



“LEARNING BY DOING” PROJECT

**“Targeted capacity building of VET partnerships
in the Danube Region for the effective modernisation of VET
systems”**

WP 6: Policy Engagement

6.1. Strategy to modernize WBL schemes in VET

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1. Executive Summary

Strengthen the capacities relevant for the implementation of the vocational education system by boosting regional, national and transnational partnerships enabling them to adopt, revitalize and modernize the existing vocational education systems in the Danubian countries and reduce the gap between labour force and labour market are the main challenges tackled by the Learning by doing project partnership.

As for the Croatia, the economic crisis has left a very fragile labour market with series of structural problems and significantly high rate of unemployment at the time. Nowadays, the situation in this field is further deteriorated by demographic decline, the unemployment rate which has never been lower, the lack of skilled workers, unpredictable changes on the labour market and additionally by insufficiently effective system of secondary vocational education hardly aligned with labour market.

Technological, communication and digitalisation changes are becoming more and more dynamic and are changing the skills profile of various occupations as well as their operating business models. Additionally, if our regional and national economy wants to be ready for and face the emerging industry 4.0 which makes part of the long-term strategy of industrial development in Croatia, further changes to the existing system of vocational education system at all levels is inevitable. By naming all these challenges, the differences between the supply of skilled labour and the labour market needs are not only emphasized, but also alarming. The latter can also be seen in the constant and urgent demands of entrepreneurs who desperately seek competent and skilled workforce also ready and prepared for a lifelong learning.

Croatia recognize education as one of its development priorities that can provide long-term social stability, economic progress and cultural identity and is of particular public interest. Therefore, strengthening vocational education and work-based learning is, among other things, the central European but also Croatian response to the tackled issues. However, lack of institutional preparedness and narrow throats hampers the transition toward modernization and interoperability of vocational education system.

The part of the solution to the problem can be found in the modern and inclusive system of vocational education which has for decades been successfully implemented by some of the European leading economic leaders like Germany or Austria - the mentor countries in this project. The new bottom-up approach which connects all relevant VET stakeholders from educational institutions, companies, chambers to decision-makers can contribute not only to start reducing these differences, but can also strongly influence the promotion of youth employment, facilitate transition from school to workplace, preserve jobs and as the ultimate goal – preserve competitiveness and further development of the regional economy. Countries which have been successfully implementing this form of education for decades have showcased that work-based learning within VET enables young people to acquire skills and competences that improve their employability and facilitate the transition from school to work and further education.

Through the prism of VET regional stakeholders` group, we want to promote a vocational education and work-based learning within VET as a right and high-quality learning experience that will ultimately provide young people with a solid foundation and entry into the labour market.

Prerequisites for introduction of such education are first and foremost a harmonization of the business entities and education institutions supported by decision makers followed by the interest of all other stakeholders to participate proactively – students, parents, chambers, regional/national employment offices and ultimately the society as a whole and with all the infrastructural, human and financial resources supporting the system.

Mutually strengthened national and in this case, transnational partnerships of VET stakeholders with improved capacities can provide better support to vocational education reforms through more effective adoption or transition toward modernization of the system of practical education (WBL).

During its implementation, the project partnership has offered to the stakeholders of vocational education in Varaždin county a set of structured knowledge and experiences, tools and already adopted effective practices that can enabled them influence decision makers in the sphere of demand-based vocational education, in order to reduce systematic disparities, i.e. to facilitate gaining the skills and competences of young people and ultimately match them with dynamic labor market needs and promote the VET system as an attractive and competitive tool.

Specific objectives of the implemented project activities included the improvement of institutional capacities and cooperation attitudes of all regional VET actors who, from the very beginning, form the regional group of VET stakeholders in Varaždin County (representatives of vocational schools, companies, regional chamber of economy, employment office, ...) The way of such direct cooperation raised awareness and prompted their sensitisation towards more company- and practice oriented forms of WBL through learning and cooperative activities on individual, stakeholder and institutional level.

