Czech Republic

Country Report on ICT in Education

Available on http://insight.eun.org

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1 THE EDUCATION CONTEXT

1.1 EDUCATION REFORM

The current curricular reform in schools is based on the Framework educational programmes (FEPs), which represent a central level of the curricular system and define educational goals and key competences as well as educational contents necessary for their achievement. On the basis of the FEP, schools will prepare their own school educational programmes. The system was validated in pilot schools. FEPs are now in different phases of development.

- FEPs were approved for ISCED levels 0, 1 and 2 except for special education. Mateřská škola (nursery school, ISCED 0) already works in accordance with the FEP.
- Základní škola (primary school) started teaching according to the FEP in 1st and 6th grades from the school year 2007/08.
- Upper secondary general education started teaching according to the FEP in 1st grades from the school year 2009/10.
- The FEPs for upper secondary technical and vocational education are prepared simultaneously with the new National Qualification Framework which defines some 250 fields of education instead of the former 800. The following technical education FEPs have been published (approved):
  - Phase 1 (June 2007): 61 FEPs – schools started teaching according to their school educational programmes as from 1 September 2009
  - Phase 2 (May 2008): 82 FEPs – schools will start teaching according to their school educational programmes as from 1 September 2010
  - FEPs for technical schools are currently subject to approval.

Pre-primary education

Mateřská škola (nursery school) is a part of the education system with a long tradition. The new Framework Educational Programme is obligatory for schools from 2007/08. Attendance is not compulsory; nevertheless it covers nearly 86% of the total age group (3-5 years), 92.8 % in the pre-primary school year. Parents can be asked to pay a maximum of 50% of the running (not educational) costs incurred by the community.

Principles of the Framework Education Programme for Elementary Education (FEP EE):

- builds on the FEP PE and forms the basis for the framework education programmes for secondary education;
- delimits all that is shared and necessary within the compulsory elementary education of pupils, including education in corresponding forms of six- or eight-year secondary schools;
- specifies the level of key competences which should be attained by the pupils at the end of elementary education;
- defines the educational content – the expected outcomes and subject matter;
- integrates cross-curricular subjects with distinctly formative functions as a binding part of elementary education;
- supports a complex approach to the implementation of educational content, including the possibility of interconnecting it appropriately, and expects that various educational approaches, teaching forms and methods will be selected and all supportive measures utilised in accordance with the pupils' individual needs;
- makes it possible to modify the educational content for the education of pupils with special educational needs;
- is binding for all secondary schools when determining their requirements for the entrance procedure for study at secondary schools.

Principles of the Framework Education Programme for Secondary General Education (FEP SGE):

- is intended for the development of the School Education Programme at four-year secondary schools and the upper stage of six- or eight-year secondary schools;
- prescribes the minimum level of education to be attained by all secondary-school leavers, which the school must respect in its SEP;
- specifies the level of key competences which should be attained by the pupils at the end of secondary-school education;
- defines the binding educational content – the expected outcomes and subject matter;
- integrates cross-curricular subjects with distinctly formative functions as a binding part of education;
- supports a complex approach to the implementation of educational content, including the possibil-

ity of interconnecting it appropriately, and expects that various educational approaches, different teaching forms and methods will be selected in accordance with the pupils' individual needs;
- makes it possible to modify the educational content for the education of pupils with special educational needs and exceptionally gifted pupils.

The FEP SGE is an open document, which is reviewed regularly based on the changing needs of society, the teachers' experience with the SEP and the needs and interests of the pupils.

Proposed reform of secondary school leaving exams

The secondary school leaving exam is a prerequisite for further education (entering university or college). There is a new procedure for organising the exam. One part is common to all upper-secondary schools in the Czech Republic, the second part is for pupils with a specific profile.

The Ministry of Education will be responsible for both content and form of the centrally prepared common part. It consists of three subjects: Czech language, foreign language (choice out of five possibilities) and one required optional exam. Language exams consist of a test, an essay and an oral exam. For the optional exam, students can choose from the mathematics, civics and social science section, the science and technical section and the ICT section.

The second part of the exam according to the specialised profile of students will be at the discretion of secondary schools. It will be held in three additional subjects – i.e. the total number of subjects will be six (previously four).

