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Pro-VET – Professional Development of
Vocational Education Teachers with
European Practices



Benchmark European, Russian and Serbian VET policy and strategy, characteristics and gaps

Springboards for developing e-learning for professionalizing VET teachers



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Abstract	This benchmarking report aims to be an analysis of the gaps and differences between European policy in VET and the policies in the partner countries. The report can work as a guide for and being learning material. Pro-VET aims to introduce a systematic approach to, and an open platform for, initial and continuous professional development of VET teachers, trainers and mentors in both school and work-based settings
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List of Acronyms

HEI(s) = Higher Education Institute(s)

ECTS = European Credit Transfer System

EQF = European Qualifications Framework

EHEA = the European Higher Education Area

Pro-VET = Professional Development of Vocation Education Teachers with European Practices

VET = Vocational Education and training

Benchmark European, Russian and Serbian VET policy and strategy, characteristics and gaps

Springboards for developing e-learning for professionalizing VET teachers'

Abstract

The benchmarking report aims to be an analysis of the gaps and differences between European policy in VET and the policies in the partner countries. The report can work as a guide for and being learning material. Pro-VET aims to introduce a systematic approach to, and an open platform for, initial and continuous professional development of VET teachers, trainers and mentors in both school and work-based settings for Serbia and Russia. The reference for the Benchmarking of the different policy is the improvement of VET teachers pedagogical competencies by.

For this benchmark trainers and VET experts from Russia and Serbia were invited to orientate and assess the European VET policies in Finland, Netherlands, Ireland and Germany with emphasis on e-pedagogy against policies in their own countries to get a comprehensive overview of what works and what does not. Workshops between partner HEIs and key VET stakeholders, policy dialogue, needs analysis surveys, data analysis, digital review between partner HEIs and key VET stakeholders provided a framework to identify the transferable practices of the European approach that can be adapted to the partner countries' VET systems to develop and boost the local labour markets. The benchmark consist of five steps: 1) Change lab workshop; 2) Russian and Serbian country reports; 3) Description of the European VET approach in Finland, Germany, Ireland and the Netherlands; 4) training and change lab as development work workshop in Finland; and fifth a change lab as development work workshop analyzing the gaps and differences between European policy in VET and the policies in the partner countries.

The benchmark resulted in springboards in the formulated design parameters and focus for the development of online courses. Therefore, this benchmark contributes in the development of VET-teacher e-learning courses that helps in their VET-teaching profession.

Introduction

Industry, commerce, services, craftsmanship in short vocational business is a pillar in the economy. However, the contribution of VET to economic productivity is often underestimated because little systematic research is carried out on this issue. A study undertaken by Cedefop (Cedefop, 2014; UE, 2014) investigated the macroeconomic benefits of VET. The study reveals that certified vocational skills typically contribute to higher productivity when reinforced by uncertified skills developed through job-related training provided by employers. This kind of training is especially important in countries which lack a strong apprenticeship systems, since many valuable skills are best learned – or can only be learned – in workplaces, not in full-time study settings. However, even workers whose initial training takes the form of an apprenticeship are subsequently likely to need continuing training to help update and improve their skills. The more vocational

skills are developed through continuing training for adult workers, the greater will be the contribution of vocational skills to macroeconomic performance. The study also reveals that in countries where VET is more commonly provided through classroom-based vocational schooling (and in the service industries) high-level skills tend to contribute more to relative productivity than vocational skills, largely because of the disproportionate share of employer-provided training received by high-skilled workers in those countries.

So, VET employee development starts in the education and takes the form of life long learning as workers engage in adult education, continuing vocational education and training (VET), and on-the-job learning. As we know teachers have a significant influence on the students achievement (Hattie & Yates, 2013). Collective teacher efficacy, teachers' creative thinking, their credibility, are in the top of influencing factors while teachers subject matter knowledge is low on the list of influencing factors, even a bit lower the initial teacher training (Donohoo, Hattie, & Eells, 2018).

A survey conducted by RSVPU (P5) in 2014-2016 (Kopnov et al., 2016) showed that 58% of Russian VET trainers do not have formal pedagogical training. Only 6% of VET teachers had experience in international communication. Moreover, retraining covered less than 15 % of all VET teachers and trainers.

In Serbia, the situation is quite similar what was found in the Russia. Until 2009, VET teachers were allowed to work without any previous teacher training. The findings have indicated the existence of a discrepancy between competencies acquired during initial education and the professional needs of VET teachers). Additionally, the current VET teacher preparation programs lack courses that develop general pedagogical knowledge to raise the quality of instruction in the broader sense.

VET teachers (in Russia and Serbia? or all the VET teachers?) and trainers need to have the necessary pedagogical ability to design and develop programmes and curricula based on European VET policies and best practice. Despite the attention and supporting tools available for VET in Russia and Serbia, all stakeholders express a growing concern about the educational quality, relevance, delivery, and management of the VET systems. Vocational education and training is a key element of lifelong learning systems, which equip citizens with knowledge, skills and competences required in particular occupations and on the labour market ("EU policy in the field of vocational education and training," 2015)

However, VET teachers' obligation to continuously develop their skills and competences to keep up with requirements set in the digital era, is not only needed in Serbia and Russia, but also in Europe. A number of EU-level reports have pointed out that VET sector greatly differs and is more complex than any other education sector, due to its necessity to be interlinked with pedagogical frameworks with industry, employment and social policy (Cedefop, 2018)

