.00% 0	20	1.65
The training experience will be useful for my future work	35.00% 7	55.00% 11	10.00% 2	0.00% 0	0.00% 0	20	1.75
It would be useful to implement such a training in my institution	25.00% 5	50.00% 10	25.00% 5	0.00% 0	0.00% 0	20	2.00

#	COMMENTS	DATE
1	Thank you very much for organizers and presenters. Shared experience is very useful, I will share it with my colleagues in my institution.	5/25/2022 9:34 AM
2	I commented above.	5/20/2022 12:39 PM

The content of the training was generally assessed positively. The topics and issues addressed were relevant for the participants and the presentation of the content was rated well.

## 3. Trainers

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	TOTAL	WEIGHTED AVERAGE
The trainers were well qualified for the training	55.00% 11	45.00% 9	0.00% 0	0.00% 0	0.00% 0	20	1.45
The trainers were communicative, friendly and approachable	80.00% 16	20.00% 4	0.00% 0	0.00% 0	0.00% 0	20	1.20
The trainers responded well to questions and queries from the participants	80.00% 16	20.00% 4	0.00% 0	0.00% 0	0.00% 0	20	1.20

The feedback on the trainers was very positive. All participants agree, most of them strongly agree that the trainers were communicative, friendly and approachable and responded well to questions and queries from the participants.

#### 4. Additional comments

#	RESPONSES	DATE
1	I think the way Marek's presentation was cut short by two of the organisers was rude, inappropriate and unfair.	5/24/2022 7:22 PM
2	Useful, informative and well organised, as well as encouraging environment set.	5/24/2022 1:08 PM
3	Thank you for zoom sessions, they made the training more interactive and useful	5/20/2022 12:34 PM

The participants gave mixed additional comments. It was criticised that one presentation had to be cut short. Other comments highlighted the usefulness of interactive zoom sessions as part of the training as well as the good organisation and encouraging environment.

#### 5. Suggestions for future trainings

#	RESPONSES	DATE
1	Might be more experience exchange - other partners presenting	5/24/2022 1:08 PM
2	You should take into account that people get tired after 5-6 hours of sitting in one place. There was no time to do the actual networking or, frankly, sightsee. Therefore, some partners, sadly, left out some trainings.	5/20/2022 12:40 PM
3	Better align the participants from the very beginning about the specific aims and objectives	5/20/2022 12:39 PM

A concrete suggestion was to facilitate more experience exchange with more partner presentations. Specific aims and objectives of the training should be made clear from the very beginning of the training. Lastly, the duration of 5-6 hours in a row and more time for networking and free time should be re-considered.

### 3.33 Attachment

## 3LOE Train-the-Trainer "Initial dual vocational training" Evaluation Survey

Dear Train-the-Trainer participant,

Thank you for taking time to fill out this feedback form on the Train-the-Trainer "For teachers to conduct dual vocational training", that was developed and tested as part of the Erasmus+ project "3LOE". This survey is anonymous and will take approximately 5-10 minutes.

#### 1. General Assessment

	strongly agree	agree	Neither agree nor disagree	disagree	strongly disagree
The overall training organisation was good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The facilities were suitable for the training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The duration and the schedule for the training were appropriate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The training met my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The overall atmosphere of the training was encouraging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The training was useful for my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend the training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

#### 2. Content and methods

	strongly agree	agree	Neither agree nor disagree	disagree	strongly disagree
The training content met my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The topics and addressed issues were relevant for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The content was well organised and easy to follow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The training material was helpful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I gained valuable knowledge from lessons and examples presented during the training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The training experience will be useful for my future work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It would be useful to implement such a training in my institution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

3. Trainers

	strongly agree	agree	Neither agree nor disagree	disagree	strongly disagree
The trainers were well qualified for the training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The trainers were communicative, friendly and approachable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The trainers responded well to questions and queries from the participants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

4. Do you have any additional comments about the training?

5. What would you suggest doing better or changing in the training ?

Thank you for your feedback!