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REPORT

Aligning work-based learning curricula in VET programmes of logistics through cross-border WBL in Latvia and Finland

Project partners:

Valsts izglītības satura centrs

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Project consortium:

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The aim of FinLat-Logic project is to align parts of work-based learning curricula of VET programs of logistics between Latvia and Finland and use work-based learning as one of the tools for aligning.

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INTRODUCTION

This report has been developed as the result of Interreg Central Baltic Program project "FinLat-Logic – Aligning work-based learning curricula in VET programmes of logistics through cross-border WBL in Latvia and Finland" implemented from June 2020 till December 2022 by consortium of three partners – National Centre for Education and Liepaja State Technical School from Latvia, and Vocational School Winnova from Finland.

The sector of logistics was chosen because it has both a local and an international dimension. As the Baltic region is increasing its role in transfer of international cargos (e.g. between Asia and Europe), we can expect increasing employment in the sector of logistics. Similarly, we can expect higher regional integration of the logistics companies and their labour force. Thus, it would be natural for logistics students to study in international environment and it would be of help to have uniform standards in the field of logistics (and therefore VET programs in logistics) across countries.

Logistics is vital for the modern life, however we tend to remember it only in the moments when logistic networks are seriously disrupted like with the global pandemic of Covid-19 and the Russian invasion of Ukraine.

The logistics industry is constantly evolving. The number of transport logistics companies, despite the intense competition, continues to grow. Taking into account the development of technology, logistics companies are looking for and implementing new systems for organizing transport in order to make daily work more efficient, increase company profits and leave less impact on nature.

No matter how great the damage caused to logistic industry by pandemic was, it also was a major saviour for companies during that period as many businesses to ensure efficiency in their performance optimized their operations by using information technologies to monitor machines remotely and artificial intelligence to help in forecasting and management of different processes in business.

Most companies have realized that in nearest future the previous supply chains will have to change – they have to become more efficacious, closer to home, with shorter delivery time.

Challenges of the working environment and the logistic industry itself in the next five to ten years will be tremendous and there is a need for young people who will connect their future with this industry and will be among creators of new logistics systems.

The old order no longer gives the desired results and most companies in the world have to create a completely new logistics systems that requires young educated professionals, with qualities that will help to successfully build a career in the logistics industry and who will be able to create and implement innovative solutions, orient themselves in the latest technologies. Thinking outside the box, good knowledge of foreign languages, digital competence, ability to quickly adapt, work in dynamically changing conditions, make decisive decisions and implement unprecedented solutions in the industry – these are qualities the labour market expects from future professionals. Due to these changes logistic industry will require even more than before young and educated specialists with a broad view and non-standard thinking because more and more processes in this field will be automated, robotized, controlled through applications. With the development of digital services, a completely new aspect of business is also emerging in logistics - digital logistics.

I FINLAT-LOGIC PROJECT

Internationalisation is one of the prevalent trends in today's society, having an impact on all citizens. Information across borders and networks with other countries have become natural elements of our daily life. Vocational education and training is not an exception. International cooperation, mobility and joint qualifications are encouraged in all European Union VET systems. VET internationalisation aims at supporting joint developments in Europe and strengthens VET quality, relevance and attractiveness.

Mobility in vocational education and training is a constituent part of internationalization process which strives to provide students with personal skills and vocational skills, enhance their competitiveness and employability thus improving the quality of their working life and life in general.

It is very important that young people during their mobility period are able to gain international experience and intercultural competence which will be important in the job market of the future. Internship also provides global outlooks on the professions and

competences required in an increasingly internationalised labour market and multicultural society.

Mobility is also one of the tools towards VET program alignment and development of joint qualifications. The work based environment is the best place where students' skills and competences can be demonstrated and evaluated and feedback provided by employers is essential for curriculum alignment with labour market needs. Work based learning between countries also allows to align VET curricula between VET providers.

The aim of "FinLat-Logic" was to align parts of work-based learning (WBL) curricula of VET programs of logistics between Latvia and Finland. It was also planned to use WBL as the tool for curriculum alignment through VET student exchange and involvement of Finnish and Latvian logistic companies.

The activity plan included the following steps: 1) initial comparing of VET logistics and WBL programs between the 2 countries; matching trainees and host companies; 2) implementing study visits of VET staff; 3) cross-border WBL of logistics students; monitoring of the workplace learning and feedbacks from logistics companies and trainees; 4) finalizing alignment of WBL programs in logistics.

Unfortunately, it was impossible to carry out the initial approach as "FinLat-Logic" project implementation was greatly affected by the Covid 19 pandemic, and there was a point when the consortium had to take a decision whether to quit or continue the project. Thanks to the perseverance and commitment of the partners it was possible to reshape the initial plans and still achieve the project goals.

Several scenarios were offered including virtual and hybrid mobility, but it turned out that companies did not have resources and experience in organizing such mobility. Another option stemmed from comparative analyses which had resulted with identification of 4 program modules/units with similar content and learning outcomes. Based on that the consortium introduced a new project output – digital content for 4 program modules.

II LOGISTICS CURRICULUM ALIGNMENT

FinLat – Logic project aimed at finding similarities between Latvian and Finnish vocational education curricula in logistics focusing on work-based learning in order to provide a possibility for a WBL student exchange between the two countries, and thus,

create a starting point for a more extensive alignment of the VET qualifications in the two countries.