Pro-VET (JAMK, 2017) aims to introduce a systematic approach to, and an open platform for, initial and continuous professional development of VET teachers, trainers and mentors in both school and work-based settings for Serbia and Russia. Consortium partners and universities cannot immediately change their entire national VET systems. However, they can add value to the development of lifelong learning and cooperation by closing capacity gaps in their institutions. Pro-VET will provide opportunities for pedagogical skill development and increased work-life relevance and collaboration with proven European approaches and

methodologies in VET in Serbian and Russian languages. The reference for the Benchmarking of the different policy is the improvement of VET teachers pedagogical competencies by

- 1) upskilling selected HE teachers in the target countries on how European HE and VET organisations find decisions for VET policy pointers (2011, 2013), identified as similar national needs for HE and VET development in the two partner countries;
- 2) foster new forms of socially-responsible and entrepreneurial thinking to enrich the national Russian and Serbian VET systems, through cooperation and evaluation of European best practice in HE and VET;
- 3) interface with industry stakeholders on their needs and requirements so that VET institutions can create new policy, curriculum and pedagogy to produce effective graduates;
- 4) build national e-labs for professional development which will produce and disseminate content and courses on European VET policy, practice and methods in Russian, Serbian and English (target languages can be increased with demand);
- 5) build an online platform with open educational resources (OER) for the target groups – HE teachers engaged in VET teacher training, and VET teachers and trainers;
- 6) market and maintain the online platform to reach as many VET teaching professionals in Russia and Serbia as possible, using mobile and Internet resources;
- 7) encourage an online interactive space using consortium websites and social networks such as Facebook, Twitter, Instagram, etc. where the target groups can discuss related issues and share experiences.

Although, there is a great diversity among the VET education in Europe one agreed on a European VET policy with the following developmental characteristics in relation to pedagogical competence (Bruges Communiqué, 2010, Riga Conclusions, 2015) (Cedefop, 2015; Latvia, 2015)

- Promoting work-based learning in all its forms with special attention to apprenticeships, by involving social partners, companies, chambers and VET providers, as well as stimulating innovation and entrepreneurship.
- Develop quality assurance mechanisms in VET in line with the Recommendation on the establishment of a European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET) (COUNCIL, 2009), and to establish continuous information and feedback loops in I-VET and C-VET systems based on learning outcomes.
- Enhancing access to VET and qualifications for all through more flexible and permeable systems, notably by offering efficient and integrated guidance services and by enabling the validation of non-formal and informal learning.
- Strengthening key competences in VET curricula and provide more effective opportunities to acquire or develop those skills through I-VET and C-VET.
- Introducing systematic approaches to, and opportunities for, initial and continuous professional development for VET teachers, trainers and mentors in both school- and work-based settings.
https://ec.europa.eu/education/policies/eu-policy-in-the-field-of-vocational-education-and-training-vet_en (“EU policy in the field of vocational education and training,” 2015)

Vocational education and training (VET) are seen as a key element of lifelong learning systems, which equip citizens with knowledge, skills and competences required in particular occupations and on the labor market.

Although, many investments have been done in cross-national convergence of skill formation systems within the European Union, inequality still remains among the European countries. However, our main focus is the improvement of pedagogical competencies of VET teachers. So, in this benchmark the focus is on the possible pedagogical competencies of VET teachers by analyzing the gaps between the European partners on the one hand and the Russia and Serbian partners on the other hand. In short: ‘Trainers (European partners), to train the trainers (Russian and Serbian partners), to train VET-teachers (the project output, development of the online professionalization courses)’. Therefore, the benchmarking report can also work as a guide for, and being learning material in the context of VET-teacher profesionalization.

Method

For this benchmark trainers and VET experts from Russia and Serbia were invited to orientate and assess the European VET policies in Finland, Netherlands, Ireland and Germany with emphasis on e-pedagogy against policies in their own countries to get a comprehensive overview of what works and what does not. Workshops between partner HEIs and key VET stakeholders, policy dialogue, needs analysis surveys, data analysis, digital review between partner HEIs and key VET stakeholders provided a framework to identify the transferable practices of the European approach that can be adapted to the partner countries’ VET systems to develop and boost the local labour markets. The benchmark consist of five steps: 1) Change lab workshop; 2) Russian and Serbian country reports (Golubeva, Shchipanova, Myrsaliev, Tregubova, & Kopnov, 2019; Papić-Blagojević, Račić, & Tomašević, 2019); 3) Description of the European VET approach in Finland, Germany, Ireland and the Netherlands (Seuneke & De Jong, 2019); 4) training and change lab as development work workshop in Finland; and fifth a change lab as development work workshop analyzing the gaps and differences between European policy in VET and the policies in the partner countries. In the results activity two and three are taken together as well as the change lab development work workshops of activity 4 and 5.

Benchmarking data activities

The first activity in this current benchmark took place during the kickoff of the project in the form of a workshop in which an inventory took place of European VET policy, practice and pedagogy aimed at identifying and explicating opportunities and benefits from this collaboration for Russian and Serbian VET teachers and national VET systems. In this workshop the method of Change lab and Cultural Historical Activity Theory (CHAT) approach (Engeström & Young, 2001; Engeström, 1987; Y Engeström, 2009; Yrjö Engeström, Virkkunen, Helle, Pihlaja, & Poikela, 1996) was used to reveal gaps between desired and current VET-teaching and dilemma’s as springboards for development. This initial inventory and data collection of Russian and Serbian state-of-the-art analysis and of relevant European VET policy, practice and pedagogy revealed a first indication of gaps and priorities for development could be determined.

