

## Country report

### Czech republic

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## 1. Introduction

The Czech Republic (Česká republika) came into being in 1993, as a result of a split of the Czech and Slovak Federative Republic. The Czech Republic is a parliamentary republic and the head of the country is the President. In 2004, the country became a member of the European Union.

The Czech Republic is situated approximately in the geographical centre of the Central Europe and has an area of 78 866 sq. km. The estimated population is over 10,5 millions, of which about 65% live in urban areas. The Czech Republic is one of the most stable and prosperous of the post-communist states of Central and Eastern Europe.

The territory of the Czech Republic is divided into 13 regions and the capital city of Prague. The basic territorial units are municipalities and corporate towns. Each municipality is administrated by a mayor, and the head of corporate towns is a lord mayor. Regions are administrated by a marshall; only in the capital city of Prague is this position reserved for Prague's lord mayor. The State is denominationally neutral, the freedom of religion is guaranteed.

The average inflation in Czech republic in 2013 was 1.4%. Count of registered unemployed people was 9.36% at the end of 2012, in february 2014 it was 8.6%. GDP in 3Q. 2013 was 962.3 bil. Kč. Average salary during 2013 was 25 128 Kč, 16 Kč (0.1%) more in comparison with 2012. Retail prices raised in year comparison by 1.4%, real salary raise was -1.3%<sup>1</sup>. Old age pension in Czech republic (30.9.2013) was 10 957 Kč.

Education in the Czech Republic is carried out in accordance with Act No. 561/2004 Coll., about Preschool, primary, secondary, tertiary professional and other education. This Act provides rules for preschool, primary, secondary, tertiary professional and other education the conditions under which education and training works, defines the rights and obligations of natural and legal persons in education and determines the competence of state administration and autonomy in education. (§ 1 of the Education Act)

The current Education Act (No. 561/2004 Coll.) on Primary, Lower and Upper Secondary and Tertiary Technical Schools sets the duration of compulsory schooling, kinds and types of schools; legal entity of schools, which gives them greater autonomy, etc. It stipulates entry requirements, organisation of the education and ending of the study for different educational levels. The Higher Education Act (No. 111/1998 Coll.) extended the non-university and private sectors of higher education. The majority of these are no longer state institutions (entirely state-funded) but public institutions (state subsidised) that manage their own property.

In 2012 there were in Czech republic 5011 kindergartens, 4,095 primary schools, 368 secondary general schools (131,013 pupils in 2012), 1,049 schools providing vocational education (339,741 pupils in 2012), 18 conservatories (3655 pupils 2012), 178 colleges (28,980 students in 2012) and 73 high schools (381,397 students in 2012).

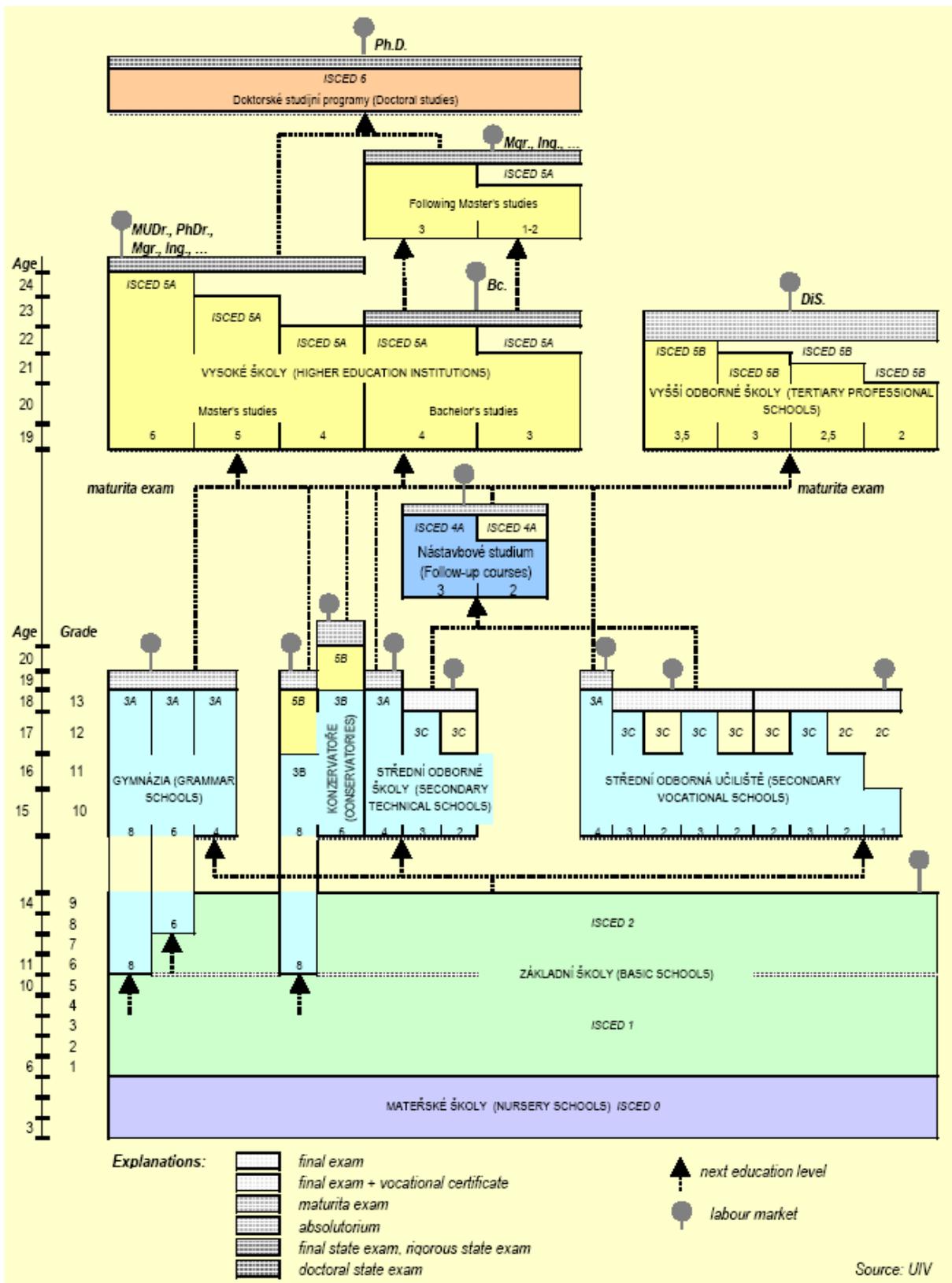
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<sup>1</sup> <http://www.kurzy.cz/makroekonomika/mzdy/>