The task was to align parts of WBL programs in logistics between Finland and Latvia corresponding to not less than 10 % (Latvia) of the VET program in logistics and not less than 10 credit points (Finland).

Comparative analysis of WBL curriculum

Each partner delegated several curriculum experts for the working group. The experts were experienced in teaching, logistics curriculum and teaching learning material development. The tasks of the working group were – agreeing of common definition of program alignment; agreeing on steps and approach, working on curriculum analysis and preparing Comparative analysis report.

Before starting the work on comparative analysis partners examined available resources to have more insight into program alignment. Several definitions were found, but none of them fully matched the project needs. Additionally partners offered their own working definitions out of which the agreement was reached on the following one: *Curriculum alignment in VET is the process in which educators between two or more education providers, on the basis of two or more curricula of these providers by comparing and evaluating identify differences and similarities in structure, topics and content. Alignment is aimed at ensuring coherence and consistency between intended learning outcomes, teaching methods, assessment tasks, and learning activities to address the changing education needs of students and the workforce.*

The agreed approach included review of VET systems in both countries, comparison of Logistic standards and programs in VET, identification of similarities and selection of possible modules/units for alignment.

As a preparation for creating the future aligned WBL program a SWOT analysis was conducted by both participating sides to see the common strengths and weaknesses as well as opportunities and threats. The SWOT results regarding resources and experience are listed below.

Strengths:

- teachers are high skilled professionals;
- close contacts with the logistic companies in the region;

- logistic employees are demanded by companies;
- partners have previous international project experience.

Weaknesses:

- lack of virtual learning environment;
- shortage of vocational teachers and trainers;
- insufficient knowledge of English language among curriculum specialists;
- low interest from companies to be engaged.

Opportunities:

- attractive training field;
- good work based learning opportunities;
- increase the attractiveness of the profession through the "FinLat – Logic" project;
- advantageous geographical location;
- multicultural and international profession.

Threats:

- Covid19 affects WBL opportunities;
- low motivation of students to participate in mobility;
- high workload of teachers hinders involvement in project activities;
- low number of students can participate to - international WBL mobility as students are under the legal age.

Comparing VET Systems in Latvia and Finland

Vocational education in Latvia and Finland bear similarities as well as differences. In last decade both countries have implemented extensive reforms in VET to improve its quality and attractiveness, to align the VET curriculum with labour market needs and to facilitate employability of young people and thus strengthen the economic and social development of the country.

The review included latest VET reforms, co-operation with working life, qualifications and studies in vocational education and training, work based learning, and international cooperation.

In **Latvia** the task of vocational education is to prepare the learner for work in a specific profession and to promote personal development, to promote knowledge, skills and attitudes that lead to vocational qualification and support competitiveness in changing socioeconomic conditions, to create motivation for professional development and continuing training, and prepare a learner to continue education at a higher vocational education level.

In **Finland** vocational education and training is designed both for young people without upper secondary qualifications and for adults already in work life. VET provides students with strong vocational competence. Another key principle is continuous competence development. Vocational qualifications can be completed in school-based VET or as competence-based qualifications. VET is organised mainly in institutions (on-the-job learning included) or as apprenticeship training. VET provides skills for both life and work. A vocational qualification gives general eligibility for university of applied science and university studies.

VET Reforms

In **Latvia** VET reform is being implemented since 2015. Amendments to the Vocational Education Law, which entered into force on April 1, 2022, continue reforms. The changes bring the existing system of vocational qualifications closer to European practice, provide greater opportunities for industries to be involved in the awarding of professional qualifications, specify the typology of educational institutions, promote lifelong educational opportunities and the development of the national economy.

Reform of VET in **Finland** was completed in 2018. With the latest reform, the number of qualifications was decreased, and qualification content was broadened to support individual learning pathways and to enable more rapid responses to the changing competence needs in working life.

Co-operation with working life

In **Latvia** social dialogue and strategic cooperation is arranged through the following institutions:

- the National Tripartite Sub-council for Cooperation in Vocational Education and Employment reviews policy proposals and drafts legal norms for vocational

education, human resource development and employment; it evaluates and proposes changes in management, funding and implementation of vocational education; it endorses occupational standards; it endorses annual student enrolment plans prepared by sectoral expert councils.

- 12 sectoral expert councils propose solutions for long-term human resources development in their respective sectors and ensure that vocational education provision is in line with labour market needs. This includes participation in development of sectoral qualifications frameworks (SQFs), occupational standards, education programmes, quality assessment procedures, work placements, and apprenticeship-type schemes; make proposals for VET curricula, nominate experts for accreditation of VET schools and curricula.
- Collegial advisory bodies (conventions) exist in each vocational education institution. Employers or representatives of employers' organisations, representatives from local government, and representatives from supervising ministries form these conventions. They help shape the development strategy of the education institution, and they contribute to its cooperation with local enterprises, to ensure students' work placements outside school and apprenticeship-type scheme opportunities.

In **Finland**, close cooperation with the working life at national, regional and education provider level is a significant part of the quality assurance of VET. Working life representatives participate in the anticipation of learning and education needs and the development of vocational qualifications as well as the preparation of plans for the implementation of education providers' competence assessments. They also take part in preparing students' personal competence development plans, implementing education at workplace and assessing competence demonstrations. Moreover, the feedback collected from working life is part of the VET funding system, providing information also for developing quality.