A second activity in this current benchmark were two country reports that describe the current national VET context, including the VET policy framework, National Quality Framework (NQF), professional qualifications, qualification recognition, work-life co-operation, pedagogical approaches, legal framework etc. in Russia and

Serbia. The two reports specify the national development needs in Russia and Serbia vis-a-vis European VET pedagogical approaches and policies in VET to allow for a comparable approach (reference).

A third activity was the description of the European approaches e.g. the current national experiences (in Finland, Germany, Ireland and the Netherlands) in the EU VET context including VET policy framework, National Quality Framework (NQF), professional qualifications, qualification recognition, work-life co-operation, pedagogical approaches, legal framework etc. The report specifies the adding value to the achievement of the development aims of the Partner Countries VET sector and formulates the value and parameters for the developed trainings, blended learning and VOOC-products.

A fourth activity was an intensive training week in Finland for teacher trainers with the focus on training and development workshops on the European VET policy and practice. Teacher trainers took part in all intensive training weeks to gather material for the benchmarking report on the findings and observations on the European policy and practice in VET from all four European countries.

Fifth and a last activity consisted of analyzing the gaps and differences between European policy in VET and the policies in the partner countries by using the above mentioned activity result together with the focus on what is needed for the development learning material to professionalize the pedagogical competence of VET-teachers and trainers in Russia and Serbia.

Results

Results of the kickoff change-lab workshop: activity 1

The first activity resulted in a ranking of pilot prioritized springboard for development based on practical experienced dilemma's and gaps descriptions by the workshop participants (see table 1). The springboards are categorized in relation to the components of the Engstrom's activity triangle (see fig. 1).

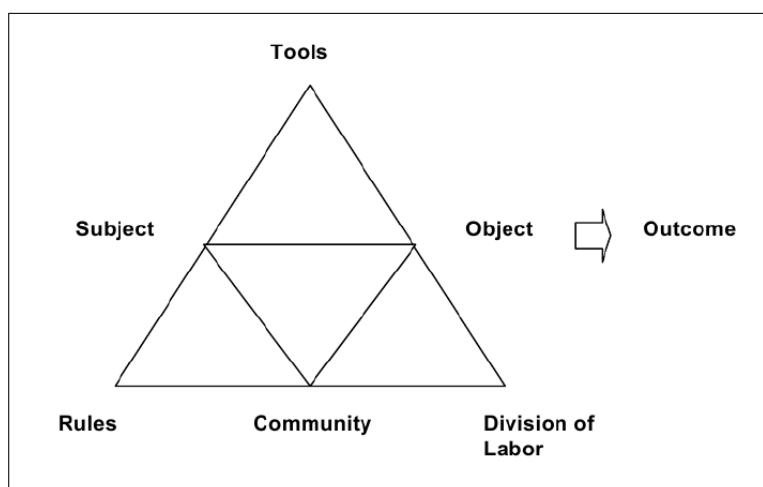


Figure 1: Activity triangle model Activity system (Yrjö Engeström, Miettinen, & Punamäki, 1999).

Remarkable is that the category of contemporary didactics like collaborative learning, peer learning, visual learning, personalized learning and learning form practice (e.g. practice oriented curriculum) are experienced as high priority to upskill. Followed by the category of upskilling the teachers and trainers with e-didactics and technology pedagogics and their passion for VET-teaching and sharing of experiences with each other.

Systematic structural cooperation between industry and VET in relation with the practice orientation of VET and the development of soft-skills and open mindedness and a vision for didactical innovation is a good third category. Low priority in the context of empowering the teacher competence has students' career development skills, and increasing support by the government, social partnership, finance. Other issues in table 1 can be related to above stated categories.

Table 1: Pilot prioritized springboards for development based on practical experienced dilemma's and gaps descriptions by the participants during the kick-off meeting. Activity-system indication refer to (Engestrom, 1987; Yrjö Engeström et al., 1999).

Springboard for development based on practical experienced dilemma's and gaps descriptions by the workshop participants	Rank Priority indication	Activity system indication
Decreasing the gap between existing pedagogy technology and required ones (innovative) e.g. collaborative learning, peer learning, personalized learning, visual learning	1	tool



Redesigning/developing of practical oriented curriculum (vocations back into the vocational learning)	1	tool
Upskill teachers (trainers) with pedagogical technology and teaching skills	3	Subject/agent
IKIGAI (how far goes the blaming)	4	Community/ culture
Increasing the possibility for VET teachers to share experiences, take part in professional and academic mobility	5	tool
Systematic structural cooperation between industry and VET	5	task division
Soft & green skills, stay open minded	7	goal
Vision/mission of future Vet Education	8	goal/outcome
Decreasing the gap between good versus poor VET	8	goal
Position of VET-teachers' profession in society (value, respect)	10	Community/ culture
Training for VET teachers	11	Tool
Professional development as a form of support, not as an obligation	12	dd
Developing Pedagogical, psychological, didactic competence	12	Subject/agent
Increasing Internship and placement	14	tool
(presentation, communication etc.)	15	goal
Fashionable, adored professions	15	goal
Students perspectives of the future career, jobs, LLL education	17	Community/ culture
More granting freedom for VET education/institutes regulations are better than practice	17	rules
Increasing the support by the government, social partnership, finance	19	Task division
Employable competitive students	19	outcome
Increasing the desire to improve VET of themselves (teachers)	21	Subject/agent

Conducive environment	21	tool
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Results of the country reports: activity 2 and 3

The results of activity two and three, the ‘country’ reports, are synthesized with a focus on teacher development in terms of related teacher competence in order to (see table 3 in appendix 1) form a basis the development framework for improving training and the development of e-learning modules. The relatedness to pedagogical/didactical teacher competences was not so transparent because of the quite abstract and many time descriptions on the macro-level of the country reports.