In the Czech Republic, the curricular reform is currently being under way, which encompasses lifelong learning as well, the National Qualification Framework is being developed in compliance with the Act on Recognition of Further Education Results (No. 179/2006 Coll.), which came into force in August 2007.

## 2. Czech education system in general

The overall architecture of the Czech educational system is shown by the following



diagram<sup>2</sup>:

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<sup>2</sup> <http://www.oecd.org/czech/41679411.pdf>

The concept and realization of initial and continuing education is basically satisfactory, and is influenced mainly by efforts to facilitate the mobility of labour and persons preparing for careers in the wider European or even international level (European concept of lifelong learning and its corresponding tools and instruments at the national level, i.e. the European qualifications Framework (EQF) and the National qualifications Framework (NQF), the European Credit Transfer System for VET (ECVET) and the credit system (ECTS - European Credit transfer system) and national equivalents, as well as Europass, Ploteus etc.).

The Curricular reform taking place in the Czech education since the early 90s of the last century is generally focused on the transition to competency-based training and also to provide greater autonomy to schools and other providers of formal training for all levels of non-tertiary and mainly for vocational providers (VET).

Most of the Czech population achieves basic education (ISCED 2A, only in special education at a very small part of the population ISCED 2C). The educational system of the Czech Republic is characterized by the fact, that the majority of students continues at ISCED level 3. The graduates ISCED 3 (about 90 % of the population) acquire general, technical or vocational secondary education with “maturita” exam (general, technical or vocational secondary education with graduation certificate) (ISCED 3A) or vocational secondary education with a vocational certificate (vocational secondary education with apprenticeship certificate) (ISCED 3C). All these outputs already allow direct output to the labour market and/or continuing education at the tertiary level. After graduating from ISCED 3A programs can be entered directly into tertiary education, the programs ISCED 3C is needed to complete a follow-up study. Sincerely many of ISCED 3C students start follow up programs, but usually they give up before final exams.

Another fundamental characteristic of initial formal education in the Czech Republic is that even ISCED level 3 provides further general education. All programs at ISCED level 3 (ISCED 3A and ISCED 3C) equip graduates with general education form, which forms the basis for lifelong learning and in the two basic streams of IVET also primary expertise in any field at the same time, it allows the immediate output to the labour market.

The possibility of direct output to the labour market involves graduates of grammar schools (and graduates of other widely profiling educational programs of ISCED 3A). No legislative barriers preclude the output to the labour market and graduates of grammar schools and of other widely profiling educational programs of ISCED 3A have quite good chances for employment at the labour market (the unemployment rate of grammar school graduates is not higher than the unemployment rate of other graduates from ISCED 3A programs).

Curricular concept of parallel general and vocational education of all types of ISCED 3 enables high vertical as well as horizontal permeability and considerable initial formal education and high vertical permeability also explains why it is so high in the Czech participation in initial vocational education and training (IVET) at ISCED level 3, the reason for this is that pupils or their parents prefer the possibility to get initial

vocational qualifications, although they have directly the possibility of subsequent tertiary study or after a follow-up study to obtain a school-leaving exam.

### 3. Vocational education and training in Czech republic<sup>3</sup>

Czech vocational education has more than 200 year tradition at tertiary level and 150 year at non-tertiary level as it corresponds with the industrial character of the Czech countries already in the Austro-Hungarian monarchy times.

Secondary education, including vocational and non-university tertiary education are codified by Act No. 561/2004 about pre-school, primary, secondary, tertiary professional and other education (the Education Act). Vocational education refers to the new Act No. 563/2004 on teaching staff, which entered into force on 1 1st 2005. Tertiary education at universities is codified by the Act 111/1998 Coll. about universities.