The secondary school leaving exam in its new form will be launched in schools in 2011/2012 at earliest. The implementation of the new secondary school leaving exams has been several times postponed, as the reform is perceived by Czech society as a very controversial topic. The Centre for the School Leaving Exams Reform (CERMAT, www.cermat.cz) which has recently been renamed "Centre for recognition of results in education" (CZVV), is directly responsible to the Ministry of Education for the preparation of the new school leaving exams[1].

1.2 KEY CHALLENGES /PRIORITIES FOR EDUCATION

Educational Trends Supported by the Framework Education Programme:

- to take into consideration the pupils' needs and potential when trying to achieve the educational objectives at elementary schools;
- to apply a more flexible organisation of education and foster the individualisation of learning in accordance with the pupils' needs and potential
- to create a wider offer of obligatory optional subjects for the development of pupils' interests and individual capabilities;
- to create a positive social, emotional and working atmosphere based on motivation, cooperation and engaging instructional methods;
- to orient changes in the assessment of the pupils towards continuous diagnostics, individual assessment of their achievements and a wider use of verbal assessment;
- to maintain, as long as possible, natural heterogeneous groups of pupils and weaken the reasons for segregating pupils into specialised classrooms and schools;
- to emphasise efficient cooperation with parents.

The draft Action Plan "School for the 21st Century" (which has not yet been endorsed by the government) and "The Strategy for ICT Development in Education for the period 2009-2013" state the importance of ICT in education. These documents describe several targets for ICT in education and identify financial resources to implement reforms in schools.

1 http://eacea.ec.europa.eu/education/eurydice/documents/eurybase/structures/041_CZ_CS.pdf

2. ICT POLICY

2.1. RESPONSIBILITIES

ICT is included in the Framework Educational Programmes for primary and secondary levels of education. The use of information and communication technologies is a necessary part of the strategic planning of schools, which, as a rule, should have an ICT plan and take ICT into account when organising teaching. Previously this was a condition for schools to get additional grants from the Ministry for ICT equipment, ICT staff in schools, etc. In 2006, 88% schools had a plan and in 2009 85% schools were continuing to draft plans.

Regional authorities (there are 14 regions in the Czech Republic) are responsible for ICT in secondary schools, while local authorities are responsible for ICT in pre-primary and primary schools. Regional or local authorities are "school founders". School founders have the main responsibility for finance and control. The Ministry, to a lesser extent, has some responsibilities, according to the number of pupils. School boards are composed of: 1/3 authority representatives, 1/3 parents and 1/3 teachers.

Through the European Social Fund (ESF) and other grant schemes organised by independent region or local authorities, schools receive financial support in various areas of education including ICT.

The use of ICT in Czech schools is evaluated by the Czech School Inspectorate. In September 2009, a special thematic report described the level of ICT in elementary schools[2].

2.2. ICT POLICIES FOR SCHOOLS

"The National Strategy for ICT in Education" drawn up by the Ministry of Education, Youth and Sport (MoEYS) was completed in 2006. In October 2008 a new document, "A Strategy for ICT Development in Education 2009-2013", was accepted by the Czech government. The document outlines nine main programmes to support ICT development in education in the next years. The main goal is to support schools in reaching a high level of use of ICT both in the majority of subjects and at the same time as a standard tool for staff and students. The support should come from the central level (i.e. MoEYS) or from the regions and be financed also by MoEYS or from the ESF. The main support programmes for primary schools, secondary schools, colleges and music academies are:

1. Connectivity Programme – support for high-speed internet connection by MoEYS as a basic condition for the further development of ICT usage at schools
2. Infrastructure Programme
3. Programme of support for teachers' education in the field of ICT usage in lessons
4. Monitoring Programme
5. Quality Management Programme
6. Entrance Exams Management Support Programme
7. Results in Education Programme
8. Integration into the Concept of eGON Programme – a strategy plan for eGoverment in all national sectors
9. Portal for Education

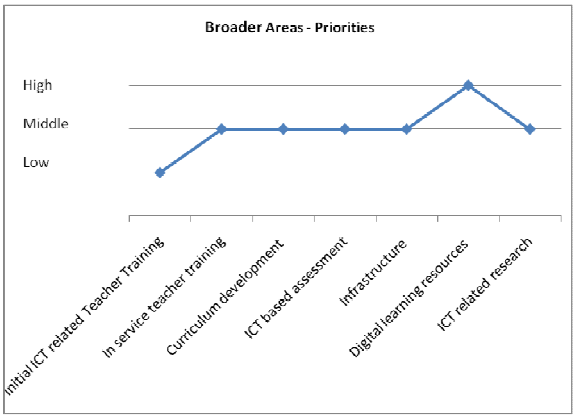
In early 2009 MoEYS drafted an Action Plan for the implementation of the strategy, which has yet not been endorsed. Some regions support the use of ICT in schools, mainly by providing financial support, for example for purchase of interactive whiteboards and other ICT equipment.