At the VET-policy level and work-life cooperation level gaps can be seen between European focus on a kind of shared responsibility between education and companies to educated competent students for work life while Russia and Serbia show still a more ‘traditional’, teacher and school, academic competence centered approach in preparing students for work-life. Although trends is going towards a more sensitivity for the need of the labor market.

Concerning teachers in Russia and Serbian there is a need teacher professionalization. From a European perspective this means developing soft-skills related to communication, organization and aligning school and work-place learning and curriculum, ‘boundary-crossing’ and collaboration competence with the business partners a ‘partner in crime’ in VET for future employee development.

From the perspectives of Funding of VET, National Qualification Framework (NQF) and Professional qualifications not much consequences for teachers can be derived. From a European teacher perspective is means finding the pedagogical ‘agency’, flexibility in the qualification frameworks for innovation VET niches and skills for formulating and determining curriculum in learning outcomes based on job-profiles.

It looks like that recognition of teacher professionalism in Russia but especially in Serbia is related to academic criteria related to university and a researcher career (this is only for VET teachers in higher education). The European recognition of teacher professionalism is beside knowledge and expertise in the domain stronger on the pedagogical and didactical competences, Coaching competences, Instructional/training competences, soft skills and work domain knowledge and expertise.

In the pedagogical approach of Russia and Serbia lecturing is dominant, while less attention is paid to active learning, inquiry learning, individualized classes and other methods which focus on students and which allow for greater student participation in the teaching process. Of course, in secondary VET more school-practice based learning is involved too. On the European partner side we see beside lecturing much more a pedagogical approach that is competence based, with personal study paths (flexibility, student suited/tailored/responsive), workplace learning, authentic (problem based) learning, self-responsible and self-directed learning; student agency, entrepreneurial learning, assessment *for* learning instead of only assessment *of* learning, cooperative and Collaborative learning, computer (collaborative) supported learning, on-line learning.

From an European perspective it means that teachers Integrated knowledge, skills and attitudes in problem-based teaching; that they have knowledge about contemporary learning psychology and instructional design insights and principles, acting innovative and responsive to student's needs and, change to student centered teaching by supporting learning-to-learn and collaborative learning, That they develop skills in e-learning supporting/coaching, e-learning development (flipping the class-room; distance learning; distance support), assessment of and for learning, and are more practitioner research skilled in order to develop their educational practice in an Evidence informed teaching/training attitude. The latter contributes to the teacher as a reflective practitioner with a practitioner research attitude.

EU-best-practices

On the transnational meeting in Finland, all EU-partners have shared a number of 'best practices'. These best practices serve as an additional basis for inspiration guiding the following Pro-VET project steps. The following European good practices, per EU partner country, were listed:

Finland:

- **eAMK**
All Finnish universities of applied sciences take part in the project. Purpose of the eAMKproject is to develop the ecosystems of learning, based on shared digital courses offering working-life oriented pedagogy, digital pedagogy and guidance. The eAMKproject is aimed to strengthen the co-operation of Finnish universities of applied sciences (<https://www.eamk.fi/en/frontpage/>).
- **Campus Online**
Enables students to follow a selection of online courses by more than twenty Finnish universities of applied sciences. Students can select courses from another university of applied sciences free of charge. CampusOnline.fi is 100% online (<https://campusonline.fi/en/>).
- **Quality Criteria for Online Implementations**
The quality criteria for online implementations have been created during fall 2017 as part of the eAMK project. The criteria was put together by Mari Varonen from JAMK University of Applied Sciences and Tuula Hohenthal from Centria University of Applied Sciences. Members from the eAMK quality criteria work group and commentators from universities of applied sciences and stakeholder groups took part in the work. Several European quality criteria have been used as a basis for the quality criteria, especially the quality cards by Uutta avointa energiaa project and the quality criteria for JAMK's online pedagogy (<https://www.eamk.fi/en/courses-offering/quality-criteria/>).

Germany:

- Standards for the Teacher Training in the Educational Science.
- Dual Vocational Education and Training (VET).
- Work process oriented and multimedia based learning in vocational education and training.

Ireland:

- **Youth Guarantee Programme**
Aim: to provide under 25s with a good quality offer of either employment, continued education, or an apprenticeship or a traineeship within a short time of becoming unemployed. However, nothing more has been heard of about this programme since its funding by the EU in 2015 (<https://www.welfare.ie/en/Pages/Youth-Guarantee-Ireland.aspx>).
- **Qualifications and Quality Assurance Act**
To include vocational qualifications within the National Framework of Qualifications (NFQ). The overall aim is to be able to provide potential learners and employers with evidence of the quality of

courses leading directly to employment or possibly further studies
(<http://www.irishstatutebook.ie/eli/2012/act/28/enacted/en/html>).

- **Campus Engage: Student Volunteering National Working Group**
Supporting students to engage with local community groups through volunteering. Designed to allows students to maximise their involvement in volunteering, find roles that will serve their goals and be acknowledged and rewarded for their contribution (<http://www.campusengage.ie/>).
- **Apprentices and Access to Industry**
<https://www.dit.ie/colleges/collegeofengineeringbuiltenvironment/accesstoapprenticeship/>
- **Pedagogical Approach**

From April 2013, all teachers starting at State-funded second level schools and FE colleges were required to have a pedagogical qualification. This is not yet required of non-state-funded institutions, but the need for Continuing Professional Development (CPD) is increasing. There is a move now by the Quality and Qualifications Ireland (QQI) to enforce a minimum Level 3 pedagogical qualification on all TVET teachers, but this is currently under consultation.