Currently enter students in initial vocational education after compulsory schooling at the age of 15. Depending on the length of the educational program lasts upper secondary study mostly 3 or 4 years. A small part of the educational programs lasts 1 or 2 years. Students at secondary schools are mainly in the age 15 to 18/19. Absolvents, who got "maturita" certificate, can continue their studies at the tertiary level. This study takes at higher vocational school (ISCED 5B) 3 - 3.5 years, and the typical age of students is 19 - 21 years. Length of the study at university (ISCED 5A) is 3-6 years and the typical age of students is 19 - 24 years.

The vocational education at ISCED level 3 is realized as 3-year educational programs completed with apprenticeship certificate (ISCED 3C) or 4-year educational programs completed with "maturita" certificate (ISCED 3A). The decision to continue after the end of compulsory schooling in vocational education program does not mean, that the students have no further general education. The curriculum of 3-year educational programs are designed so that at least 30% of the total course time is dedicated to general education, the general education at 4-year educational program takes at least 45%. All basic areas are included: language training (Czech language, foreign language), social sciences, mathematics, natural science, arts and physical education, the proportion of the teaching time is in accordance with the field of vocational education.

The advantage of vocational education at ISCED 3A is that they are recognized as equivalent to the general education in grammar schools. Graduates of these programs have the opportunity to continue their studies at tertiary level. This increases the attractiveness of vocational educational pathways.

Since the '90 of the last century takes place the curriculum reform in vocational education. This curricular reform is a part of changes that had to be done particularly in the field of education and its functional links to qualified work and employment in connection with the overall transformation process after 1989. On the other hand the basically pragmatic – functional approach to initial and further education as preparation for future profession is older and has characterized long-term development of education at least since the reform in pedagogical area in the first half of the 20th century. The initiatives to establish equivalence between the VET and

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<sup>3</sup> Počáteční odborné vzdělávání v České republice Podrobná zpráva. Refernet.2005.

the general (academic) education at both ISCED 3 and ISCED 5 levels, completed in the 1940s and 1950s, also have origin in that period.

The curricular reform introduces a two-level (that is national- and provider-level) structure of curricula and final examinations in the initial VET system. The curricular reform being in progress since the early 1990s, generally focused on transition to a competence-based education and training and also to provision of an increased autonomy to schools and other providers of formal education (and particularly VET) of all non-tertiary levels, is thus at present linked to the development and implementation of the Národní soustava kvalifikací / National Qualifications Framework (NQF) and other tools necessary for integration of the Czech Republic into the arising European area of lifelong learning in both its dimensions (lifelong learning and life-wide learning).

There are, in principle, two levels – that is the national (state administration) level and the school (provider) level – of designing curricula including assessment tools and procedures within the Czech initial formal education and training (excluding level ISCED 5), with corresponding levels of educational programs, the so-called Rámcové vzdělávací programy / Framework Educational Programs (FEP) and the so-called Školní vzdělávací programy / School Educational Programs (SEP). Both the general scheme of competence-based curricular standards and their particular branch-related occupational specifications for summative assessment procedures (for final examination and certification purposes) in IVET at national level are designed by the Národní ústav odborného vzdělávání / National Institute of Technical and Vocational Education (NÚOV) in cooperation with the relevant sectoral bodies, and approved by the Ministerstvo školství, mládeže a tělovýchovy / Ministry of Education, Youth and Sports (MŠMT) together with other relevant ministries (if appropriate).

Framework Educational Programs are set and approved curricula documents by the state, which define the general mandatory requirements for various levels and fields of education, the quality of students personal targets, which the student need to achieve at the end of the training. They are binding documents for the development of School Educational Programs, for the assessment of learning outcomes, development of textbooks and the basis for funding. Framework Educational Programs for vocational education are issued by the Ministry of Education, after consultation with relevant ministries, central trade unions and employers' organizations nationwide and have nationwide validity.

School Educational Programs are created by a school according to the Framework Educational Programs and to the education branches. Framework Educational Program is elaborated in School Educational Program in accordance with the educational conditions, objectives of the school development and the needs of the regional labor market. School Educational Programs are not institutionally approved, the CEO of the school is responsible for processing. School Educational Programs must be posted in an accessible place in the school. Compliance of the School Educational Programs with the Framework Educational Programs controls the Czech School Inspectorate.

Upcoming Framework Educational Programs for secondary vocational schools are made in relation to the new system of education branches. For each education branch is processed one Framework Educational Program. The system consists of Framework Educational Programs for schools providing secondary education with an apprenticeship certificate (ISCED 3C) and of Framework Educational Programs for schools providing secondary education with a “maturita” certificate (ISCED 3A).

In the Framework Educational Programs are defined the competencies of the absolvents and requested learning outcomes. Framework Educational Program provides with three areas of the absolvents competencies: civil, key and professional. Professional competencies are defined on the basis of the qualification requirements for occupation or group of related occupations. The starting point for the determination of expertise are graduate professional profiles and integrated system type positions, which is a system of information on the content and requirements of the individual professions.

