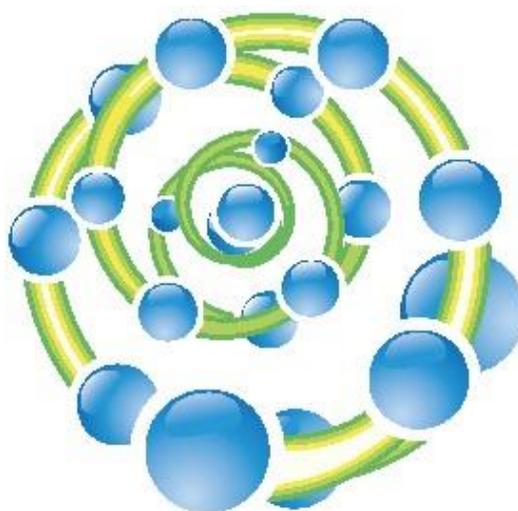


Innovation in VET

Czech Republic



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A. Introduction

There is no unified approach to innovation in the Czech Republic (CZ) education system. However, the strategic documents of the Ministry of Education, Youth and Sports (MŠMT) reflect the need for innovation, innovative teaching, creativity and entrepreneurship.

A ***New measures fostering vocational education and training (VET)*** paper adopted by the MŠMT in January 2013 refers to the need of modifying the National Curricula (RVP – Rámcové vzdělávací programy) for secondary schools in terms of contents. Recent developments in science and technology and the changing requirements of the labour market initiated the change. Modifications need to be systemic, made in close cooperation between ministries, employers, regions and schools and coordinated in line with the standards of the National Register of Qualifications (NSK) ⁽¹⁾. Fostering acquisition and use of knowledge, skills and qualifications need to facilitate personal development, employability and participation in the European labour market, thus improving quality and innovation in VET particularly by means of the Leonardo da Vinci and other programmes.

The **Digital Education Strategy 2020** (2014) suggests transformation and upgrading of learning process at schools with the support of digital technologies. These technologies include creation of online study materials, transformation of teaching methods and provision of educational software. The aim of the strategy is to incorporate modern technology into the entire learning process of primary schools as a prerequisite for a shift from memorising facts towards the literacy, communication skills and logical thinking. One of the seven main areas of the strategy deals with the promotion of innovative processes, monitoring, evaluation and dissemination of the results.

The **National Innovation Strategy 2012-20** is dedicated to excellence in research, to cooperation between the corporate and academic sectors in the area of knowledge transfer, to support for innovative entrepreneurship and to people as initiators and bearers of new ideas in terms of technical as well as non-technical innovation. It seeks to reinforce the role of innovation and the use of hi-tech as a source of the country competitiveness and the long-term economic growth, the creation of jobs and the improvement of quality of life.

⁽¹⁾ National Register of Qualifications (NSK) is a publicly accessible register of vocational qualifications and complete vocational qualifications recognised and validated in the territory of the Czech Republic that can be acquired on the basis of the Act no. 179/2006 Coll. on validation and recognition of the outcomes of CVET. **Vocational qualification** is defined as ability of a person to duly perform a task or a set of tasks within an occupation enabling their applicability on the labour market (e.g. cold dishes preparation, production of cakes and desserts, roofer skilled in laying roofs of historical buildings). **Complete vocational qualification** is defined as a professional competence to duly perform all the tasks within an occupation (e.g. cook, pastry chef, roofer, etc.).

The fulfilment of the objectives set by the National Innovation Strategy in the area of education and human resources depends on the functionality of primary and secondary education and on its quality. The interconnection ⁽²⁾ between the strategy and the *national education policy* ⁽³⁾ is evident particularly in the following areas:

- key competences, education towards entrepreneurship, independence and creativity,
- horizontal mobility and involvement of the corporate sector in the development of curricula;
- tools promoting lifelong learning;
- development of logical thinking;
- improving IT literacy;
- teaching of mathematics;
- teaching of technical subjects and sciences and targeted development of positive attitude towards technology from an early age.