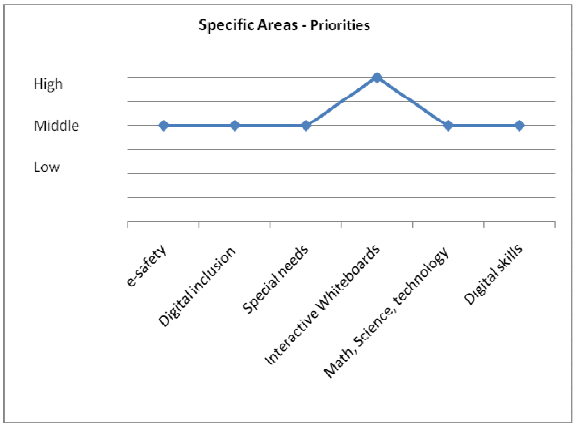
The national projects in the framework of European Social Fund can be regarded as indirect state support for use of ICT in education. For instance, pedagogical support is intended to enhance the competences of the teaching profession (within Methodology II, a project under ESF, planned for 2009-2011). The project focuses on systemic support of teachers in the area of methodology and didactics, the development of virtual learning communities and effective methods of education. It contributes to an increase in the quality of the work of teachers, which helps them to make effective use of various forms and methods of teaching, share experience with other teachers, and learn in the sense of lifelong learning. The main outcome of this project is the national portal for teachers: www.rvp.cz.

[2] www.csicr.cz/upload/TZ%20ICT%20z%C3%A1%C5%99%C3%AD%202009.pdf.

Thanks to EU structural funds the new operational Programme, "Education for Competitiveness", managed by the MoEYS, will support the use of ICT in all subjects. Schools will have the opportunity to create a project and apply for an ICT grant in teaching (DVDs, cameras, netbooks, notebooks, computers, software, IWBs, etc.). The programme will start with grant applications in the next year.

2.3. ICT PRIORITIES





3. THE CURRICULUM AND ICT

3.1. THE CURRICULUM FRAMEWORK

In accordance with the new principles of curricular policy, formulated in the National Programme for the Development of Education in the Czech Republic (the so-called White Paper) on Pre-school, Elementary, Secondary, Higher Vocational and Other Education (the 'Education Act'), new curricula for the education of pupils between 3 and 19 years of age are being introduced. Curricular documents are developed at two levels – state and school (see Diagram). The state level is represented by the National Education Programme (NEP) and Framework Education Programmes (FEPs). Whereas the NEP formulates the requirements for education which are applicable in initial education as a whole, the FEPs define the binding scope of education for its individual stages (for preschool, elementary and secondary education). The school level is represented by School Education Programmes (SEPs), on the basis of which education is implemented in individual schools. The SEP is created by each school according to the principles prescribed in the respective FEP (See Annex 1 to see the NEP, FEPs and the state and school level).

Framework Education Programmes:

- are based on a new education strategy, which emphasises key competences, their interconnection with the educational content and application of the acquired knowledge and skills in real life;
- build on the concept of lifelong learning;
- formulate the expected level of education for all pupils at different stages of education;
- support the educational autonomy of schools and professional responsibility of the teachers for the outcomes of the educational process.