Content of education is processed by the educational areas (not according to subjects): language education, social sciences, natural sciences, mathematics, education, health, ICT, economic education and training in the relevant field of study. For each area are set desired learning outcomes (knowledge, skills and habits) and Frame curriculum. Emphasis is placed on learning outcomes, curriculum is seen as an instrument of education, not as a goal of education.

Framework Educational Program sets a minimum number of teaching lessons and the minimum proportion of professional practice and training. At least 20 % of the lessons are the lessons that the school will use by its decision in the creation of the School Educational Program. Framework Educational Program provides guidelines for the development of school curricula and defines the basic conditions for progress and organization of the education, safety and health, physical education and teaching staff. Framework Educational Program characterizes the conditions and access to education for learners with special educational needs (i.e., students with disabilities, physical or social handicaps, but also exceptionally gifted learners) and to adult education.

VET providers – in cooperation with regional authorities and employers in the relevant sectors – are in charge of designing their tailored SEPs, in compliance with the relevant FEPs. This two-level curricular structure is reflected also in designing awards and assessment procedures for completion of non-tertiary IVET programmes which are completed by an examination (the ISCED 3C type, completed by the so-called Závěrečná zkouška / Final Examination with or without Apprenticeship Certificate, the ISCED 3A and the ISCED 4A types, completed by the Maturitní zkouška / School-leaving Examination). Curricula including assessment procedures at the non-university ISCED 5B level (the so-called Educational Programmes for Tertiary Technical Education, completed by the so-called Absolutorium examination) are designed by providers (Tertiary Technical Schools) and accredited by the MŠMT and/or other relevant ministries. All above-mentioned types of examinations are on the national level (the state examinations), however, they have not been yet external ones (i.e. independent of the learning pathways).

New final examination<sup>4</sup> (Nová závěrečná zkouška) was being developed since 2005 within the framework of Kvalita I. - a project of the Ministry of Education, Youth and Sports. It was based primarily on real needs of teaching practice. Since the existing situation when each school could determine the contents of the final examination based on their own needs and requirements was not acceptable anymore, various initiatives aiming to unify the contents and implementation of final examinations were spontaneously appearing in some vocational fields already before the start of the project. Subsequently, the New final examination was developed and implemented by means of two related projects of the MŠMT – NZZ (Nová závěrečná zkouška / New Final Examination) and NZZ 2 (Nová závěrečná zkouška 2 / New Final Examination 2).

Since 1999 has started a reform of school-leaving exams, which commissioned a division of the Institute for Information in Education - Centre for reform of the school-leaving examination (CERMAT). Centre for the Evaluation of Education follows the activities of this centre (later the Centre for the Evaluation of Educational Results). Centre for the Evaluation of Education continues with using the historically established CERMAT mark, which is generally known and used by the professional public.

Reform of the school-leaving examination passed through dramatic changes, there is currently stabilized version, the graduation consists of two parts - common (state) and profile (school). The common part is in the responsibility of the State and it is centrally developed and evaluated. This concept enables the standardization of tests. The goal is to increase the transparency of examination and the relevance of school-leaving certificate. Profile of the school-leaving examination relates to technical subjects and it's in the responsibility of the school CEO. It takes into account the characteristics of the study field, profile of the graduate, the set target competencies and relevant curriculum. To succeed at final exams student must pass the required tests in both of these parts.

Model of the leaving exam is based on the valid legislation - the Education Act No. 561/2004 Coll. and Decree No. 177/2009 Coll. as later amended. In 2014, students must pass two compulsory examinations, from Czech language and literature and foreign language or mathematics. In the profile section they must pass 2-3 mandatory tests that are based on the Framework Educational Program and the CEO and up to a maximum of two optional tests, which are offered by the school.

In January 2013, the "New measures fostering vocational education and training" until 2020 were adopted by the Government. Based on this document, the tax legislation was amended in 2013 that involves employers financing the training of the IVET students. This legislation provides for tax allowances for companies that cooperate with schools in the field of IVET. The expenses of property acquisition related to the training and the expenses related to the training itself (e.g. related to

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<sup>4</sup> ReferNet Questionnaire on Policy Reporting 2014 update Progress towards the short term deliverables of the Bruges communiqué. CEDEFOP, 2014. [online]. [cit. 2014-03-20]. Dostupné z: [http://www.cedefop.europa.eu/EN/Files/6116\\_en.pdf](http://www.cedefop.europa.eu/EN/Files/6116_en.pdf)

the assignment of the company employee, workplace or machines for the training) become tax deductible. Also a higher limit for motivation fee paid to students undergoing training in the company is set to be eligible as tax deductible expenses and the income of the students from their practical training is excluded from income tax. The provisions have been effective since the beginning of 2014.

In 2013, a project "POSPOLU" (Support of cooperation of secondary vocational and technical schools with companies) was launched with financial support from the ESF. Its goal is to create tools promoting enhanced cooperation between secondary technical and vocational schools with employers to provide quality vocational training to IVET students. Various models of cooperation are being developed and piloted with the help of ECVET and EQVAVET tools. Main focus is practical training in the real working environment, especially in the fields of study that are demanding in terms of technology.

In the framework of the project "POSPOLU" methodical handbooks are being prepared, as well as courses for teachers and other experts and examples of good practice are being gathered that include training of IVET students at the company workplace and other forms of cooperation between schools and employers. They include development of vocational as well as key competences.