The Netherlands:

- **Regional Learning**
Regional Learning is an educational format from Terra (a land-based VET school in the north of the country) in which groups of students work together with the region (e.g. farmers, local entrepreneurs, governmental organisations, NGO's etc.) on real world problems and questions. In so doing, the VET school Terra aims to foster 1) students '21st century skills' as well as 2) contribute to regional innovation and development (<https://www.mboterra.nl/Over-Terra-MBO/Onderwijs/Regioleren.html>).
- **Master of Education 'Learning & Innovating' MEd-MLI**
A two years (part-time) applied master's programme for professionals in education and HR, focussed on developing research-based innovations for learning and professional development (<https://www.aereshogeschool.nl/opleidingen/deeltijd/master/leren-en-innoveren>).

Comparing future scenario's Russia and Serbia strive for settling and improving existing VET teacher education with a special focus also on modern educational technology use and contemporary educational and learning psychology insights. Teachers' life-long-learning and development of teaching competencies is equally important for the Russia, Serbian as the European teachers. The same holds for staying updated with e-learning technology development. The European perspective is also focusing on education for sustainability (in relation to live and nature) e.g. whole school approaches; responsive education, and developing, curiosity, inquiry and an entrepreneurial student attitude.

Results of the intensive change lab workshop Finland and Russia: activity 4 and activity 5

In the change lab workshop the results on working with design parameters can be summarized in general based on European Vet, Russian and Serbian needs. The results show a build-on on the previous results of activity 1, 2, and 3 but in more concrete parameters and intended objectives and outcomes. The change lab concentrated in the context of this benchmark on design parameters (see table 2) and the focus for the actually development of courses can be summarized as: 1) Soft skills development; 2) Contemporary Learning psychology, pedagogical and didactical competence, role of the tutor, teacher and learner; 3) Design and realizations of up to date e-learning; 4) Design and tutoring of online courses. This related to 5) European VET educational policy related to online training.

Table 2: focus of the design parameters and intended objects and outcome

Category	Design parameters	Intended objectives and outcomes
General based on European VET	Using e-learning platforms for design, create and teach e-learning courses	e-Content creation
	Soft skills development	Teacher's professional development
	Developing pedagogical skills	Development of key competences;
	How way to present material in the course	New ways to present the materials
	Relevant content selection and structuring	Competence in content selection and structuring
	Formation of the readiness to use the EU practice	Competence in using good EU practice
Russian	Use e-learning platforms for publishing learning content;	Teachers able to create e-content
	Conduct online discussions and engage in communication with student	Teacher developing in conversation, dialog, discussions skills
	Engage in communication with students and other teachers;	Teacher are capable in communication, dialogue skills

	Developing pedagogical/didactical skills of	Teachers now how to develop VET of key competences/competence/competencies
	Ways to present material in the course	Teachers are capable to use new ways to present instruction and learning materials
Serbian	Development of teaching and learning material for VET teachers	Teachers are creating and developing learning and teaching material
	Using Moodle platform for publishing learning content	Teachers are capable of using Moodle platform for teaching and learning
	Choice of pedagogical and didactical approach in realization of teaching and learning process	Teachers are understanding and know how to implement different didactical approaches
	Development of soft skills	Teachers have improved their soft skills necessary for teaching and learning
	Networking of VET teachers	Teachers are exchanging their knowledge and experience

Conclusions

Understanding VET-teachers as “professionals” means having high expectations of them as advanced knowledge workers. It means they should not only conduct their work in an effective manner, but also strive to improve their skills throughout their career, collaborate with colleagues and business to work towards school improvement, and think creatively about the challenges they face. However, if we expect teachers to act as professionals, we should treat them as such and give them full opportunity to develop themselves by offering up to date course to professionalize themselves. PROVET is in the heart of this by contributing to the development of professional courses building in the cultural context and up to date European good practice. Therefore, this benchmark is not just one-way from European good VET-practice towards but a co-creation artefact for further development of VET-teacher professionalization in Russia and Serbian.

Gaps

The benchmarking with European partners on the one hand and Russia and Serbian partners on the other hand over the 5 activities has resulted in a well-grounded focus for the further development of on-line course for the professional development of VET-teacher within the developmental limitations of this project. This focus is based on the gaps that were determined by the partners. The main gaps concern overcoming the:

- Teacher curricula and teaching towards more student-centered curricula
- Domain knowledge centered way of curricula and teaching towards also practice and competence and profession center curricula
- Academic oriented professionalization recognitions and low teacher as a profession recognition towards upskilling and recognizing the teacher profession skills beside the domain knowledge

- Minimal or no pedagogical and didactical VET-teacher training towards offering online opportunity for professionalizing teacher trainers and Vet-teachers
- Institutional, external motivated driven professionalization and learning towards more personal, internal, from the professional heart motivated and drive to learn and develop yourself as a professional teacher.

Focus for teacher professionalization

From a European good practice perspective this means in relation to teacher professionalization:

- Developing soft-skills related to communication, organization and aligning school and work-place learning and curriculum, 'boundary-crossing' and collaboration competence with the business partners a 'partner in crime' in VET for future employee development.
- Developing the pedagogical 'agency', flexibility in the qualification frameworks for innovation VET niches and skills for formulating and determining curriculum in learning outcomes based on job-profiles and competence and competencies.
- Recognition of teacher professionalism is beside knowledge and expertise in the domain stronger on the pedagogical and didactical competences, Coaching competences, Instructional/training competences, soft skills and work domain knowledge and expertise.
- That teachers Integrated knowledge, skills and attitudes in problem-based teaching; that they have knowledge about contemporary learning psychology and instructional design insights and principles, acting innovative and responsive to student's needs and, change to student centered teaching by supporting learning-to-learn and collaborative learning,
- Teachers develops skills in e-learning supporting/coaching, e-learning development (flipping the classroom; distance learning; distance support), assessment of and for learning, and are more practitioner research skilled in order to develop their educational practice in an Evidence informed teaching/training attitude.
- That teachers develop themselves as reflective practitioners with a practitioner research, inquiry attitude.
- The development of education for sustainability (in relation to live and nature) e.g. whole school approaches; responsive education, and developing, curiosity, inquiry and an entrepreneurial student attitude.