Education should, in addition to training for a specific profession, focus on transferable skills and the ability to deepen and broaden one's professional skills. The aim is also to link VET with the requirements of the labour market by introducing cooperation mechanisms between employers and schools (e.g. by means of sectoral agreements). The requirements should be reflected in curricular reforms, by increased efficiency of the counselling system and enhanced cooperation between schools and external partners while providing practical training to students in real work environment. However, schools should not prepare students neither for highly specialised working positions nor for a particular employer. As many employers as possible should be involved in shaping the curricula.

In practice, these strategic priorities are promoted through a combination of top-down and bottom-up approaches. On the one hand, there are national (system) projects and development programmes (grants) of the MŠMT and ESF operational programmes that support individual institutions' and partnership projects. On the other hand, there are popular competitions rewarding innovative attitude of students and teachers. Usually, these priorities target the innovation of education content (curricula) and teaching methods (using of ICT, support of teachers) or developing soft skills (including creativity and innovativeness).

⁽²⁾ The National Innovation Strategy 2012-20 was approved by the Government of the Czech Republic in January 2011. This is a common document of the two Ministries: of Industry and Trade of the Czech Republic as well as of the Education, Youth and Sports. The fulfilment of the objectives set by the National Innovation Strategy depends on functional primary and secondary education.

⁽³⁾ The national education policy consists for instance, of the Education Policy Strategy of the Czech Republic 2020, the Long-Term Plan for Education and the Development of the Educational System 2016-2020, etc.

B. MŠMT development programmes/grant schemes

In line with the strategic document 'New measures fostering vocational education and training', the MŠMT announced a 'Fostering continuing education of VET teachers and trainers in real work environment' development programme 2013-14. The programme is to support secondary schools in fostering cooperation between schools, their founders and local employers, and in training VET teachers and trainers at the employer premises. The acquired competences of trained teachers will be subsequently used during the innovation of school curricula.

In 2010-11, the MŠMT announced calls for project proposals within the Education for Competitiveness Operational Programme (ECOP): *Improvement of the conditions for education at primary schools and Improvement of the conditions for education at secondary schools*. The main purpose was to promote development of areas that are problematic in a long-term, e.g. innovative teaching methods, reading and IT literacy, mathematics, mentoring, etc. The applications show that the most preferred projects focus on creation of digital teaching materials and on teacher training on how to use technologies.

C. Competitions

The country has a long tradition of competitions organised for students of secondary schools. They are very popular among the students. '**Students' scientific activity**' (SOČ – Středoškolská odborná činnost) has been organised successfully for several decades. The recent competitions include:

The 'Czech Little-Head' (České hlavičky) - a competition organised for talented students of secondary schools on annual basis since 2007. The best student scientific papers in multiple fields receive a national award.

Since 2009, a national convention of students of secondary vocational schools and a competition '**Boffin of the Year**' (Machři roku) are organised. The aim of these events is to draw attention to and promote VET. On the main square of a city, the schools across the country compete every year in several categories. The competition is accompanied by a crafts market where individual schools can promote themselves.

In 2011, within the framework of the 'Craft is Alive' project, Prague had a chance to test a new competition called **Sollertia**. Its main principle is in direct competition of performances of a student and a professional with experience. That makes it possible to objectively determine the level of achieved knowledge and skills of students. The professionals are real-life experts

with good references in the field. Students as well as professionals have to fulfil the same task under identical conditions. The winner among pupils is that who is able to reach at least two-thirds of the result presented by the challenger (expert). The purpose of the competition is also to enhance direct participation of companies in shaping the contents of education and evaluating the results of vocational training.

This competition is open only for pupils from secondary schools seated in Prague, as it is a part of the project has been co-financed by European Social Fund (ESF). Every year several fields of study (three-year study programmes concluded with apprenticeship certificate, e.g. carpenter, hairdresser) are chosen for the competition. In 2011, 1 850 pupils competed and 75 reached the finals. A new Craft is Alive III project has also started in about 20 secondary schools in Prague. Recently, Sollertia competition became available also for the four-year *maturita* study programmes.