The curricular reforms described above have preceded the start of the Copenhagen process. In connection with it, they were to be expanded to the extent of the European concept of lifelong and especially life-wide learning (LLL, LWL). The measures taken in this context so far include passing the new School Act (2004), the Act on the Recognition of Further Education Results (2006), developing the National Qualifications Framework (NQF) and elaborating its tools with pilots of their use in trial implementation of procedures for recognition of prior learning (including prior experiential learning).

The Act No. 179/2006 Coll. (the Act on the Recognition of Further Education Results, effective from 1st August 2007), stipulated the National Qualifications Framework (NQF) and its tools and enabled pilots of their use in trial implementation of procedures for recognition of prior learning (RPL).

#### **4. Description of two apprenticeships in the automotive sector**

Automotive Repairman (Automechanic) and Electromechanic for Equipment and Instruments (Electromechanic for vehicles)

##### **Legal framework (laws, provisions, funding)**

Education in the Czech Republic is governed by the Act No. 561/2004 Coll., about Preschool, primary, secondary, tertiary professional and other education (Education Act). The § 3 Paragraph 5 of this Act and § 58 Paragraph 5 and § 83 Paragraph 1 are important for initial training. It authorizes the Government of the Czech Republic, in cooperation with other actors in the educational policy to continuously determine and regulate fields of studies in primary, secondary and higher vocational education. All branches of education are divided into categories on the basis of attained education.

The resources from the Ministry of Education, Youth and Sports budget are designated for covering the direct non-investment expenditures and flow to the schools through the regional budget, the resources from the founders are allocated to schools for operational and capital costs. The funding from public budgets (for direct and operational costs only) is based on per-capita normative rates set for the given school type and the study field. Schools may also receive resources from the MEYS budget for development programmes. Private resources constitute a very limited source of the funding of public secondary VET schools. These are resources earned by the school from renting their property, from the provision of services for a payment and from complementary business activities. Schools may also accept donations from individuals and enterprises.

##### **Mechanik - opravář motorových vozidel (Automotive Repairman)**

**(code: 23-68-H/01)**

Education category: secondary education with a vocational certificate

Field of study: Mechanical engineering and mechanical production (Code: 23)

Final certificate: certificate of apprenticeship

##### **Elektromechanik pro zařízení a přístroje (Electromechanic for Equipment and Instruments)**

**(code : 26-52-H/01 )**

Education category: secondary education with a vocational certificate

Field of study: Electrical engineering, telecommunication and computer technology (Code: 26)

Final certificate: certificate of apprenticeship

## **Involved institutions (realization & monitoring of the training)<sup>5</sup>**

### 1. National level

The Parliament has legislative power and approves laws.

The main body responsible for IVET is the Ministry of Education, Youth and Sports – MEYS (Ministerstvo školství, mládeže a tělovýchovy – MŠMT).

The key responsibilities of the MEYS:

1. the development of national education strategy and priorities;
2. development of curricular policy (Framework Educational Program);
3. care for the quality of education on the basis of the objectives and content of education;
4. coordination of public administration and funding.

### 2. Regional level

On the regional level are responsible the regional assembly, regional council, the regional authority (zastupitelstvo kraje, rada kraje, krajský úřad).

*The regional assembly* has decision-making powers and forms a commission for education and employment, which has its say on e.g. the number and the structure of the schools and their educational provision, the quality of schools, the funding of education in the regions, etc.

*The regional council* (9-11 members) is elected by the assembly and holds executive powers. It forms expert commissions in various areas where they have an advisory function. One of the commissions is normally concerned with young people and education. Regional self-governing bodies are directly responsible for establishing and closing down VET schools and school facilities.

*The regional authority* is a regional body of the state administration. One of its departments deals with education, youth and sports. The authority is responsible for the execution of state administration in the region, and its main tasks in the area of education include, above all, the development of a regional long-term plan for the development of education and of the education system, and a report about the situation in education in the region. Moreover, the regional authority allocates

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<sup>5</sup> More in Czech Republic. VET in Europe – Country report. Available on [http://www.refernet.cz/sites/default/files/download/vet\\_2013\\_cz\\_cr.pdf](http://www.refernet.cz/sites/default/files/download/vet_2013_cz_cr.pdf)

resources from the state budget to schools to cover pedagogical staffs' wages and direct educational costs, and checks upon their use.

*The Education Commission and Regional Council for Human Resource Development* have a consultative function at regional level.

*School directors* hold significant powers. They are responsible for preparation and implementation of school curricula (School Educational Program) based on approved national curricula (Framework Educational Program), for the quality of pedagogical work and human resources policy, for educational management and efficient use of financial resources. A school council as a consultative body is established at schools. Its members include representatives of the school founding body, pedagogical staff and parents (possibly pupils of age).

*Social partners* can influence both the conception of objectives and content of vocational education and its framework organization in the respective field of study at national and regional levels, particularly through the co-operation on the preparation of curricular documents.