In addition, the objective was to reveal and exchange transnationally the tools, which can support and pave the way of a long-term transition of VET systems towards more competitive one, especially in countries where such system does not exist or exists only up to a certain level. In the frame of this objective, the mind-set of the regional group of stakeholders along with a longterm changes in the institutional, cultural and organisational frames are subjected to an active change.

To support the project's vision and to boost the transition of existing VET system, several capacity building and scenario building activities were organised in order to detect where the capacity is lacking and which activities could help VET stakeholders to increase their own capacities, including practical roadmaps defining clear responsibilities, rights and obligations for each key VET actors involved.

All these activities were organised in order to gather, at the end of the project, one joint framework of recommendations to support the VET reform in Croatia targeting all VET stakeholders and policy makers and their power of decision-making.

1.1. Main Activities of LbD Project

In line with the introduction and short description of the project, numerous thematic work packages and activities navigated the partnership through 3 phases of learning during 30 months of implementation. In this way, the VET stakeholders of the Varaždin County, as primary consumers, were put in the centre of learning, absorbing and changing process ensuring at the same time active involvement and participation.

First phase of learning refers to individual learning which comprehended 3 rounds of study visits and 16 bilateral staff exchanges in total, in which Croatian VET stakeholders participated and shared recognition and experience of the quality of work-based learning.

Second phase continued with stakeholders` learning within capacity building & ambition setting & scenario development workshops according to the challenges identified and upon which local stakeholders set up an ideal VET model that was not to be a copy of already testified successful German or Austrian VET systems but the one that can be applied within the respective region.

All these activities were followed by two sensitisation campaigns (enrolment campaigns 2018 and 2019 in Varaždin County) in order to raise awareness and create a common understanding among public as well.

The activities resulted with the third phase at the end of the project where regional VET actors continue to cooperate within the Work-based learning observatory ensuring the sustainability of the project results and support to transition processes with expertise and knowledge sharing reinforced with new transnational tool in view of a Guidebook for more efficient work-based learning.

Base on the information, new opinions, exchange of experiences, new knowledge gained and conclusions drawn, the regional VET group members jointly propose innovative strategies aimed at policy level / decision makers hoping that they can be taken into account while making proposals on regulatory modifications and revisions of the existing VET legal framework.

1. 2. Aim of the strategic document

This policy recommendation document discussed also at final round table aims, it its main idea, at supporting and enabling regional VET actors in Croatia to boost the transition of the existing VET systems toward more competitive one including practical roadmaps, defining responsibilities, rights and obligations for each key VET actors involved, to support VET reform and to integrate work-based learning schemes into the existing frames of vocational education that is now implemented in Croatia.

1.3. Fields of intervention

Based on the project workshops (ambition settings, scenario building, ...), study visits and staff exchange activities, four main areas of intervention were discussed and confirmed by regional stakeholders as most important ones:

- Legal framework and improved career guidance
- Quality assurance in accordance with quality standards in VET system
- Support for education institutions and companies
- Cooperation of VET system stakeholders

2. General information on VET system

Croatian VET/WBL system is a part of the secondary level education which is not mandatory by law, but most of the students continue their schooling even after finishing mandatory elementary school.

The system is managed by the Agency for Vocational Education and Training and Adult Education (ASOO) – a public institution founded under the Ministry of Science and Education. In defining the regulatory framework and the requirements of the VET system ASOO collaborates with Croatian Chamber of Economy, Ministry of Economy, Entrepreneurship and Crafts Croatian Chamber Crafts, Ministry of Labour and other respective institutions like Croatian Employment Service, Association of Employers, Ministry of tourism etc. Ministry of Science and Education decides on the enrolment quotas every year and allows opening and closing of programmes/schools. The enrolment policy is outside of the VET schools` jurisdiction.

Vocational education programs acquire knowledge, skills and competences to carry out professional affairs and provide students with the opportunity to get involved in the job market immediately after school. Vocational programs last from two to five years, and with certain conditions can be continued at secondary and / or tertiary level. They encompass technical and related vocational schools (4-year programmes) and industrial and crafts schools (programmes lasting 1-3 years). Croatia had a dual system in VET schools since 1994, but it was abandoned in 2013 mainly due to the insufficient supply of apprenticeship positions in real sector. Nowadays institutions are preparing, via national reform, to introduce a dual system back into VET schooling.