In 2011, the MŠMT initiated for the first time a national competition **DOMINO**. The aim of this competition is to motivate and encourage teachers to get actively involved in the development of digital learning materials and to enhance their interest in innovation of teaching process and introduction of ICT in the majority of course subjects in schools. The slogan of the competition therefore is – ‘a good school is not made by modern technology, it is made by the people who use modern technology.’ The competition is linked to the international competition E-learning Award organised by European Schoolnet.

D. Other project-based initiatives

Often, ESF funded projects are an opportunity to pilot innovative initiatives. They can be either national ‘system’ projects or local bottom-up initiatives. For instance, internships of teachers of vocational subjects at employers’ workplace have been recently quite successfully pilot-tested in ESF projects. The internships provide convenient opportunity for the transfer of innovation into the learning process. It has been verified in practice that for VET teachers and trainers, repeated internships in companies are particularly beneficial. This method of vocational skills development is quite popular.

POSPOLU is a national project for innovation in VET.

E. Example: The national pilot project POSPOLU (TOGETHER)

E.1. Overview of the project

The 2012-15 **POSPOLU** (Fostering Cooperation between Schools and Enterprises with Focus on VET Practice) project illustrates innovation in VET. It identifies and analyses the cooperation among schools and enterprises and tests new models of cooperation. The aim of the project is to promote cooperation between secondary vocational schools and employers and to increase training in real work environments. The project also revises curricula, changes VET staff policy, and introduces ECVET and EQAVET principles.

The project designs a new VET model, including legislative changes, resulting in smooth and more efficient cooperation between schools and enterprises. It is co-financed by the ESF. The MŠMT has designed and implements the project in cooperation with employers' associations and the National Institute for Education (NÚV). Professional associations, founders of VET schools, representatives of public sector and a number of experts from schools and enterprises are also involved in the implementation of the project.

Within the project, a committee consisting of 13 social partners has been established. It represents checks whether the project outcomes are in line with their expectations and the real practice of the 'world of work'.

The main activities are:

- design of cooperative models and case studies;
- pilot-testing and monitoring of co-operative models;
- quantitative and qualitative surveys showing the forms of cooperation and how the training is carried out in real work environment;
- design of methodology and teaching materials;
- design of VET model;
- legislative changes to better link VET with practical training in real work environment;
- educational events for teachers/trainers and entrepreneurs.

The project involves 38 schools across all regions, nearly 100 companies and other entities. Cooperation between schools and enterprises is monitored in 26 fields of study. Pilot-testing of cooperation is carried out by 16 partnerships to determine the limits under the existing legislation and to transfer the practical experience from the pilot-testing into proposals of systemic measures. Another 10 partnerships between schools and enterprises are involved

in the so-called 'monitoring', under which examples of good practice are identified, and case studies, units of learning outcomes and methodological materials are prepared.

Teachers/trainers and employers learn how to plan and evaluate cooperation. They agree in advance what are the student learning needs at the workplace. The ready-made templates can be used for the purposes of innovation of school curricula focusing on the needs of the cooperating employers.

The POSPOLU project is gradually generating **cooperative models** capturing various possibilities of cooperation between secondary vocational schools and enterprises in the following areas:

- practical training and work placement ⁽⁴⁾;
- involvement of experts from practice in planning and implementation of the training;
- profile of Maturita examination;
- internships for pedagogues in companies.

The project creates generic models of cooperation featuring a framework description of cooperation between schools and enterprises (employers) in three main categories of educational attainment. It also identifies areas in which it is possible to develop cooperation between schools and employers. The areas are further developed into applied models of cooperation related to various groups of fields of study and levels of education. Fifty six applied models point out sectoral differences of training in real work environment. They provide specific information on objectives of co-operation, content, evaluation methods and organisational arrangements and legislative environment.

Applied models have been developed for popular study programmes (e.g. within the fields of study 'Transport and Communications', the four-year study programme 'Transport Management and Administration' and the three-year study programme 'Operator of Postal Services and Transportation'). However, they cannot be directly applied to other study programmes within the field. The models are meant to be a source of inspiration for pedagogues from schools and company representatives in the course of the joint planning, implementation and evaluation of specific cooperation. They serve as a basis for development of principles for specific cooperation between schools and enterprises.