### **Duration of the training**

Both *Mechanik opravář motorových vozidel* (Automotive Repairman) and *Elektromechanik pro zařízení a přístroje* (Electromechanic for Equipment and Instruments) are three-year vocational programmes (ISCED 3C). They enable graduates to perform manual work. They are concluded by the final examination after which a graduate gets a vocational certificate that acknowledges the respective vocational qualification awarded. Graduates leave directly for the labour market or they may enter a two-year follow-up program (ISCED 4A) and pass *maturita* examination that opens a path to higher education.

For technical programmes (ISCED 3A), the total number of lessons is between 28 and 33 per week; the proportion of general subjects and vocational ones is about 60:40. Some lessons are optional. There are also 33 lessons with vocational programmes (ISCED 3C); the proportion of general subjects, vocational subjects and practical training varies. In three-year courses (the prevailing type) practical training can make up from 35% to 60% of the lessons. (For programs *Automotive Repairman* and *Electromechanic for Equipment and Instruments* it is about 45 %.)

### **Location of the training**

These programs are usually provided by secondary vocational schools (*střední odborné učiliště - SOU*) and by the secondary technical schools (*střední odborná škola - SOŠ*).

The first (sometimes also the second – depends on the program) year of the program is completely school-based and combines general education subjects with

technological and workshop subjects. Special focus is given to technology and workshop skills.

The third (sometimes also the second – depends on the program) year of the program combines a school-based environment with a real workplace. Thus, following a supervised practical training program, final-year learners are placed in enterprises for every second week throughout their final year.

The main criteria for a teaching centre to select a company lay in its suitability (infrastructure, resources, production system, organisational structure, etc.) with regard to the training programme, in the sense that the accurate training of the student must be guaranteed.

Usually it is teaching centres that distribute students among available posts in different companies. The decision on how to allocate students depends on the needs of the company and the profile of the student, not only concerning the marks, competences, experience, etc., but also with regard to location proximity, availability of transport, etc. Learners themselves may show their interest for accomplishing their practical training in a specific enterprise.

### **Description of the learning contents and destinations (Curricula, learning outcomes)**

The study plans of the three-year vocational programs include general subjects, vocational subjects and practical training. The minimum allocation of general and vocational subjects and practical training is defined by the Framework Educational Program.

The organization of secondary education is defined by the Education Act § 65, where education is divided into theoretical, practical training and education outside the classroom. Practical training is divided into training, exercises, teaching experience and professional or artistic practice and sports training, according to various disciplines of education. Practical training takes place in schools and school facilities or sites of natural or legal persons who are authorized to perform activities associated with the discipline of education and agreements with the schools on the content, range of teaching and the conditions for its actions.

Framework Educational Program for the field of education 23-68-H/01 **Automotive Repairman** issued by the Ministry of Education, Youth and Sports on 28. June 2007, No. 12 698/2007-23.

Students will learn to perform maintenance and servicing of motor vehicles. They learn to find defects, revealing their causes, repair and adjust individual components of motor vehicles, engines and fittings, transmissions, chassis at a basic level and electrical wiring and electrical equipment of vehicles. To do this, students gain fitting skills, but also knowledge of individual vehicle components, principles of operation and normal faults, working with diagnostic equipment. In the workshops, trainees

learn the basics of manual and mechanical processing of metals and non-metallic materials and become familiar with the principles of health and safety at work. Students will also be prepared for driving license class C. Some schools specialize in the repair of motorcycles, automobiles or trucks repair.

Graduates are qualified workers mainly prepared to adjust, treat, test and repair motor vehicles; so they can work as auto mechanics in car repair shops, workshops of large transport companies, agricultural and other companies, but also for example in technical inspection stations, emission measuring stations and may also be applied in assembly factories, in adjustment and control of produced vehicles. Graduates may also work as truck drivers. Graduates may continue studies, especially in fields focused on automobiles, in the field of engineering specialization, or in the business oriented field. Examples of possible job positions include: auto mechanic, mechanic for single track vehicles, truck and bus mechanic, personal vehicle mechanic, tire shop mechanic.

Framework Educational Program for the field of education 26-52-H/01 **Electromechanic for Equipment and Instruments** was published by the Ministry of Education, Youth and Sports on 28. July 2007, No. 12 698/2007-23.

Trainees learn to control, maintain and repair electrical equipment and devices. With measuring and testing equipment and reading technical documentation for the electrical, electronic and mechatronic device are trainees able to determine the fault and repair the equipment. They are also able to assess measured values for the inspection, diagnosis, and elimination of defects for system start up, make adjustments and determine operational settings.

Graduates can work in the field of electro-technology, in technical services with a focus on electrical equipment, such as consumer electronics, office equipment, medical instrumentation, refrigeration and air conditioning equipment, lifting equipment, and operational maintenance tasks in the fields of industrial automation (automatic production lines and robotics).

Examples of possible job positions include mechanic for digitally controlled machinery, electronic systems mechanic, electro-technical systems mechanic, safeguard technology mechanic, etc.

**Form of competence-ascertainment / examinations (theoretical & practical part?; oral & written exam?)**

Both programs are finished by a final examination and graduates will receive a certificate of apprenticeship (výuční list). According to the Education Act § 74 Final exam consists of a written test, oral test and practical training examination. The final exam will be held before the Board of Examiners. The final exam is currently undergoing reform and the project New Final Exam / New final examination.