Working life committees play a key role in the quality assurance of VET. They participate in ensuring the quality of the implementation of competence demonstrations and competence assessment as well as developing the VET qualifications´ structure and qualification requirements. They also process rectification requests concerning the assessment of students' competence.

Qualifications and studies in vocational education and training

In **Latvia** the content of vocational education programmes is defined by State Vocational Education Standards. This includes strategic aims, basic principles, and mandatory content, ratio of theory and practice, and evaluation procedures. Vocational education providers also ensure that specific skills and competences required in the occupational standards are included in the programmes they offer.

Vocational education combines education and practical training (50-65% of curricula depending on the type of programme) at school and enterprises. Vocational education at secondary level can be implemented also as an apprenticeship type scheme (nationally called "work-based learning") with flexible curricula taking place alternately at school and in enterprise.

Occupational standards are endorsed by the National Tripartite Sub-council for Cooperation in Vocational Education and Employment, approved by the government, and reviewed at least once every five years. Qualification exams that consist of theoretical and practical parts are designed in line with both occupational and State education standards. Representatives from relevant sectoral organisations participate in the examination process. To acquire a qualification, VET students have to take a State qualification exam at the end of the education programme.

In **Finland** vocational qualifications are independent of the way the vocational skills have been acquired. As long as the individual's competences meet the national qualification requirements, they can be acquired in different learning environments and ways, at different times. Students demonstrate their skills in competence demonstrations at practical work.

A personal competence development plan is drawn up for each student. The plan is drawn up by a teacher or a guidance counsellor together with the student and, when applicable, representative of working life.

The plan charts and recognises the skills previously acquired by the student and outlines what kind of competences the student needs and how they will be acquired in different learning environments. Students may have obtained relevant skills from working life, another school, international study, work placement periods, family and leisure activities

or through the media. Previous learning is recognised and only the missing skills are acquired.

Guided and goal-oriented studying at the workplace takes place in versatile learning environments both at home and abroad and is based on practical work tasks. Educational institutions, workplaces, workshops, worksites of educational institutions and virtual learning environments reinforce each other. The education provider is responsible for the education but the student will also be appointed a workplace trainer who must have the required competences for the task.

Work based learning

In **Latvia** work based learning as an educational approach in vocational education was introduced in 2013 in the form of pilot projects, and in 2016 it was adopted by the regulation of the Cabinet of Ministers. Today it is a high level education and employment policy priority in Latvia. WBL means that a student of a vocational school during the programme of WBL acquires theory and practice of vocational content of education programme in an education institution and in a company according to the individual plan of the appropriate education programme. Learning based in the work environment requires that at least 25 percent of the total educational program should be learned in the company. The company can organize not only practice of professional content, but also theory.

The introduction of WBL was not only a priority issue of Latvian education policy, but also of employment policy. This was determined by the need to bring education and work environments closer together, solving education and employment issues in an integrated way, in order to prepare the future workforce with knowledge, skills and competences that meet the requirements of the labour market in sectors important to the national economy.

A VET school has the overall responsibility for the implementation of the WBL program. A tripartite agreement – school, student and company – has to be concluded. Additional bi-lateral agreement is concluded between the student and the company – on wage in case of job contract, or agreement on the allowance. Apart from the wage/ allowance also the individual labour protection means and the civil liability insurance of the learner are ensured in accordance with the training contract. A training plan is agreed between the school, the employer and the apprentice.

Opinion on the company's quality can be obtained from the Sector Expert Council. VET institutions are free to choose whether they will implement a VET programme in apprenticeship mode or in a school-based mode.

The programme (its mode of delivery) is adapted at school and company level to meet the needs of apprenticeships.

In **Finland** work-based learning is planned as part of the student's personal competence development plan. For work-based learning, students have either an apprenticeship agreement or a training agreement. As they find new work opportunities, students can flexibly switch between work-based learning agreements. The employer always appoints a workplace instructor who is responsible for the student.

Studying at the workplace is either based on apprenticeship or on training agreement. Both can be flexibly combined. Learning at work can be used to acquire competence in all vocational qualifications as well as other training advancing or supplementing vocational skills. Studying at the workplace can cover an entire degree, a module or a smaller part of the studies.

In apprenticeship, most of the competence will be acquired at the workplace through practical work tasks and will be reinforced in other learning environments if needed. The student, education provider and employer agree on the arrangements on the apprenticeship together. The apprenticeship is based on a fixed-term contract between the student and the employer. The student is a full-time worker and receives pay.

In the training agreement, the student is not in a contract of employment and does not receive any pay or other compensation. This agreement is drawn between the education provider and the workplace.

The workplace is required to keep track of the development of the student, report to the education provider and take action if the competence is not reached. No minimum or maximum amount has been set for competence acquired in connection with practical work tasks. Instead, education and training organised at the workplace is planned as part of the personal competence development plan, taking into account the competence needs of the workplace and individuals.

The plan is attached to the agreement and the training is designed in cooperation with different parties. Students can find the workplace by themselves or ask the education provider for help with finding a suitable workplace.

International cooperation

Latvia supports internationalization and encourages VET student and teacher mobility as it strengthens acquisition of key competences and transversal skills and supports the development of job specific skills needed in the labour market.

Learning mobility is an opportunity for future specialists to gain professional experience abroad, opportunity to join the European labour market. For teachers, however, international experience helps to improve their daily work and encourages the achievement of professional goals.