⁽⁴⁾ The term *practical training* is used for training of predominantly manual skills in two to three years VET study programmes (ISCED 3C), that may be realized in the companies as well as in the schools workshops and other facilities. The term *work placement* is used for the real-work experience that is a part of more advanced four-year VET study programmes (ISCED 3A).

Case studies developed in the course of pilot-testing are closely related to the applied models. They describe a specific example of cooperation between a school and a company while placing students and internships of pedagogues in real work environment training. Case studies are meant to inspire – not to be copied – and offer an example featuring problematic areas of cooperation as well as positive experiences.

E.2. Innovative elements in the project

The POSPOLU project promotes innovations at two levels. At the micro-level of participating schools close links to the world of work makes the whole educational process more innovative (e.g. it allows for transfer of innovation in technology into learning process and flexible response to changes in practice, etc.) while creating the same tools for other schools. At the macro level it seeks to propose innovations of the VET system. Legislative modifications proposed by the project form part of the new model of VET. These innovative elements include training of teachers and trainers, co-operation between schools, ECVET and EQAVET principles and better quality and wider scope of practical training and work placements.

E.2.1. Training of teachers and trainers and co-operation between schools and enterprises

- **Reinforcing the role of an instructor of practical education:** The instructor of practical education is an employee of the company and is responsible for the management of the students' learning activities and for their safety at workplace. The instructor's position is specified by a contract on contents, scope and conditions of practical education, arranged both by the school and the company. The relevant employee can perform solely part-time the instructor's activities or (especially in larger companies) the instructor's position can represent a full-time job. The instructors need to prove their professional competencies, skills and experience in relevant occupation. They are not pedagogues and therefore they only submit students' evaluation proposals and documentation. In order to become an instructor, it is currently required to complete the so-called 'pedagogical minimum' in an extent of 50 to 60 hours.

The increased share of the students' practical training in companies' workplaces under the POSPOLU project increases also the importance of the instructors' role, particularly when the teacher of vocational training secures solely supervision and is not permanently present at the workplace. Therefore, in order to increase the quality of pedagogical guidance provided to students it has been proposed to establish a vocational qualification, 'Instructor of practical education'

within the National Register of Qualifications. Competences required by the NSK qualification standards can also be acquired through training courses developed and provided specifically for the POSPOLU purposes. In case the school becomes the so-called 'authorised person' ⁽⁵⁾, it is entitled to carry out examinations of the applicants to verify vocational qualifications required by the qualification standards.

- **Training of practitioners involved in VET:** Involvement of practitioners in school environment, using their practical experience from companies and transfer of latest technologies and materials in VET is more than desirable and has potential to allow for a smooth transition of graduates to the labour market. Practitioners take part in theoretical teaching or supplement practical training carried out at schools or model work environments. Practitioners are also involved in the process of completion of vocational training, i.e. in shaping assignments of uniform final examinations or during actual examinations.

Under the current legislations, practitioners are not regarded as members of pedagogical staff. However, unless they are occasionally involved in teaching and accompanied by a teacher, they need to prove pedagogical competencies. A specific training course has been developed and piloted within the project with the aim to facilitate the acquisition of these competencies.

- **Continuing education of teachers in enterprises:** So far implemented ESF projects pointed out not only the need but also the popularity of internships in companies provided to teachers of practical training and vocational subjects. Currently, the teachers of vocational subjects maintain and enhance their expertise and professional knowledge and skills through self-study and in their spare time. Long-term employment at school, which does not allow for direct contact with rather dynamic development within their field, results in outdated knowledge and reduces the quality of education.

POSPOLU proposed the teachers' obligation to complete an internship in a company within the specified timeframe for self-study. In parallel, schools are obliged to allow teachers to participate in such an internship. The companies should provide suitable schedule of such internships in terms of length as well as time according to the school year (during the school holidays, during periods

⁽⁵⁾ Authorised person is (usually) an institution entitled to carry out examinations of candidates applying for verification of acquired vocational qualifications in line with the Act no. 179/2006 Coll. on validation and recognition of the outcomes of CVET.

reserved for self-study activities, or during periods when the students perform their own practical training at workplaces of the companies) while securing a mentor who will appropriately guide a teacher in internship. The schools should make it possible for the teacher to participate in an internship and if needed, they should secure a substitute teacher. Internships for the teachers shall be treated in the Agreement on Cooperation concluded between a school and an enterprise, and their administration should be entrusted to a coordinator of such collaboration (see below).