It focuses on the development and verification of materials used for the purposes of final examinations in vocational fields. These are the topics of the written, practical and oral parts of the examination in particular vocational fields covering the national framework of fields of study. The aim is to establish uniform assignment of final examination for all vocational fields achieving thus comparability of final examination within each field. Topics of final examinations are developed under the organizational and methodological support of the National Institute for Education (NÚV) by teams of pedagogues who teach the relevant vocational programs at schools. The representatives of employers assess developed materials in terms of existing needs in the practice. Developed topics are provided to all schools on yearly basis – for each vocational field there is a set of topics comparable in terms of contents as well as complexity level.

### **Educational staff (trainers or/and teachers?)**

According the Act on pedagogical staff teaching at secondary schools: teachers in general - education courses, teachers of vocational subjects, teachers of practical training, teachers of vocational training. The adequate education of the teaching staff is required, which is also described in the Act on pedagogical staff.

### **Classification of the apprenticeships in the NQF**

At the principle objectives and learning outcomes are based new curricula for primary and secondary education, the Framework Educational Programs and qualification standards are described by the National Qualifications Framework (NQF).

Each qualification retained in the register NQF has a certain qualification level describing working skills (abilities). Qualification levels form a scale for the classification of all complete and professional qualifications and are common to the National Qualifications Framework and the National System of Occupations. Overview of skill levels expresses their relationship with the EQF levels. Currently in the registry NQF are kept full and professional qualifications in levels 2 to 7.

Both vocational fields, which are described in this report are on the level H and correspond to the level 3 of the NQF. The Automotive Repairman and Electromechanic for Equipment and Instruments have not processed yet within the NQF.

## Qualification Levels in the Czech Republic

	Levels of attained education	NQF levels
V	Tertiary doctoral programmes	8
T	Tertiary Masters programmes	7
R, N, P	Tertiary vocational education, Tertiary Bachelor's programmes	6
	Tertiary vocational education diploma/professional studies will be included in this level after the implementation of the reform of higher education	5
K,L,M	Upper Secondary Education with "Maturita" Exam	4
E,H	E: Upper Secondary Education with Apprenticeship Certificate (2 year) H: Upper Secondary Education with Apprenticeship Certificate (3 year)	3
D,E,J	Upper Secondary (E with Apprenticeship Certificate)	2
B, C	Elementary education, lower secondary education	1

## 5. Status quo of the learning outcome orientation in the Czech vocational system<sup>6</sup>

### Implementation of the learning outcome approach

The term learning outcomes is translated as anything what a student should know, should understand and should be able to do at the end of an educational program. These were introduced into the Czech educational system by the act 561/2004 Sb., on Preschool, Elementary, Secondary and Tertiary Vocational and Other Education (the Education Act) and have been gradually implemented since 2006.

### How are units of learning outcomes designed?

Core curricula establish a clear hierarchy between knowledge and skills. By knowledge is meant a system of facts and theories which students acquire by being taught. Knowledge forms the foundation of education. By skills is meant the ability to perform certain tasks. For many skills appropriate knowledge is a prerequisite. The orientation towards skills is further strengthened by the notion of key competences. These are defined as collections of knowledge, skills, attitudes and values which are necessary for personal development and are useful in common situations.

The curricula and EQF descriptors are generally in agreement. Qualification levels are defined in terms of learning outcomes. The learning process is interpreted in a comprehensive sense, to include knowledge and skills in the cognitive, physical and social domains. This knowledge and these skills are not considered in isolation, but are combined into more general competences. The linking of particular learning outcomes to EQF levels demonstrates clear and significant similarities.

Curricula for vocational education (RVP OV) define key and professional competences which constitute the requirements for a graduate in a given study field. Education in all areas of vocational education focuses on helping the students acquire, and building on their basic education, develop the following key competences: learning competences, problem solving competences, communication competences, personal and social competences, civic competences and cultural awareness, professional and business competences, mathematical competences, IT and communication competences, and competences for working with information.

As far as knowledge is concerned, level 3 of the EQF requires the “knowledge of facts, principles, processes and general concepts, in a field of work or study”. Analyzing the key competences, toward which education in given fields of study is geared, may demonstrate, that graduates will obtain the knowledge required for EQF level 3.

Level 3 skills “a range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information”; as well as to EQF level 3 competence, which require that learners “take responsibility for completion of tasks in work or study, adapt own behavior to

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<sup>6</sup> Pohanková, J. a kol.: National Referencing Report of the Czech Republic. NUV, Praha 2011. ISBN 978-80-87063-47-7.

circumstances in solving problems“. Terminology on level 3 is the least conclusive in the area of competence, considering the lack of a precise specification of learning outcomes, referring merely to “a responsibility for fulfilling tasks“. Important elements of responsibility may be found in the definition of technical competences: “ensure work safety and health protection; strive to achieve the highest possible quality of work, products or services; and act economically and in accordance with the strategy of sustainable development“.