Design parameters

Above mentioned gaps and teacher professionalization challenges are boomeranged as springboards in the formulated design parameters and focus for the development of online courses:

- Using e-learning platforms for design, create and teach e-learning courses for publishing learning content; online discussions and engage in communication with; communication with students and other teachers and student.
- Soft skills development; needed in teaching; supporting student learning; communication with the business, work life and societal actors to build partnerships for VET-education.
- Developing contemporary learning psychological (vision on learning, based of understanding learning processes), pedagogical and didactical skills based their vision of learning and intended and related learning processes in order to realize effective teaching e.g. the development of

relevant competence and competencies (integrated use of knowledge, skills, attitudes, ethics, sustainability accountable etc.) to work life and the goodness of the society.

- How way to present material in the course; functional use of a broad range of e-technological functionalities (collaborative functions, communication and dialogue functions, video as medium for demonstration but also as a student video-production tool for observing, reporting workplace or real life experience and input for dialogues and learning, virtual reality for discovering complex or difficult to enter real life situations, simulations, online literature data sources, etc.)
- Relevant content selection and structuring; efficient and effective design of e-learning based on backwards reasoning of the intended students learning outcome and related learning processes
- Formation of the readiness to use the EU practice of more dual or partnerships in VET-education with real live practice, business, society to increase the relevance of VET-education.

General conclusion

VET-education is of tremendous importance for the development of each country and the globally welfare and wellbeing. The important role of VET-teacher in the effectiveness and the contribution of good learning processes and learning outcomes of students is easily underestimated. The idea that if you have enough knowledge of a domain or be a skilled person in the practice is the main recognition for teachers is denying the teacher as a real profession. A profession that beside knowing the domain or having built up practical skills is built on the most important pillar having teaching knowledge and competence. The latter goes far beyond the competence of being able to tell a story, and even telling a good instructional story is a teaching competence only few really own. This benchmark aims to contribute in the development of VET-teacher e-learning courses that helps in their VET-teaching profession.

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Appendix

Appendix 1: Results of the country reports activity 2 en 3

Table 3: Synthesis of the country reports with a focus on development of teachers' competences (focus project).

VET aspect	EUROPE (Synthesis of Dutch, Finnish, German and Irish country reports) With a focus on teachers' competences (focus project)	Russia	Serbia



VET-policy framework	- Trust, shared responsibility (the State, employers, Trade unions / workers' councils, apprentices, VET schools and the Chamber) - Competence based - Lifelong learning - School and company's collaboration (dual-education) - European qualification framework Pedagogical teacher competences relatedness: - Communicating with work-life stake holders	VET-policies aimed at creating necessary conditions for training workers and specialists demanded on the labor market considering the changes taking place in the Russian economy, the transition to innovative technologies, knowledge engineering. - Management of the VET system is carried out at the federal and regional levels - 'Training highly qualified specialists and workers with modern standards and advanced technologies' - 'Modernization and renovation of the infrastructure and technical base of vocational educational organizations' Pedagogical teacher competences relatedness: General, enhancing overall quality of VET: - Ensuring professional development of pedagogical staff of the VET system - Providing conditions for improving teachers' qualifications (trainers, mentors, facilitators) - Lifelong learning	In academic studies, students are trained to develop and implement scientific, artistic and professional achievements while on vocational studies, students are trained for the implementation and development of professional knowledge and skills necessary to participate in the working process., based on accredited study programs for higher education in compliance with international recognized standards. VET-policy aims a better connection between vocational education and industry. Pedagogical teacher competences relatedness: Planned activities: - Improving teacher competencies in vocational studies - Introduction of research into vocational studies VET governance: - Setting the frame for realizing professional practice in HEIs - Improved syllabus with market needs requests.
Work-life cooperation	- Procession task oriented - Workplace competence oriented - Work-place learning - Dual-learning at school and the workplace	All stakeholders involved in the organization of VET: federal and regional governments (on education as well as on employment), regional enterprises, industries,	Planned activities but not much realized yet in relation to teacher education: - Strengthening the cooperation of HEI in the field of vocational studies with the economy