All vocational education institutions provide opportunities for their students to join WBL activities in other EU countries. VET schools are also active in implementing or participating in international projects.

State Education Development Agency organizes the annual event *SkillsLatvia***:** where students from Latvia VET schools present the excellence of their skills by competing in 16 professions. This event serves as a pre-selection competition for further participation of young professionals at the European and international level competitions *EuroSkills* and *WorldSkills.*

In **Finland** international cooperation and mobility are encouraged in vocational education and training. This is done both at home within the qualifications and through international mobility, which is quite popular in Finland with every seventh student in initial VET spending some time abroad as a part of their studies. The aim of international mobility and cooperation is to enhance the competitiveness and quality of the Finnish working life, education and training and to develop students' personal skills and outlooks from a global perspective. Strong networks of international cooperation also help Finnish VET provide students with the competences required in an increasingly internationalised labour market and multicultural society. Skills competitions encourage both the young and adults to consider VET as a viable, attractive option. They are also an important tool for developing and benchmarking VET. Finland participates in *WorldSkills*, *EuroSkills* and *Abilympics*. Also, a national skills competition called *Taitaja* is organised annually.

Comparison of VET systems in Finland and Latvia provided group members with the basic information on how the both systems work and what are the common grounds for program alignment, work based learning implementation and future cooperation.

Comparing descriptions of logistics curricula in LV and FI

To compare both curricula they were translated into English. Program themes, learning outcomes, modules content were thoroughly analysed and discussed. In the analysis the contents of Latvian modules and the competence requirements of Finnish units were compared in order to find similarities.

Preliminary comparative analysis provided review of Latvian and Finnish VET programs in logistics: it described structure of programs, distribution of topics, intended learning outcomes, share between theoretical and practical parts, identified similarities and differences as well as specified areas of alignment.

The table below shows the similar parts of Latvian and Finnish Logistics curricula identified during comparative analysis.

Latvian Modules	Similar parts in the Finnish and Latvian competence requirements	Finnish Unit
Transport and Logistics Business Basic Processes	– operate as part of the logistics system as required by their tasks, – understand the key concepts of the industry, – understand the stages of the reception and storage of goods.	**Receipt and storage of goods and Freight transport**
Deployment of Goods in Warehouse	– choose the right location to store the goods in and observe the standards set for the storage of goods	**Receipt and storage of goods and warehouse information systems**
Identification of Freight	– receive deliveries of goods, – accurately count the units of goods on arrival and compare them to the documentation, – handle arrival documents and act appropriately if there is visible or concealed damage, – use correct packing methods and the required labels, – use a barcode scanner and print out address stickers and similar using peripheral devices	**Receipt and storage of goods / Picking and dispatching goods**
Preparation of Freight for Transfer	– use correct packing methods and the required labels – use dispatch technology – use different transport documents – apply different criteria when preparing shipments follow occupational safety instructions	**Picking and dispatching goods and Handling of hazardous substances**
The Freight Processing	– use picking documents, – apply different criteria when preparing shipments, – follow occupational safety instructions	**Picking and dispatching goods and Receipt and storage of goods**

The Warehouse Inventory and Survey	– Every country has its own inventory systems and software used, but the competences developed are similar. This module is acquired during the WBL periods in each country	**Stocktaking and balance management and Warehouse information systems**
Cargo acceptance and delivery in the warehouse	– accurately count the units of goods on arrival and compare them to the documentation, – handle arrival documents and act appropriately if there is visible or concealed damage, – update arrival data in the stock accounting system	**Receipt and storage of goods**
Organization of transportation process documents circulation	– use dispatch technology, use different transport documents	**Picking and dispatching goods**
Logistics employee practice	– acquired during WBL mobility	**Work placement**

Table 1

Similarities and differences in "Logistic worker" programs

Comparative analysis revealed both similarities and differences in how the programs were constructed in two VET schools.

Finnish and Latvian studies differ in a few ways. The major difference is in the programs structure. In Latvia programs are divided into levels: A - basic level, which usually has 4 modules, on the basis of which one can further study in three directions - Logistics employee (Professional qualification level 3), Warehouse worker (Professional qualification level 2) and Docker (Professional qualification level 2). B – level consists of modules for the chosen professional directions. At C - level there are professional specialization modules. (See *Image 1*).

In Finland, the studies are divided into units and the units are divided into compulsory, optional and common units. Compulsory units in Finland form the core of the degree together with common units.

The studies at Liepaja State Technical School include both vocational education and upper secondary school. In Finland upper secondary school studies can be integrated with vocational studies by completing a combination degree which is optional.

Another difference is in learning to use a forklift. In Latvia students do it on a simulator, because the real driving of a forklift is planned in another module. In Finland, however, practical driving of a forklift is acquired in the unit "Warehouse worker".