Also, long-term (e.g. several months) teachers' internships that would be more of an employment-like nature combined with long-term practitioners 'engagement' on teaching positions on a rotation basis seem to be a convenient and effective solution. This would allow alternating the academic and professional career of teachers and practitioners.

Completed internships would help to increase teachers' qualifications within the upcoming career system. In case of vocational subjects, teachers could become a prerequisite of acquisition of higher qualification level.

- **Coordinator of cooperation between school and enterprise:** Since the creation of quality long-term cooperation places significant demands on organisation, planning, assessment and evaluation of students' practical education in enterprises, POSPOLU suggests establishing the position of a coordinator. The need for this position has been identified primarily in schools co-operating, for various reasons, with multiple enterprises (often more than 100).

The coordinator would be in charge of adjusting the terms and conditions of co-operation between the school and the enterprise and responsible for securing at least the minimum volume of practical training and work placements of students in enterprises. Coordinator's tasks would also include research of companies in the region, identification of suitable enterprises with adequate personnel as well as material resources, establishment of contacts and networking, quality evaluation of particular cooperation.

In addition to securing practical education of students in collaboration with teachers of practical training and work placements, coordinator should also focus on other types of cooperation such as:

- organisation of students recruitment in cooperation with enterprises;
- implementation of final examinations at the workplace of enterprises;

- graduation projects using assignments of the companies;
- organisation of leisure activities for students in co-operation with companies;
- securing internships for school teachers in companies;
- recruiting practitioners to take part in teaching process at schools.

The coordinator would be an employee of the school. In case of smaller schools, a deputy head teacher for practical education might fulfil this function. In the case of larger schools, one of the teachers of practical training or work placements might perform this function as a part-time job.

The key tasks of the coordinator would include also processing and annual up-date of the so-called 'Supplement to the school curriculum', which would be a result of negotiations with companies (see below). This would set up processes of monitoring and evaluating the quality of students' practical education at companies and in other forms of cooperation with enterprises.

E.2.2. Piloting the ECVET principles

The purpose of the implementation of ECVET principles piloted within the project POSPOLU is to build mutual trust, to foster quality and attractiveness of practical training and work placements for students of secondary vocational schools and to actively use descriptions of the learning outcomes. The main point is to precisely describe the goals of the students' practical training at the employers' premises and the specific skills, knowledge and competences they need to master, as well as the students assessment and evaluated methodology. Given the fact that the students usually work in companies after completing some vocational training at schools, the employer shall be provided with the information on the students' skill level and practical experience.

In the pilot stage, the school and the company define and agree on the students' needs to master during their training in a company – creating thus a learning outcome unit – and draw up the 'Agreement on training'. Surveys carried out among the schools involved in the project conclude that additional paperwork is counterproductive and the schools are often discouraged from participating in pilot-testing. Therefore, it is possible for the schools involved in the project to make use of their existing agreements with the social partners. The relationship between a school and an enterprise shall be in line with the applicable legislation (School Act no 561/2004 Coll.) defined by the so-called 'Agreement on contents, scope and conditions of practical education'. The template of the Agreement is available as a supplement to the School Act, and the majority of schools make use of it while making some

minor modifications. The purpose of ECVET piloting principles is to improve quality of current Agreements concluded between the schools and their social partners by including in them quality assurance and quality control mechanisms.

Units of learning outcomes are flexible and can help learning adapt to fast changing technology. It is possible to edit and modify the units in line with the labour market trends and requirements and thus to enrich and enhance school curriculum (see below: 'Supplement to school curriculum'). When creating units of learning outcomes, the project recommends using as a reference the qualification and evaluation standards developed within the National Register of Qualifications (NSK).