	- National Qualification Framework Pedagogical teacher competences relatedness: - Organization and aligning school and work-place learning and curriculum - 'boundary-crossing' competence	educational organizations and students, parents / representatives. VET organizations operate in three basic legal forms: budget, autonomous and non-state educational organizations. Pedagogical teacher competences relatedness: Nothing specific	Professional practice provided in VET-schools is weak despite the Strategy for Education Development of professional practice outside school (work-based) learning (weak). Students of the final years of bachelor and master vocational studies refer to the professional practice in enterprises with which the higher education institution has signed cooperation agreements, it is customary for enterprises to appoint mentors of student practice and to implement the practice in accordance with the plan and program of VET school. The role of the mentor from the company, i.e. co-mentor, who has the appropriate level of qualifications and education, is especially important in the students' writing master's thesis on master vocational studies. Namely, the final work on master vocational studies, according to the Standards for Accreditation, is designed as a project in which the practical problem from the company in which the student was performing the professional practice during the studies will be
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			solved. The co-mentor is a person employed in an enterprise that helps student in solving the practical problem and he/she is a member of the commission for the defense of master thesis. Young people do not have adequate competences for certain jobs is one of the main causes of their unemployment. It
Funding of VET	- State, governmental financed VET - In company (commercial) training is company funded	The financial support of VET in the Russian Federation is carried out in accordance with the national legislation from the federal budget, from the budgets of the constituent entities of the Russian Federation, from the funds of employers and VET organizations. Pedagogical teacher competences relatedness: Nothing specific	Higher education institutions can be state and private: state institutions are financed by the Republic of Serbia (N=48), while private institutions (N=14) are financed from their own sources. About 25%²¹ of the funds from the republic budget intended for education are allocated for higher education. Students can enroll in all HEIs including VET schools as self-financing too. Financing of higher education institutions from the budget is regulated by a legal act at the level of the Regulation²³ and it is essentially based on the same principles as the regulation from 1992. As well as financing of other levels, financing of higher education as key input elements include number



			and structure of employees, number of government-funded students, the size and number of buildings, etc. Differences in own funds (primarily from tuition fees) are significant and their share in the total funds of the HEIs varies from several percent to 80%.
National Qualification Framework (NQF)	NQF and EQF frameworks, Dublin descriptors and Bologna agreement. Pedagogical teacher competences relatedness: - Finding the pedagogical 'agency', flexibility in the qualification frameworks for innovation VET niches	The Federal Law «On Education in the Russian Federation» sets forth requirements for an independent assessment of the quality of education, which is aimed at obtaining information about educational activities, the quality of student training, and implementation of Curricula. The National Agency for Development of Qualifications has been founded to create modern effective mechanisms for interaction between business and the education system. Pedagogical teacher competences relatedness: Nothing specific	National Qualification Framework²⁵ is formally regulated by the Law on the National Qualifications Framework of the Republic of Serbia. The linking of the NQF with the European Qualifications Framework is an official process that will be implemented during the accession to the European Union. Pedagogical teacher competences relatedness: Nothing specific
Professional qualifications	- Based on job profiles - Formulated in learning outcomes Pedagogical teacher competences relatedness:	In the Russian Federation, the functions of the National Qualifications Framework may be referred to the document «Levels of qualifications in order to prepare occupational standards», approved by Order of the Ministry of Labor of Russia from 12, April 2013. No. 148n. The document includes a description of 9 levels of qualifications, as well as a description of ways to achieve them. The single document establishing the National	The goals of the National Qualifications Framework, amongst other are the development of qualifications standards based on the needs of the labor market and the society as a whole as well as ensuring that the entire education is oriented on learning outcomes building the competencies which are defined by the standard of a given qualification, as well as the affirmation of the



	- Formulating and determining curriculum in learning outcomes based on job-profiles	Qualifications Framework has not been yet approved in the country. Pedagogical teacher competences relatedness: Nothing specific	importance of key, general and inter-curricular competencies for lifelong learning. In NQF qualifications are classified in eight levels and four sublevels, and, in accordance with their type, they are classified into general, professional, academic and vocational qualifications. Pedagogical teacher competences relatedness: Nothing specific
Qualification recognition	- Teachers and trainers are selected entering of VET-teacher education based on explicated pre-educational level requirements and work expertise. - VET-teachers' personal tutoring role recognition (guidance, coaching, counseling) - Formal described teacher competencies - Workplace mentors/coaches mostly not pedagogical trained. Pedagogical teacher competences relatedness: - Pedagogical and didactical competences - Coaching competences - Instructional/training competences - Soft skills	The right to be engaged in teaching activities have persons with secondary vocational (5 level of NQF) or higher education (6-8 level of NQF) that meet the qualification requirements specified in the qualification reference books, and (or) occupational standards. Characteristics of the occupational activity of VET teachers and industrial education trainers are indicated in the occupational standard «Teacher of vocational training, vocational education and additional vocational education» (approved by the order of the Ministry of Labor of Russia from 09.09.2015. No. 608n). Pedagogical teacher competences relatedness: (See occupational standard mentioned above)	There are no special programs for the initial education of future academic staff in higher education. Likewise, there are no requirements concerning particular subjects during studies, such as psychology, pedagogy, teaching methodology or other education related subjects. Professional development in the form of published scientific papers and other relevant publications is extremely important for career promotion, this being one of the criteria for the teacher's employment and earning a higher-ranking title. Trainers: In the education of VET teachers there have not been established or systematically defined training process for the teaching role. The basic knowledge of the



	- Work domain knowledge and expertise		profession (contents) is significantly more valued than how that knowledge is passed on to others. The minimum criteria for the elections include precisely defined indicators of scientific or artistic work, while educational work is not valued at all. It is estimated through insufficiently relevant indicators, such as student surveys, or completely lacking objective indicators for evaluating the quality of the methods of teaching. Teachers: Election to the position of teachers at HEIs is regulated by the Law on Higher Education, while the precise conditions are established in the general act of a higher education institution. Typically, a PhD degree is required for those applying for academic staff positions, although persons with lower degree levels may apply for some positions.
Pedagogical approaches	- Competence based - Personal study paths (flexibility, student suited/tailored/responsive) - Workplace learning - Authentic (problem based) learning - Self-responsible and self-directed learning; student agency - Entrepreneurial learning - Assessment for learning - Cooperative and Collaborative learning	Mentioned are: - The dual training model - The modular credit learning system - E-learning for distance learning - Business and role-playing games. - Project work - Technologies used for training WorldSkills Pedagogical teacher competences relatedness:	learning outcome-oriented education; competences are based on learning outcomes and defined by qualification standard. Pedagogical teacher competences relatedness: Lectures are dominant, while very little attention is paid to active learning, research methods, individualized classes and other methods which focus on students and