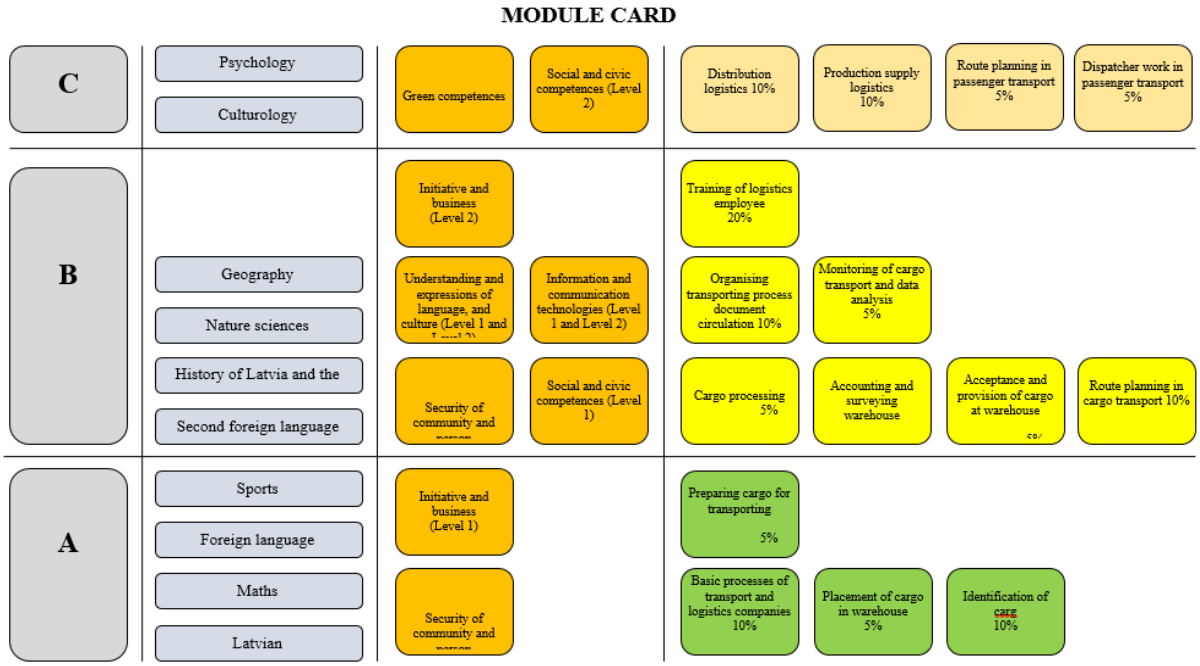

Image 1. Module card of Latvian Logistics program

Difference is also in the length of the program acquisition. In Latvia VET degree "Logistics worker" is an EQF 4 – level degree and takes 4 years to acquire. Level C module content of Latvian VET program is similar to Finnish college level or 1st degree higher education program. In Finland the program acquisition is more flexible and can last up to 3 years including WBL periods in a company.

Considering the above mentioned differences only vocational modules from A and B levels from Latvian curriculum were used for further program alignment.

Differences in programs lengths also affect the time when students can start their mobility as prior to mobility they have to acquire all the basic modules. This should be considered when organizing cross-border mobility.

The comparative analysis identified four the most similar curriculum modules/units in each country's logistic qualification curriculum:

Finland:

- Receipt and storage of goods (Compulsory)
- Picking and dispatching goods (Compulsory)
- Stocktaking and balance management (Compulsory)
- Warehouse information systems (Optional)

Latvia:

- Deployment of goods in warehouse (Module A)
- The Freight processing (Module B)
- The Warehouse inventory and survey (Module B)
- Receiving and issuing goods in warehouse (Module B)

Both countries curricula also had similar content for language and communication skills development, however this was not used as a subject for program alignment.

Partners decided to base further Logistic program alignment on the similar identified modules as it was considered reasonable to align similar modules rather than different ones.

III DEVELOPMENT OF DIGITAL CONTENT

Development of digital content was introduced after the FinLat-Logic project amendments. It was considered that this new activity could contribute to the program alignment and at the same time give added value to the existing curricula.

The decision was that Latvian partners develop materials for digital modules: Warehouse inventory and survey; Receiving and issuing goods in warehouse and partners from WinNova work on modules: Receipt and storage of goods; Picking and dispatching goods.

For the digital modules development working groups of curriculum alignment were strengthened with experts from companies, multimedia specialists as the digital content development demanded specific expertise.

The materials were developed in national languages and translated into English. Availability of materials in English was important for the peer reviewing, testing, and piloting and also for the further application of materials in a study process and in organizing international students' mobility for both project VET schools.

Before starting the digital content development partners agreed on methodology, which included the following steps:

- Establishing a digital space for uploading and storing developed digital content materials;
- Developing the unified visual design for digital materials;

- Thematic content planning and drafting structure of e-modules;
- Developing terminology lists, reviewing already existing digital materials available in other schools and online, brainstorming content for videos;
- Drafting tools for feedback collection;
- Working on digital modules content development;
- Translating developed or other useful digital materials from/to Latvian, Finnish, English;
- Creating scenarios for video materials; video filming and assembling;
- Exchanging first drafted e-materials and/or videos provided by digital content developers between LVT and WinNova;
- Finalizing developed digital content for translation;
- Translating of the developed digital content;
- Peer reviewing the developed content by school and company representatives;
- Preparing schedules for piloting and tools for feedback collection;
- Finalizing modules after piloting and student mobility.

Methodology included steps for monitoring quality assurance like joint on-line workshops to present materials and discuss the developed content, methodologies, and digital functionality. Additional on-line monitoring meetings were organized to follow the content development process and keep time schedule on track. Such approach helped to follow the progress of work done by each working group and to borrow ideas for inspiration. It also ensured continues mutual learning through knowledge and experience exchange, as well as helped curriculum experts timely identify existing gaps and introduce necessary adjustments in the content development process.

During digital module development process partners revisited the results of the survey implemented in the early months of the project to find out the opinion of companies about the most important skills to be acquired in the chosen logistics program modules. This survey was sent to around 200 logistic companies in Latvia and Finland.