According to the employers and schools, it would be useful to issue standardized certificate of completion of practical training or work placement, which would be mandatory for the graduates with Maturita or apprenticeship certificate. Each graduate of secondary vocational or secondary professional school receives a yearly report on their study results. Provided that they have successfully concluded their studies, they also receive a certificate on Maturita examination or an apprenticeship certificate. Since 2014, it is possible to indicate on the report the company in which the student completed their practical training or work placement. However, it would be appropriate for the reports to include, in addition to the name and the address of the company, also the learning outcomes (described by means of listed and evaluated skills, knowledge and competencies mastered in the course of practical training). Students who do not complete successfully their studies have no other evidence of acquired knowledge, skills and competencies but their yearly school reports. In such cases, the certificate on completed practical training or work placement could help to facilitate the entrance on the labour market, transfer to another educational institution or future recognition of vocational qualification within the framework of the National Register of Qualifications.

The 'Europass Mobility' document has been piloted for these purposes. The personal document record, in addition to the identification data of the student and institution by which it was issued, is also a list of acquired learning outcomes.

By the overall evaluation of vocational training, regardless of where it had been carried out, it should be included within the competencies' list in the student's portfolio – stipulating all the competencies arising from the school curriculum (or the VET standards of the complete vocational qualification) mastered by the student. The portfolio of student's works produced in the course of their studies together with the portfolio of (mastered) competencies would be a prerequisite for taking the final examination.

E.2.3. Using EQAVET

While teaching at schools is subject to initial, interim and final evaluation secured by the Czech School Inspectorate (ČŠI), contents and quality of practical training/work placement in companies often lacks quality control. In line with the current legislation, school is responsible for quality assurance. In practice, the quality is determined by the material equipment of companies, good will, tradition and scope of cooperation with specific school, personal contacts as well as the size of the company and the number of employees guiding the students. Many schools, whose students have only a small part of practical training in real work environment, do not even presume that the students would master at some part of competencies required by the school curriculum and therefore their evaluation is based on the attendance and good behaviour. Most schools monitor to a limited extent their students' learning outcomes. In particular, schools in technical fields are trying to make sure that the students get familiar with a real work environment in general.

POSPOLU suggests establishing an *ex-ante* criterion for the selection of the company – it would be its accreditation as an authorised person for particular qualifications within the National Register of Qualification (NSK). The guarantee would then be provided by the relevant authorising body, i.e. the individual Ministries. Thus, the company would be in line with the responsible school agreement ⁽⁶⁾.

For the cooperation quality assessment, the project designed a template entitled 'Quality training criteria'. This template is a table consisting of 30 quality indicators inspired by the Switzerland example (the so-called 'Qualicarte'). The table is divided into four areas and it is supposed to be filled in by the company who provides the training. The school verifies the extent and quality of the criteria fulfilment in the following areas:

- prior to the beginning of the training in the company: terms and conditions are set by the hosting institution,
- in the beginning of the training: a specific programme for the initial period spent in the company/institution,
- during the training: the institution helps the student to acquire competencies needed for the labour market and devotes time to training and gradual transfer of knowledge and skills,
- obligation of the company, in which the training is carried out: the institution plays an active role in the training and cooperates with all the involved parties.

⁽⁶⁾ This school is responsible for the learning outcomes of a defined part of vocational training, including that the students shall perform work activities in such a manner securing acquisition of relevant competencies.

It also includes targets for the following period that shall help the company as well as the school to effectively address potential issues arising from the evaluation.

POSPOLU suggests that evaluation of practical training/work placement in companies should not be solely the responsibility of the schools but it should be carried out by the Czech School Inspectorate.

E.2.4. Better quality and wider scope of practical training and work placements

POSPOLU seeks to eliminate the major part of the companies' issues regarding the employment of the graduates of secondary vocational schools. The proposal to substantially reinforce the cooperation between employers and schools, particularly in the area of practical training, opens up room for improvement in terms of the graduates' competencies.