2.1 Contextual conditions of VET system

No.	Indicator	Data for the beginning of a school year (September)		
		(2007)	(2012)	(2017)
1	Number of secondary schools (DZS)	705	724	744
2	Number of secondary vocational schools (DZS)	458	454	454
3	Number of students in secondary schools (DZS)	184.183	184.793	155.624
4	Number of students in secondary vocational schools (DZS)	126.959	123.218	100.639
5	Number of adults in vocational qualification programmes as the part of lifelong learning process (DZS)	6.913	3.401	2.312
6	Percentage of VET system graduates among all the secondary school graduates (DZS)	71,1%	69,0%	67,1%
7	Success rate of finishing secondary schools vs. success rate of finishing secondary vocational schools <small>(ratio of graduated secondary school students and the number of enrolments 4 years before that based on DZS data)</small>		84,98% : 80,38%	84,23% : 80,00%
8a	Student/teacher ratio in secondary schools (Teachers Full-time equivalent - FTE)	11,6	10,9	8,5
8b	Student/teacher ratio in secondary vocational schools (Teachers FTE) (DZS)	11,5	10,7	8,2

9	Percentage of secondary vocational schools having their own workshops	All the schools have their workshops / practicums	
10	Percentage of companies who accept apprentices during their secondary schooling <small>(Eurostat for 2010 and 2015)</small>	15,3%	14,4%
11	Number of secondary vocational school's student cooperatives <small>(HUUZ – number in 2018)</small>	88 secondary school cooperatives <small>(542 in total with educational centres and elementary schools cooperatives)</small>	
12	Percentage of secondary vocational school students involved into student cooperatives work	Data not available	
13	Total number of different vocational programmes <small>(MZO 2016)</small>	285	
Programmes with greatest enrolment quotas			
1	The Economist	6	The Carpenter
2	The Salesperson	7	The Hotel and Tourist Technician
3	The Waiter	8	The Hairdresser
4	The Cook	9	The Computer Technician
5	The Patisserie Maker and Assistant Chef	10	The Gardener and Fruit Grower
Programmes with largest interest of the pupils finishing primary school (by enrolment applications)			
We weren't able to acquire this statistic, but reports from after enrolment in summer 2017 show that after 1st enrolment cycle left the most enrolment places in craft, mechanical and technical secondary schools, whilst general programmes (Gymnasiums) were mostly full. This means that the programmes with largest quotas are not the ones pupils target the most, there is discrepancy between what educational sector see as the educational need with the demanded educational qualifications from students.			
14	Average division of hours between in class learning (theoretical and general knowledge) and practical work (in percentages).	cca. 10-40% of practical work in curricula	
	Programme(s) with minimum percentage of practical work	4-5 year VET programmes	
	Programme(s) with maximum percentage of practical work	1-3 year programmes	

2.2 The purpose of VET system

The VET system in Croatian form is an integral part of the education system and should provide sufficient and adequately skilled labour supply for the needs of regional or national economy having workplace specific skills and knowledge based competencies.

Even though the education institutions and entrepreneurs are considered and involved into debates about the VET system development (*25 different sectorial counsels within the Croatian Qualification framework are advisory and professional bodies ensuring the development of human potential in line with labour market needs within respective sectors*), the existing educational programmes were developed within the education sector while ignoring the labour market trends. This results with enrolment relying on pupils/parents' wishes instead of the needs of their future employers. Parents wanting the best for their children often direct them into more general high schools programmes hoping they will continue their education on the tertiary level.

2.3 The internal factors of VET system

Strengths

Vocational education in Croatia should be a result of a firm collaboration among education institutions and business entities as the core of the process of VET system. The main laws and acts on VET are enacted in collaboration of the ministries and chambers, whereas the Croatian Chamber of Crafts has a public authority in the area of vocational education – a master link that enables connection between education and economy and labour market. The Croatian Chamber of Economy has no official jurisdiction in this area.