The survey revealed that companies from both countries had prioritized the same professional skills to be developed in the chosen modules with some insignificant differences. The survey findings were considered in the digital content development process by offering appropriate teaching/learning materials that could promote development and/or improvement of the identified skills. The survey results were also

taken into account when designing programs for VET students' mobility/WBL in Finland and Latvia.

Digital content consisted of written material, pictures, training videos, tests for practicing and links to other online learning materials.

The developed digital content was peer reviewed by the project staff, teachers at partner schools, and external experts from companies to ensure that materials were appropriate for teaching – learning process, and in accordance with the current labour market needs.

Material development process and peer review facilitated:

- cross-utilization of the prepared materials;
- improvement of training and learning materials;
- improvements in the usability of the materials;
- implementation the e-learning material in the digital learning platform of the schools.

Additional feedback on the developed content was collected from VET students and teachers during the piloting process.

The feedback showed that overall the materials were learner oriented and motivating and appropriate for acquiring a profession of logistic worker.

80% of the students, who participated in the piloting of digital materials agreed that topics were interesting for them and the instructions given were easy to understand. They also agreed that materials provided opportunity to acquire new knowledge for their profession; information was presented in attractive way and supported self-directed learning.

Teachers were of similar opinion that instructions are easy to understand, materials promote students' interest in profession. Teachers also estimated that materials provided students with additional knowledge and better understanding of what skills they would be able to develop during WBL/practical training.

The developed digital modules were finalized taking into account the feedback from peer reviews, digital module piloting and student and staff mobility. Some improvements were made regarding visual materials and test materials.

IV CROSS BOARDER MOBILITY

Professional Development Program for WBL Tutors and Trainers

FinLat-Logic project proposed to put work based learning at the centre of curricula alignment. WBL represents the day-to-day link between VET institutions and workplaces. WBL is also a good tool to facilitate employees' social responsibility towards VET education as through students' competences evaluation employers can provide feedback on adjustments needed in curricula. One of the key factors determining the quality of vocational education and training (VET) is cooperation between VET schools and employers: companies, employer and sectoral organizations, sectoral experts. (See *Image 2)*

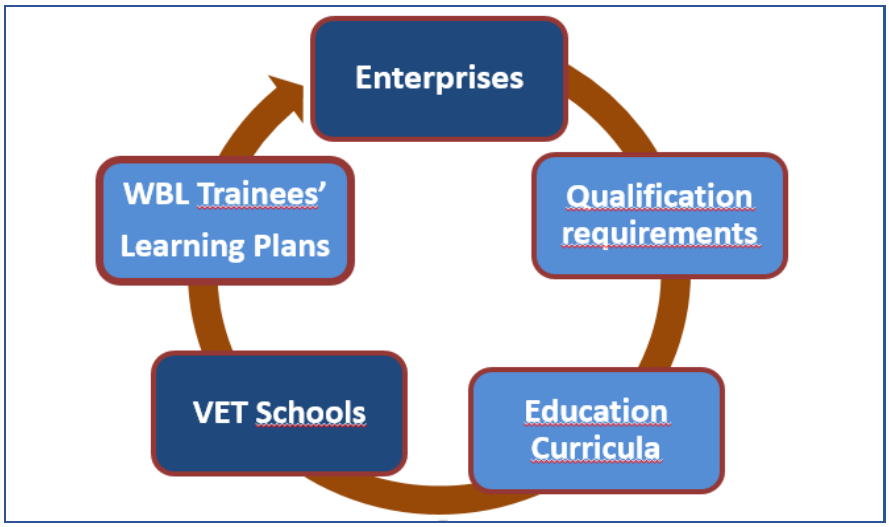

Image 2. VET school and enterprise cooperation cycle

Cooperation starts with communication. This is the reason why the project proposed to implement transnational Tandem Training: joint transnational workshops of VET and company representatives to prepare for organization of high quality work-based learning and to agree on the roles, responsibilities, actions from each side. Close cooperation enables VET schools to follow the ever-changing skills needs in labour market and adjust the training provision.

To promote cooperation between project VET schools and companies involved in the cross boarder WBL Professional development program for WBL tutors and trainers was developed and piloted.

The aims of the program were to:

- ensure common understanding of WBL tutors role in national and transnational contexts;
- strengthen the WBL tutors understanding about WBL as a framework for alignment of VET curricula; agree on principles and approaches of alignment;
- prepare WBL tutors for using learning-outcomes based approach in and for aligned WBL curricula;
- improve WBL tutors' skills in preparation and implementation of transnational, as well as national WBL and mobilities in logistics sector;
- improve cooperation and communication between VET tutors in preparing, implementation, assessment and validation of WBL, mobilities, apprenticeships in logistics sector;
- improve pedagogical skills of WBL tutors in supporting VET trainees during WBL, mobilities, apprenticeships.

Joint Workshops

Participants of the target group were VET tutors and WBL coordinators from Latvia and Finland, as well as workplace tutors from logistics companies in Latvia and Finland. For the project purposes it was important to have both groups represented – VET schools/education sector and logistics companies/employers. It was also important to involve participants who have taken part in the process of aligning the curricula.

Initially it was planned to organize joint workshops in Finland and Latvia to better prepare the target group for implementing students' mobility. However, due to pandemic the first part of the tandem training was organized in on-line format and face-to-face workshops took place during students' mobility.