- **Improving the time distribution (scheduling) of practical training:** National Curricula specify solely the minimum weekly scope of practical training for the entire study. Traditionally, the practical training is organised on weekly basis, when one week of school is followed by one week of practical training. Despite this arrangement being regarded as satisfactory during the initial period, in the course of the professional development it becomes an obstacle to quality training aimed at practical application. Under this arrangement, students do not get a comprehensive overview of the processes and links within the individual professional activities (e.g. processes during construction, technological processes during production, processing of an order since the placement until the distribution, etc.) neither are they able to be integrated into the team. This arrangement causes problems also in general education, e.g. foreign languages teaching – where lack of continuity makes it difficult to master the language.

POSPOLU proposes for the students an obligatory practical training, for at least three months, in real work environment in companies. It also recommends to pilot-test any arrangements that would allow for implementation of a continuous three months period of practical training in real work environment in the second half of the last year of study. Such a solution seeks to facilitate the transition of students into practice in case they perform their practical training at the premises of their potential future employer. It would allow for more intensive vocational training just before entering the world of work. The assumption is that students would take the written and oral part of the final examination before the start of the continuous period of practical training and the practical part of the final examination would be carried out after the completion of practical training. This

kind of arrangement has also its potential risks. In addition to the problem of limited capacity of companies providing practical training for students, this solution requires substantial modifications in terms of organisation of academic year within operating conditions of schools.

- **Enhancing the scope of work placements:** Given that work placement is typically implemented during two weeks in the second grade and another two weeks in the third grade of the study, it can possibly offer to a student only a basic introduction to the real practice environment. In fact, the schools and the cooperating companies do not expect that work placements, as they are arranged now, would enable students to acquire any vocational competencies.

Therefore, POSPOLU suggests increase the work placements of students up to the minimum of 12 weeks per study with the option to perform maximum half of the placement during the school holidays. The assumption is that the work placement will be carried out in a continuous manner (at least for a month), typically in the last two years of the study. It will be possible to schedule the placement any time in the course of the school year.

This work placement should be followed by individual work placement in the minimum scope of four weeks during the last two years of the study. It might be carried out during the school holidays as well as during normal school hours. In the latter case, it would be the school's obligation to make sure that the student gets the opportunity to catch up on missed theory lessons, e.g. by means of individual consultations, e-learning tools, etc. The purpose of individual work placement would be the fulfilment of a specific task assigned by the employer and a preparation for the Maturita exam profile, including processing of Maturita paper. Individual work placement might be carried out in a continuous form or as one- or multiple-day consultations concerning the assigned task.

- **Revision of National Curricula (RVP):** The Ministry of Education, Youth and Sports issued an individual National Curriculum for each field of study (the total number of RVPs amounts to 281). The Curriculum defines mandatory training requirements in relevant fields of study and levels of education, i.e. particularly learning outcomes, which need to be acquired by the end of the study, contents of education and basic conditions of implementation of education. It is a binding document for all the schools providing secondary vocational education. These schools are obliged to develop their own school curricula in line with the

Curriculum. The National Curricula for secondary vocational education were developed gradually in the course of the period 2007-12.

- The options for RVPs revision lag behind the dynamics of changes both in technology and in labour market. The whole VET system is not able to adequately respond to the employers' needs. Many of the fields of study have an extremely narrow vocational profile, i.e. they prepare students for one specific occupation securing thus only limited applicability on the labour market. Due to that and to some other circumstances, a major part of the graduates do not work in their field. Therefore, it is necessary, on the one hand, to increase quality of training in the area of general and key competencies ⁽⁷⁾ and on the other hand, to adapt vocational competencies to the needs of specific employers. The new VET model designed by the POSPOLU project proposes the following revision and update of the existing curricular documents:
 - To allow the opening of joint first grades for different fields of study (when needed) with enhanced role of career counselling, particularly in cases when there is not co-operating employer for whom the students are being trained.
 - Instead of making distinction by an occupation or a group of occupations at the very beginning of the study, the fields of study should be grouped into broader vocational profiles focused on particular section of technology, economics, services, agriculture, etc. and their application in the world of work, while placing emphasis on key competencies, general education and broad basis of vocational training.
 - To reinforce the focus of VET National Curricula on basic types of literacy (reading literacy, numeracy, scientific literacy) and key competencies (ability to learn, to work in team, communication skills, etc.) and to strengthen the preparatory nature of the general parts of the curricula for the purposes of the follow-up vocational training (i.e. applied mathematics, applied chemistry, etc.).