3.2. ICT IN THE CURRICULUM

The educational content of **elementary education** has been divided into nine broadly defined educational areas in the FEP EE. Individual educational areas consist of one or more educational fields of similar educational content. One of them is *Information and Communication Technologies*. The nine educational areas are as follows:

- Language and Language Communication *(Czech Language and Literature, Foreign Language)*
- Mathematics and Application
- Information and Communication Technologies
- Man and His World *(Man and His World)*
- Man and Society *(History, Civics)*
- Man and Nature *(Physics, Chemistry, Natural Sciences, Geography)*
- Arts and Culture *(Music, Fine Arts)*
- Man and Health *(Health Education, Physical Education)*
- Man and the World of Work

Educational content in four-year secondary schools and at the upper level of six- or eight-year secondary schools has been divided into eight (generally: upper-secondary education), roughly defined educational areas in the FEP SGE. Individual educational areas consist of one or more educational fields of similar educational content. One of them is *Information Science and Information and Communication Technologies.*

The use of ICT in school education and related support of information literacy ranks among the priorities of the curricular reform in the Czech Republic. The position of ICT within the curricula is defined not only as an independent school subject but mainly as a tool for solving problems and as a basis for creating an educational environment.

- The Framework Education Programme for Elementary Education (Education Research Institute in Prague)[3]
- Framework Education Programme for Secondary General Education (Education Research Institute in Prague)[4]
- Annual Report for the 2007/2008 School Year (Czech School Inspectorate)[5]

3.3. STUDENTS' ICT COMPETENCE

Framework Education Programme for Elementary Education (FEP EE):

Stage 1

THE BASICS OF WORKING WITH A COMPUTER Expected Outcomes – Cycles 1 and 2

- use the basic, standard functions of a computer and its most common peripherals
- observe safety rules when working with hardware and software, and proceed in an informed manner in the case of their being faulty
- protect data from damage, loss or abuse

INFORMATION SEARCHING AND COMMUNICATION - Expected Outcomes – Cycles 1 and 2

- use simple and suitable ways to search for information on the internet
- search for information on web portals, in libraries and in databases
- communicate by means of the internet and other common communication devices

INFORMATION PROCESSING AND APPLICATION Expected Outcomes – Cycles 1 and 2

- work with text and pictures in text and graphics editors

Stage 2

INFORMATION SEARCHING AND COMMUNICATION – Expected Outcomes

- verify the credibility of information and information sources and assess their importance and interconnectedness

INFORMATION PROCESSING AND APPLICATION – Expected Outcomes

- work with text and graphics and table editors, and use suitable applications
- apply basic aesthetic and typographic rules for work with text and pictures
- work with information in accordance with legislation on intellectual property rights
- use information from various information sources and evaluate simple relationships between data
- prepare and present information in text, graphic and multimedia forms at user level

Framework Education Programme for Secondary General Education (FEP SGE):

DIGITAL TECHNOLOGIES – Expected Outcomes

- manage, combine and apply the ICT tools available
- utilise his/her theoretical as well as practical knowledge of the functions of individual components of both hardware and software to solve problems creatively and effectively
- organise data effectively and protect it from being destroyed or abused

[3] http://rvp.cz/informace/wp-content/uploads/2009/09/RVP_ZV_EN_final.pdf
[4] http://rvp.cz/informace/wp-content/uploads/2009/09/RVP_G-anj.pdf
[5] http://www.csicr.cz/upload/annual_report_2007-08.pdf

- be familiar with the possible uses of ICTs in various areas of social knowledge and practice

INFORMATION RESOURECES AND SEARCHING, COMMUNICATION – Expected Outcomes

- utilise the services of information networks available to search for information and to communicate, as well as for self-learning and teamwork
- make the best of the offer provided by information and educational portals, encyclopaedias, libraries, databases and educational software
- assess topicality, relevance and reliability of information resources and information, creatively utilise information and communication services in compliance with ethical, safety and legislative requirements

INFORMATION PROCESSING AND PRESENTATION – Expected Outcomes

- process and present the outcomes of his/her work using advanced functions of application software, multimedia technologies and the internet
- apply an algorithmic approach to problem solving

ICT competences are not explicitly mentioned (either in FEP EE or in FEP GE) as key competences.

3.4. ASSESSMENT SCHEME

ICT competences are assessed in the same way as other competences; no common assessment framework scheme dedicated especially to ICT competences is defined. ICTs are regarded as "ordinary" tools for learning. Students in primary and secondary schools are obliged to pass the subject "Information Science" and they are graded (classification scale: 1 - 5; 1 is the best, 5 – fail) at the end of every term. The assessment of ICT knowledge lies within the competence of each school (as mentioned above), but schools must comply with the national curriculum in the area of ICT. ICT is both taught as a separate subject and regarded as a support in all the other subjects.