Training methods included:

Peer learning – participants learn from each other and from best practices through sharing experiences about the approaches and models used in Latvia and Finland, both at VET schools and logistics companies;

Individual approach – the perspective, experience and input of each participant is important to achieve a broader outlook and make each participant a donor and a receiver in the learning community of WBL tutors;

Tandem approach – to plan, prepare and implement work-based learning, VET school tutors work in tandem with workplace tutors. Therefore, many tasks are designed to strengthen collaboration, and pairs of VET and workplace tutors work together in many tasks to establish the tradition of cooperation.

Training is implemented as a simulation of WBL process Before-During-After looking from the perspective of 3 main actors: VET tutor, Trainee, Workplace Tutor (See *Image 3*).

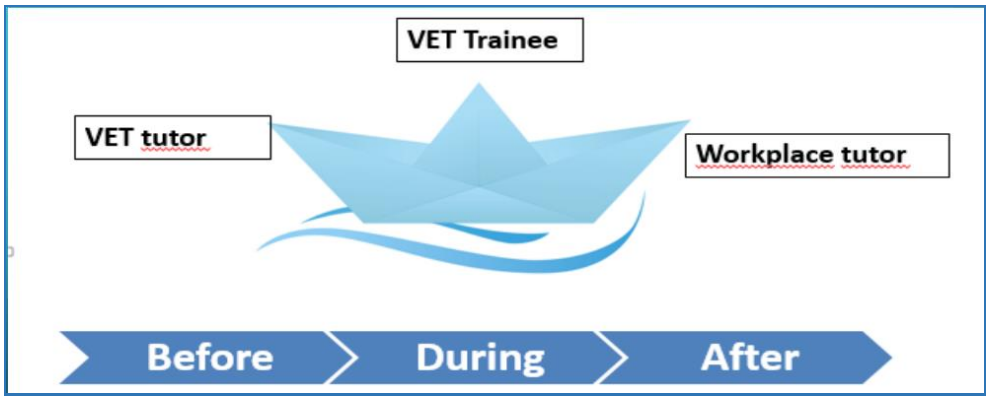

Image 3. WBL process

Training program contributed to the exchange of experience among WBL tutors from schools and companies about WBL programs in both countries and expected learning outcomes. Feedback provided by participants helped to better understand what skills companies expect from WBL students, the possible gaps in programs and training methodology, similarities and differences in Finnish and Latvian VET programs for logistics worker qualification.

VET Students' mobility

Initial work based learning periods were planned for 4 months with participation of 10 VET students from each country. For that purpose each partner had to select students and address and shortlist 10 companies, which could participate in the matchmaking process as well as host student work based learning mobility. However, due to pandemics it was not possible to stick to the initial plan. As a result WBL periods were shortened to one month and the number of WBL students was reduced from 10 to 5.

As the length of WBL period and number of students was reduced, reduced was also the number of companies which participated in the matchmaking process, however,

communication with them continued and they were invited to contribute to the project survey regarding the important skills for logistic sector workers.

Five students from Liepaja were the first to start a month long internship in 2 companies in Rauma:

Kongsberg Maritime Finland Oy, which is a branch of an international, knowledge-based technology corporation with 200-year-old history focusing on the design, sale and manufacture of marine industry equipment. In Finland the company has factories in Rauma and Kokkola. The Rauma unit's production line includes propulsion equipment and anchoring, fastening and towing systems.

Logisticas Oy is a logistics company established in 1997. In the summer of 2021, the company expanded its operations to the Vaasa region through acquisitions. Currently, the Logistikas Group includes four companies.

Postponement of WBL mobility created situation in Winnova that only one student was able to come to Latvia. The internship took place in *Trelleborg Wheel Systems* in Liepaja, which is a leading global supplier of tires and complete wheels for agricultural and forestry machines, material handling, construction vehicles, motorcycles and other specialty segments.

All students participated in WBL according to individual plan which was coordinated between student, VET school and company. The plan included improvement of skills acquired in 4 selected modules.

As WBL student mobility was one of the tools for program alignment it was essential to receive feedback from students and WBL tutors in companies.

The focus of tutor's feedback was on the following qualities:

- theoretical preparation of the learner (trainee);
- work skills;
- quality of work;
- attitude towards the assigned task;
- communication skills and communication with other company employees;
- punctuality (observance of working hours, observance of deadlines);
- workplace organization;
- self-initiative and desire to learn new skills.

Overall feedback from company tutors showed that students' knowledge and practical skills were sufficient and in line with the module content and learning outcomes described in the individual plans. Tutors highlighted that all students were highly motivated, with good professional skills, responsible, self-confident, and with a good command of English.

The knowledge, skills and attitudes demonstrated by both countries students during the WBL period proved that selected parts for curricula alignment corresponded to company/ labour market needs. Tutors from companies admitted that students' performance during WBL met and even exceeded company's expectations. Another proof was that all students received invitation from companies to return back for summer job or next WBL period. Companies also expressed interest to establish long term cooperation with VET schools from Liepaja and Winnova.

Students' feedback was aimed at receiving their opinion about the quality of the traineeship in the company and had to answer the following questions:

Did you discuss learning goals and learning plan with your school?

To what extent were you clear about the goals of your traineeship?

How satisfied were you with the guidance and support from the school?

How satisfied were you with the guidance and support from the company?