⁽⁷⁾ Kuczera, M. : Učení pro praxi. Přezkumy odborného vzdělávání a přípravy prováděné OECD. Česká repulika. NÚV Praha, 2010. [*Teaching for practice. Surveys of VET carried out by OECD*]
Education policy strategy of the Czech Republic for 2020. MŠMT Praha, 2014.

- To draft the qualifications' part of VET using the complete vocational qualifications defined in the National Register of Qualifications (NSK) and to formulate standards for practical training/work placement in the form of qualification and evaluation standards incorporated in NSK.
 - To make sure that the last year of the study is focused on the specific complete vocational qualification (defined by NSK) related to the potential employment of the graduate in the given company.
 - To make it possible to divide the study period into stages, i.e. so that the students after completing the second (in case of the three-year vocational programmes) or third (in case of the four-year vocational programmes) year of their study could acquire apprenticeship certificate of lower category in the relevant field of study and the corresponding vocational qualification or the complete vocational qualification (some kind of proficiency test) to avoid the situation when students leave the school prematurely without any formal qualifications.
- **Standards for practical training/work placement:** Students of the same field of study should acquire comparable vocational competencies during the practical training or work placement. Currently, these competencies are generally outlined in the National Curricula for given fields of study. However, they are not explicitly defined. They are clearly formulated solely in individual school curricula, which do not allow any comparability among schools. Other issues are related to the fact whether the students perform major part of their vocational training at school or in various companies. In the framework of vocational training, students should as a matter of fact master much wider spectrum of competencies than they are able to learn in a company with a specific production programme. Therefore, the new VET model comes up with a proposal to incorporate the so-called 'Standards for practical training/work placement – specifying the qualifications' part of VET - into curricular documents. It should secure that students, during their training, can master at all the required practical competencies either in one or in multiple cooperating companies or at school.

The role of the standards can be played by relevant vocational or complete vocational qualifications of the National Register of Qualifications (NSK). The

Standards for practical training/work placement should also include standards defining requirements for facilities and equipment of the workplace; they should be regarded as guidelines for cooperating companies.

- **Supplement to the school curriculum (ŠVP):** At present, the ŠVP chapter devoted to the cooperation with social partners is usually rather general and does not specify the competencies and learning outcomes which the students will acquire during their practical experience in particular company. Also it does not explain how this training will be secured in terms of staff training. That is due, among other things, to the fact that the school curricula are designed for a long-term period. However conditions and circumstances in the companies are changing rather fast.

Therefore, for the purposes of planning specific cooperation between schools and enterprises in school curricula, it is recommended to introduce the so-called 'Supplement to the ŠVP'. The Supplement represents a planning for practical training/work placement, defining the required competencies (learning outcomes) that students need to acquire in the course of their practical training/work placement at the company's workplace, including the time schedule (scope). The Supplement is updated on a yearly basis and shall allow for flexible response to the development in the field as well as to changing conditions and production plans of the companies, and for planning of the schedule and organisation of the training in relation to a specific company.

Conclusions

More than a quarter of all secondary vocational schools across all 14 regions of the CZ have been involved in the project. At the national level, the project proposes the introduction of principles specified in the so-called 'New model of VET'. The draft of the new VET elements fostering cooperation between schools and companies is the principal outcome of the project. Selected topics will be subsequently endorsed by submitting proposals for legislative modifications enabling their future implementation.

Even if the proposals are not implemented in the future, the project still brings undeniable benefits for the schools involved. They have adapted and innovated their own curricula in the section entitled 'Cooperation with the employers', they had selected those principles (e.g. participation in sponsorship activities or open door days) and forms of cooperation (e.g. recruitment of new students), which in the course of pilot-testing proved to be beneficial, and they incorporated them into the Supplement to the school curriculum, which would be

updated on a yearly basis. The Supplement will allow for an efficient and flexible response to the labour market skills' needs and address regional differences. In the course of the project's sustainability, the schools will, on a regular basis, submit implementation report.