There was also a shortage of scholarships for deficit occupations but nowadays even those funds are available for entrepreneurs. Apprenticeship makes connection between theoretical and practical education and practical training in the workshops enables connection with the world of work. However, there is still a strong tendency to increase the number of hours in practical training within the VET programs.

Weaknesses

The current system of vocational education and training still does not ensure completely the competences needed in the labour market because the VET programs are not flexible enough to follow the fast developmental trajectories in global economy (especially connected with the technology development in the companies). The curriculum change process should be regionally oriented, simplified and accelerated as much as possible. The career orientation is optional and used rarely, on self-initiative level only. Implementation of the same VET programs within several VET schools on regional level.

There seems to be discrepancies between supply and demand for specific educational and skills profiles in many sectors, with some VET programmes with the highest enrolment rates preparing students for occupations with the highest number of unemployed persons. It is a general opinion in Croatia that students choose craft occupations because they cannot enrol in the more appealing secondary schools. Poor perception of VET by elementary school students and their parents, especially towards technical professions and employment opportunities in this field.

Many schools in Croatia are not equipped good enough. Due to the staff requirements and demands for certain standards of equipment, professional programs are expensive and VET institutions need considerable support in adjusting and changing supply of the programs regarding human and infrastructure resources.

Entrepreneurs are not stimulated enough for working with apprentices (no help or stimulation from the government) which they see as investment of much time, effort and money with no satisfactory returns. Change of mind-set needed. In addition, there is no adequate program for the training of mentors within the companies (in-company training) in order to acquire pedagogical competences, which makes companies often not adequate in providing practical training for students. Lack of interests among SMEs to be involved in VET system.

Internal stakeholders:

- Students, teachers and companies
- Agency for Vocational Education and Training and Adult Education
- Ministry of Science and Education
- Croatian Chamber of Crafts – involved into apprenticeship schemes and proficiency examination of VET industry and crafts students

2.4 The external factors of VET system

Opportunities

Vertical mobility was enhanced for the pupils who completed education for a craft profession from 2012/2013 school year because every student has a chance to continue education in the fourth year free of charge and to take the State Graduation Exam and thus to enrol at university programmes. This might encourage more pupils in three-year vocational education programs because after this they still have an alternative to proceed to tertiary level. However, taking the differential exams in order to enrol the 4th year is still too demanding.

The Croatian Qualifications Framework has been created and enables more focus on learning outcomes and students' competences. The emphasis is on the knowledge and skills which are needed and related to labour market especially on transversal skills such as learning to learn, entrepreneurship, personal and social development, health, sustainable development, ICT use and citizenship education which were elaborated in more detail. It also places more emphasis on lifelong learning as a way of personal development and economic and general development of society.

Entering the EU opened us the chance to use structural and cohesion EU funds to renew the equipment in workshops, school practicums, tools, machines, educational supplies and didactical materials. Participation in EU projects can enable exchange of knowledge and experiences to get the new ideas for improvement of our educational system. Also the Croatian government set some economic measures (stimulation from the government, bank loans under good terms, tax benefits for mentor companies) for helping the SMEs.

Threats

Insufficiently effective collaboration on decision-making level has slowed down the implementation of the landmark Strategy for Education, Science and Technology and the associated curricular reform.

Fast development of new knowledge and technologies, frequent changes in the labour market and demographic population aging present the negative forces in the VET system environment. Some occupations disappear, because for many years there has been no registration or enrolment in given programmes.

Openness of the Croatian small economy make it vulnerable to negative trend of spill-overs. Globalization and raising industrialization lessens the need for handmade products. Growth of import from cheap labour force countries makes SMEs market prices uncompetitive, therefore forcing the SME owners to close their businesses.

External stakeholders:

- Ministry of Economy, Entrepreneurship and Crafts
- Chamber of Economy (CoE)
- Croatian Employment Service
- Association of Employers
- Ministry of tourism
- Trade unions
- Local authorities

3.0 Strategic Plan

VET in Croatia is the least selective way to secondary education. It includes substantially more practical training than four-year VET programmes, features an applied vocational curriculum including a very limited general subject pool and offers no direct access to state exam or tertiary education.