What new things did you learn during the traineeship related to your profession?

What new things did you learn which were not directly related to your profession?

Would you consider working at that company if you were offered a job?

Students' feedback demonstrated that their knowledge and skills were sufficient to perform job duties during internship. They also appreciated the warm welcome and support from hosting schools and companies. As added value they mentioned that international mobility provided broader insight on their future career opportunities nationally and internationally.

V FINALIZING CURRICULUM ALIGNMENT

The whole curriculum alignment process turned out to be more challenging than initially expected due to several reasons – due to the global pandemic the project could not been implemented in line with the original activity plan; none of the VET schools had previous experience in VET curriculum alignment; during the project development phase not all the possible risks were appropriately assessed.

Comparative analysis showed that Latvian VET program "Logistics employee" is broader as regards the learning outcomes to be achieved and the time needed for program implementation. "Warehouse employee" program is a constituent part of a wider "Logistics employee" program. Obviously it would have been easier to align "Warehouse employee" programs of both VET schools, but as in Latvia this program alone is not popular with students, the decision was to align Latvian VET program "Logistics employee" and Finnish VET program "Warehouse employee".

The following modules/units were selected for further VET program alignment as comparative analysis identified that more than 60% of the learning outcomes were alike. See table 2.

Latvian modules	Finnish Units
Deployment of goods in warehouse (A) 90h aligned (152h – total)	Receipt and storage of goods 30cp
The Freight Processing (B) 100h - aligned (152h - total)	Picking and dispatching goods 30cp
The Warehouse Inventory and Survey (B) 112h - aligned (212h - total)	Stocktaking and balance management 10cp
Receiving and issuing goods in the warehouse (B) 90h - aligned (152h - total)	Warehouse information systems (optional) 20cp
Logistic employee WBL (160h - international) (600 - total)	International WBL 15cp

*Table 2.*Aligned parts of curriculum

Taking into consideration that Latvian VET program is designed for certain amount of hours, but the Finnish program is expressed in competence points our method of calculation was as follows.

The total amount of Latvian "Logistics employee" VET program is 3032 hours (without general education subjects) out of which 392 hours are planned for acquisition of the 4 aligned modules – *Deployment of goods in warehouse, The freight processing; The warehouse inventory and survey; Receiving and issuing goods in the warehouse* plus 160 hours for international WBL period, which together makes 18, 2% of the total program amount.

Finnish VET program for “Warehouse employee” (without language and communication skills development unit) corresponds to 150 competence points. Aligned curriculum part: *Receipt and storage of goods* (30 cp); *Picking and dispatching of goods* (30 cp); *Stocktaking and balance management* (10 cp); *Warehouse information systems* (20 cp); *Working in an international environment* (15 cp) in Finnish VET program corresponds to 105 cp or around 2/3 of total competence points.

The project goal was aligned WBL curricula in logistics between Latvia and Finland – minimum 10% for Latvia, corresponding to not less than 10 competence points of Finland.

We can assume that FinLat – Logic project goal on program alignment has been achieved as the aligned share of Latvian WBL curriculum is 18, 2% and Finnish curriculum – 105 competence points.

Based on the consortium work on VET program alignment we have listed some conclusions and recommendations derived from our experience.

CONCLUSIONS

- The process of VET Logistic program alignment between Latvian and Finnish VET schools proved that both programs have some differences, but basic demands are similar.
- Work on program alignment opens opportunities for long term partnerships between VET schools and companies as it not only strengthens cooperation between them, but also promotes employers social responsibility towards VET education. At the same time it positively affects the VET program quality and attractiveness.
- Aligning curriculum can be economically advantageous solution in long term, as it gives students the opportunity to be involved in the international labour market already during studies, while companies can get to know their potential labour force.
- If schools want to work towards excellence, program alignment should be their common practice rather than exception.
- VET schools that implement aligned VET programs are more interesting for young people as they can provide their students with better career opportunities in national and international labour market.
- Involving more than two VET schools in the alignment process would provide more know-how, competence and different experience, but at the same time make the management process more difficult.
- Work on digital content development, peer review and piloting allowed us to examine the program modules more thoroughly and the feedback received from VET teachers, students and company representatives provided additional information for the alignment process. At the same time the feedback confirmed that the digital content and materials were appropriate for studying towards logistics qualification and the labour market needs.
- Program alignment process can serve as a good tool for continuous information exchange and mutual learning among participants.
- Possibly the project result would have been different if not the disruptions of the Covid -19 pandemics. At the same time it made us to look for new opportunities. In our case it resulted in digital content, which also contributed to alignment process.

RECOMMENDATIONS

- In the process of establishing working groups for VET program alignment it is essential to include company representatives as they can provide information on current labour market needs which a school might not be aware of.
- It is advisable to start the program alignment with finding common ground with partners on what is understood by program alignment.
- SWOT analysis at the start of the alignment process will help to understand the strength and weaknesses of the involved institutions (experts in the field, motivation and commitment throughout the project, the partners' willingness to compromise, etc.).
- Program alignment should be implemented gradually, in several steps to avoid possible bottlenecks and leave space for revisiting the work done and introduce changes if necessary. For example, start with comparing separate modules/units rather than the whole program.
- To see how the aligned parts of the program work in practice it is advisable to pilot them during a WBL period.
- If schools plan to implement VET program alignment it is recommended to do it with schools with common previous cooperation experience in international projects. It will save time for implementation of core project activities.

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