	- Computer (collaborative) supported learning Pedagogical teacher competences relatedness: - Integrating knowledge, skills and attitudes - Problem based teaching - Knowledge of contemporary learning psychology and instructional design insights and principles - Innovative and responsive, student centered teaching - Supporting learning-to-learn - Supporting collaborative learning - E-learning supporting/coaching - E-learning development (flipping the class-room; distance learning; distance support) - Assessment of and for learning - Evidence informed teaching/training attitude (reflective practitioner; practitioner research attitude)	Nothing specific mentioned; rather lecturing based.	which allow for greater student participation in the teaching process, current needs of e-learning are: • implementation of interactive and cooperative teaching methods (active and cooperative learning); • creation of different tools of student's assessment (tests, quizzes, project, group work, essays). • establish more efficient and easier communication with all of the stakeholders (trainers, teachers, students); • Increase the efficiency of international cooperation and reduce geographical barriers and distance; • providing more efficient exchange of knowledge and experience;
Legal Framework	VET-system is general based on national legislation and laws. Pedagogical teacher competences relatedness:	VET-system is based on an extensive federal legal framework. Pedagogical teacher competences relatedness: Nothing specific	VET-system is based on a legal framework Pedagogical teacher competences relatedness: Nothing specific



	- Knowledge of the national VET-structure and how students can flow through. - Learning outcomes needs to be aligned to the national legal educational levels.		
Future scenario's	- Intense cooperation with working life, - Regional oriented VET - Responsivity of the curricula to technological, societal and labor market developments. - Expanding the computer supported education (Virtual reality; computer (video) supported collaborative learning; - Holistic profiles towards flexible labor market developments. - Further development of NQF and cross-country recognitions - Sustainability development goals oriented VET Pedagogical teacher competences relatedness: - Teachers' life-long-learning competencies; staying updated with technological, societal developments - Sustainable oriented education (whole school approaches; responsive education) teaching competencies	- Implement and develop public-private partnership mechanisms at the federal, regional, and institutional levels. - Development of mechanisms for independent assessment of qualifications. - State support of the modernization of the VET system; subsidies for regional VET development programs. - Development of a unified VET system including development of new models of training for VET teachers and the development of the WorldSkills movement in Russia. - Improving vocational orientation of students in general education; development of the system of secondary vocational education, taking into account the combination of theoretical training with practical one at the enterprise. - Create a barrier-free study environment in vocational education and training (inclusive education). - ECVET implementation. Pedagogical teacher competences relatedness: - Professionalization of teachers. Teacher training has not changed much over the past 30 years (systems fails; lack of pedagogical competencies as well as e.g.	- The establishment of a system of professional orientation, professional practice, career guidance and counseling - Monitoring the quality of implementation of the practice by the higher education institution and the company are in charge: Setting learning objectives and the entire program of practice; - • Providing a place or position in a company for a student; - • Negotiating about Practice Agreement; - • Monitoring the process of professional practice; - • Management of professional practice; - • Assessment of professional practice. - The Action Plan recognizes the need to support and improve the work of teaching staff in higher education - A program for acquiring - competencies in the field of pedagogical-psychological and didactical-methodical training of teachers is being realized but only for the teachers in primary and secondary schools - developing a model of a center for the development of education in professions that educate teachers in colleges (universities) - Improving teacher development system



	- E-learning technology development - Curiosity and inquiry attitude	ICT-skills, literacy). Regarding subjects as: activating pedagogy, group learning etc. - Five standard qualities VET-teachers: 1) knowledge of their curriculum, pedagogical skills, lifelong learning; 2) able to work with special needs students; 3) organization and planning; 4) communication skills and 5) social skills. Professionalization with regard to general challenges: - Overall modernization of education. The system as "growth and development" rather than "survival model". - Bridging the gap between education and the labor market (by e.g. encouraging closer cooperation between employers and schools, partnerships, 'dual education', apprenticeships) - Digitalization; ICT in education, ICT-skills, literacy of teachers. - o E-learning - o Web based / online learning - o Mobile learning - o Distance learning - o Working with Learning Management Systems - o Blended learning - o Flipped learning / teaching - o Virtual reality, simulations - Sustainable development - Internationalization, Europeanization, globalization.	Pedagogical teacher competences relatedness: Training teachers for application of new learning methods, IT and e-learning, in instruction • lecturers can use a large number of different materials in different formats and in this way can improve the quality of the curriculum; • students acquire knowledge more quickly with the help of interactive media that contain images, videos and audio records; • communication between the lecturer and the student inside and outside the classroom can be significantly improved; • greater involvement of students in the education process. Pedagogical needs are based on the needs of adopting contemporary pedagogical and didactic knowledge on the educational process at the macro and micro level (theoretical and practical components), as well as on encouraging the development of pedagogical, didactic and communication competencies necessary for educational work in higher education. In addition, there is a need to train teachers for the creative and practical application of acquired theoretical knowledge
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		- Connecting VET with other levels e.g. academic education. - Connecting to the young generations (gap!)	in the field of pedagogy and methodology of teaching, in order to enable the development of the knowledge and skills necessary for the improvement of the teaching process. • Developing recommendations for the application of technologies in teaching; • Developing teacher training programs;
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