### **How are units of learning outcomes assessed and documented?**

The unit of learning outcomes is defined as a certain part of the qualification, which may be specific to a single qualification, but may also be common for several qualifications. It consists of a coherent set of knowledge, skills and competencies - expected learning outcomes which can be verified, evaluated and acknowledged. Defined competencies should be based on real work tasks and connect the world of education with the labor world.

Each unit can be assessed by number of points that represent its weight within the qualification. ECVET system awards first with points of the qualification in general and then awards each unit (in this direction will be ECVET further elaborated in connection with the National Qualifications Framework). For qualifications, which have no determined points, can be estimated points according to the significance of unit for the given qualification and for the labor market.

The initial training points are determined by an estimation according to the significance of the given educational field (to reach or "exceed" education defined by an appropriate FED) and for entering the labor market; in fact it will be a small number of points. The use of point assessment is voluntary. It will depend on the agreement of both institutions and on the possibilities for the point implementation in practice.

In the ECVET system are units of learning outcomes instrument for transferability and recognition of achieved results in different environments. The learner can get them in various ways – formal, non-formal and informal learning, both in his country and also in abroad. Learning delimited in the form of units is implemented on the basis of the training modules. The unit cannot be substituted with a part of the formal learning program, e.g. for training module or curriculum of the School Educational Program.

### **How can the role of the teachers or/and trainers be characterized? Is there an opportunity for a better support during the arrangement of competence orientated learning?**

Teachers are involved in the development of the School Educational Programs, where they create units of learning outcomes, training modules and integrate them into the SEP. The goal is to motivate students and improve their vocational training.

Teachers have the opportunity to take an ECVET course, where they learn to assemble the unit of learning outcomes, which will help them to improve pupils' practical training in companies. Participants will become familiar with the European instruments for the support of the vocational training and mobility of pupils, with the possibility to describe the results of learning outcomes through knowledge, skills and competences. They will have an opportunity to practice and try to formulate learning outcomes, so that the learning outcomes will be understandable and useful.

### **Potential to improve & deepen this focusing on the learning outcome approach**

The aim of the implementation of learning outcomes units and ECVET in initial education is to promote learning mobility, increase the attractiveness of vocational education and to support the quality in education. Challenging in the Czech Republic is the connection of the existing qualification system with ECVET principles and utilization the learning outcomes recognition.

Further development of the NQF is currently influenced by the implementation of ECVET. The intention is to use the competency model to define the "transversal qualifications" and to obtain a practically usable "units of learning outcomes". Reflections about the possibilities of ECVET system implementation lead to the assumption that units of learning outcomes could be mostly covered with particular competencies in the qualification standards of professional qualifications.

The problem may occur in the method of defining competencies - not all competencies in the standards of the NQF are properly formulated. Another problem may be the detection of true portability of selected competencies or their parts.

### **Short outlook:**

#### **Plan to convey the learning outcome orientation?**

The secondary education system does not currently use a credit system. Nevertheless, the Czech Republic has agreed to the Recommendation of the European Parliament and Council of 18 June 2009, on the Establishment of the European Credit system for Vocation Education and Training (ECVET). This has been undergoing testing since 2009. In April 2012, the Ministry of Education approved a draft strategy for the implementation of ECVET in the country. ECVET elements introduced in the Czech environment since the end of 2012 Pospolu project - Support for cooperation between schools and companies with a focus on vocational training in practice. Implementation of ECVET in the Czech Republic supports the Coordinating Center for ECVET. It was established by decision of the Ministry of Education in April 2012.

The ECVET elements are introduced in the Czech environment since the end of 2012 by the Pospolu<sup>7</sup> project - Support for cooperation between schools and companies with the focus on vocational training in practice. Within the project, schools could participate in the development of the generic, but particularly of the specific applied models of cooperation related to the groups of fields of study included in their own curricula, either during the phase of creating or subsequent commenting. The form of applied models will be developed in the course of the whole project. A school may, together with the enterprise with which it has established cooperation, participate in a tender for pilot testing of these models. In such a case, the school and the enterprise jointly prepare, in line with the terms and conditions of the tender, a proposal for pilot testing in their environment. An important benefit for the project and consequently also for the whole system of VET will be the detailed feedback acquired from pilot testing of cooperation between schools and enterprises from the entire country in terms of possibilities and limits of mutual cooperation under the existing legislation.

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<sup>7</sup> <http://www.nuv.cz/pospolu/ecvet>

## 6. Conclusion

Vocational education in the Czech Republic aims to gradually increase the transparency and quality of its outputs. The potential of ECVET wants Czech Republic use to improve the attractiveness of vocational education (mainly in technical branches) and to raise the efficient use of material -technical base in initial vocational education. All this combined with the possibilities, offered by international cooperation. The aim is to link the initial and continuing education through the implementation of recognition of prior learning. In the field of continuing education is systematically formed the qualifying system NQF and ECVET. The launching of ECVET will also contribute to increase mobility of students, not only in initial vocational education. There is informational and methodological support for the implementation of the mobility using ECVET.

The concept of learning outcomes is gradually being introduced in the Czech system of vocational education and training and this helps to increase transparency and to promote transnational mobility. Focus on learning outcomes has become an important part of the systems development in education policy in many countries and in many ways influenced the development of the curricula concept in vocational education and training.

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