The key purpose of these recommendations is to influence decision makers in order to improve the secondary vocational education system in Croatia, make it more flexible and align it with the labour market and regional economy needs based on work-based learning with special attention to VET contextual environment – stakeholders implementing VET programs. The following steps were recognized as crucial for improving of the Croatian VET/WBL/ apprenticeship system:

- Legal framework and improved career guidance

A clear and consistent legal framework is necessary for quality implementation of VET. The unique status, rights and responsibilities of each stakeholder should be defined enabling VET stakeholders to act effectively in the ultimate benefit of VET students and labour market.

Revision and introduction of new, open curricula that are flexible and in line with the labour market needs should be realised through partnership and collaboration with the companies' experts having in mind the increased hours of practical training in school and in companies. Promotion and enabling vertical and horizontal permeability should open the opportunity of choosing new pathways in one's carrier. Promotion of excellence in apprenticeship and sharing good practice among VET providers and learners can also be a model to enhance creativity, innovation and to appeal new apprentices.

Career guidance is an important element in relation to improve the attractiveness of certain occupation but also to help students in elementary schools to make choice that match their capabilities and can complete their education. In order to identify their interests, the professional orientation system among elementary school students should be introduced systematically (7th and 8th grade students at least) and implemented by professionals.

- Quality assurance in accordance with quality standards in VET system

A clear system of evaluation and quality control should be establish before, during and after the entire period of students' education and apprenticeship in school and in companies – learning outcomes should be defined for each qualification separately (in line with occupation standards). Such system should enable the acquisition of the same skills and competences ensuring systematic feedback mechanism between vocational schools, apprentices and especially feedback from the in-company trainers as well.

- Support for/from education institutions and companies

A well-functioning and motivating financing system should be established and available to schools (better school workshops equipment), students (scholarships), companies that provide apprenticeships (cost of mentoring). In addition, a continuous overall and mandatory professional education/capacity building for all expert school staff/teachers in view of professional training instrument (vocational education agencies + mandatory cooperation with companies/technology providers) in order to follow the latest knowledge and implement it in the curriculum of vocational subjects.

In addition, a systematic data collection and analyses of skills, competences and labour market needs for better planning and forecasting of the VET occupations and programs should be regularly performed by respective institutions.

- Cooperation of VET system stakeholders

Permanent, firm and complementary cooperation and dialogue among VET and other respective relevant stakeholders / Institution (Ministries, Agencies, regional government, schools, committed companies, Chambers, social partners ...) and proactive approach and work on a continuous modernization of the VET education is an important precondition and an imperative.

Financial Resources

All these actions require significant financial resources that should enable systematic strengthening of the capacities and competencies of VET stakeholders, equipping of workshops in schools and companies, introducing monitoring systems for predicting trends in vocational education, encouraging SMEs to get involved in a vocational education system implementation, promoting individual guidance and support for pupils in choosing their occupation, raising awareness of vocational education while designing and promoting recognition and the value of the vocational occupations in Croatia.

Available regional, national and EU funding may provide the resources necessary for initial and further bridging of these gaps and eventually guarantee successfulness of implementation of the newly established VET surrounding and its sustainability.

Conclusion

In order to achieve the concept of a more successful and attractive vocational education, strengthen the work based learning model and improve the quality assurance system of vocational education, it is necessary to make significant changes as early as in elementary education in order to recognize vocational occupations as an attractive option that provides the acquisition of specific vocational competences.

The majority of challenges identified throughout of the project activities and summarized in this document did not emerged from each of the stakeholders separately but as a result of the overall development process of VET environment over the years and as a result of the influence of the society as a whole.

Therefore, all these challenges – institutional, cultural, mind-set and expertise have to be addressed and considered systematically, thoroughly and on a multi-level approach which comprise a complete policy paradigm shift – effective inclusion of policy framework, dedicated individuals, educational institutions, business sector involvement, cultural environment, mind-set shift, demographic trends, social and all other aspects of life.

Above all, a close cooperation, synergy, a truly proactive approach and taking responsibility by all relevant individuals and institutions is a must have.