The **IT Literacy** test is a commercial test for pupils of 8th and 9th grades which schools can buy (paying per pupil) and thus certify a certain level of pupils' key competences in the ICT. The test is not obligatory and it is up to the school to decide whether it will have its students tested or not.

GENERAL

Assessment of pupils made by teachers is both continuous (during the school term) and then final (at the end of the term). Pupils/ students are assessed for the results in particular subjects and they also receive an overall assessment. Pupils and students receive paper school reports mid-year (January) and then at the end of the school year (June). The assessment rules in each school are part of the school regulations. The concrete means of continuous assessment are usually set by teachers of particular subjects.

One example of assessment in ICT:

The fields of assessment:

- Ability to manage, combine and apply ICT tools
- Utilise his/her theoretical and practical knowledge of the functions of hardware and software
- Capacity to use the internet as a source of information, searching for information, ability to assess its topicality, relevance and reliability
- Work on projects – in pairs, individual work

Evaluation of the subject, i.e. final grades, depends mostly on the following assessment:

- test (written or on computer)
- self-assessment
- assessment by other students (quality of the projects, etc.)
- comparing the results with other students

3.5. ICT BASED ASSESSMENT

ICT based assessment is an individual initiative of some schools. There is a wide range of possibilities for ICT-based assessment which are at the disposal of schools, but the use varies from school to school. Basically, pupils are assessed by means of ICT in the Computer Science subjects. In other subjects ICT is used from time to time as a mean of assessment – physics, mathematics, general science, languages. Students either work on various projects or are tested on computers.

Some schools use e-Learning courses which are also assessed electronically. *Electronic books* are becoming more and more popular. They are updated every day by teachers in the internet or the school intranet/extranet. In the majority of cases, schools use one

of the wide range of licensed school information systems/programmes, such as Bakaláři, Škola OnLine, SAS, iŠkola, aSc, Relax KEŠ (e.g. www.bakalari.cz etc.) to provide pupils and students with their results (grades), information about absences or planned activities. These programmes are also accessible for the parents, who can easily check the study results of their children on the internet using only a basic login with a password to access the system.

Also language tests (mainly international certificates) are increasingly assessed using computers and the internet.

The "European Computer driving licence" (ECDL), which certifies a certain level of ICT competence is also being taken by teachers and students in the Czech Republic[6].

3.6. QUALITY ASSURANCE OF THE USE OF ICT IN SCHOOLS

A national scheme for evaluation (self-evaluation) of ICT use in schools is being prepared.

Moreover, a study of the usage of ICT at schools in the previous two years was published by Czech School Inspectorate in January 2008, and a second one, on usage of ICT in primary schools was published in September 2009[7].

Usage of ICT in schools in last two years, Czech School Inspectorate – released in January 2008:

Overview: The study published in 2008 aimed to establish the level of progress in ICT implementation in primary and secondary schools in the preceding two years. The study was conducted at a time of great political change.

Age range of children: 6 - 16. Sample size: 513 primary schools.

Type of study: A combination of qualitative and quantitative methods was used. Methodology: Data was collected from 513 schools using interviews and lesson observations. Respondents included head teachers, ICT teachers, subject teachers and pupils.

The study found that, when compared with data from previous surveys in 2005 and 2006:

- There was more extensive usage of ICT in schools.
- Schools had better prepared curricular documents and ICT plans, and these were important for effective ICT implementation.
- Teachers had a greater interest in training to enhance their ICT skills and the didactics of education with ICT support.
- Head teachers and teachers had a greater interest in innovation processes using ICT (against a backdrop of limited financial resources).
- Teachers had a greater interest in preparing their own electronic educational content.
- There was increased awareness that ICT utilisation in lessons is attractive for pupils (and parents, for example for when comparing and selecting schools).

4. DIGITAL LEARNING RESOURCES AND SERVICE

4.1. CONTENT DEVELOPMENT STRATEGIES

The content development of educational resources is supported and controlled by the Ministry of Education only via a central reviewing system for textbooks and learning resources.

Learning resources are produced by a large number of publishers, who have to first obtain the "approval stamp" for each book from the Ministry according to firmly set rules. The process is open for all companies and each book has to be approved by expert evaluators from the Ministry. Schools and teachers choose which book they would like to use. Some books are paid by the company, some other by pupils.

[6] http://www.ecdl.com/publisher/index.jsp?&p=93&n=100

[7] For more information in Czech language: www.csicr.cz/upload/1.%20U%C5%BEit%C3%AD%20ICT%20ve%20%C5%A1kol%C3%A1ch%20za%20uplynul%C3%A9%20dva%20roky.pdf http://www.csicr.cz/upload/TZ%20ICT%20z%C3%A1%C5%99%C3%AD%202009.pdf

4.2. E-CONTENT DEVELOPMENT

The teachers' portal http://rvp.cz/ is primarily targeted at the curricular reform and contains only evaluated materials. Apart from this project, there are several projects focusing on specific areas. The portal Veskole.cz focuses on IWB and Metodik.cz offers pedagogical e-learning support. There is also a wide range of examples of regional and school projects which collect digital content on a local basis. So far no system, evaluation or rules for sharing digital educational content has been introduced in the Czech Republic. Despite this, digital content and online services have become integral parts of modern education in schools and their importance is constantly rising.

Modern educational methods make increasing use of resources which were not primarily aimed at education and are accessible online (so-called Primary Resources). These include various archives, newspapers, websites of museums, memorials, national parks, cities or towns, personalities, events, and also the archives of TV channels. It is seen as important to maximise the use of these materials, including TV educational programmes and other broadcasts.

4.3. USER - GENERATED CONTENT

The most important initiative is ESF project Methodology II (see section 2.2 above). The project focuses on the systemic support of teachers in the area of methodology and didactics, the development of virtual learning communities and effective methods of education. It contributes to an increase in the quality of the work of a teacher, which helps the teacher effectively use various forms and methods of teaching, share experiences with other teachers and learn in the sense of lifelong learning.

A teachers' portal is available on www.rvp.cz and consists of seven main areas:

- Texts – database of methodology texts.
- Learning object – database of learning resources, connected to Learning Resource Exchange (EUN).
- Discussions – new module for teachers of all type of schools.
- Wiki – place for sharing learning objects, pedagogical know-how and other materials, place for cooperation on projects.
- Blog – electronic diary.
- Digifolio – professional and leisure e-portfolio.
- E-learning – module focused on self-education.

There are about 5,000 daily unique visitors (teachers). All the content is free and is built mainly upon contributions by teachers. Part of the portal is validated (reviewed by teacher-specialists), part is a community web. The site is based on Web 2.0 principles.

4.4. WEB 2.0

See 4.3. There is a Wiki on the portal http://rvp.cz/, various Moodle communities promoting web 2.0 tools, and portal http://veskole.cz/, created with the purpose of supporting interactive education, mainly interactive whiteboards and other modern technologies in education.

4.5. CONTENT SHARING

See 4.3. Teachers' portal http://rvp.cz/ assisted by localisation of Creative Commons licences, which are applied to almost all resources on the portal.

4.6. LEARNING PLATFORMS

During the implementation of the "National Strategy for ICT in Education" (2001-2006) there was a strong emphasis on teachers' learning. All courses offered for teachers by the Ministry were accompanied by e-learning LMS support based on Moodle, which is almost the only LMS used in Czech schools. The Teachers' portal also uses Moodle for e-learning. Other open-source systems used on the portal are: Mahara, WordPress, phpBB, Mantis, etc. (and, as in other countries, TwinSpace).

5. TEACHER EDUCATION FOR ICT

5.1. ICT COMPETENCE TARGETS

The desired level of teachers' ICT competences is neither explicitly stated in the profiles of university graduates from faculties of education nor in the professional profiles of teachers (except ICT teachers). The training of future teachers at universities includes only one obligatory ICT subject (a one semester course with the aim of teaching ICT user skills) but offers many optional courses in the field of ICT. Generally,

the system of university education of future teachers is as follows:

- 3-year bachelor study programme - pre-primary school teachers
- 5-year master study programmes - primary school teachers
- 5-year master study programmes - lower secondary school teachers
- 5-year master study programmes - upper secondary school teachers
- 3-year Ph.D. study programmes

Trainee teachers choose a subject specialisation. One of them is "Technical education and ICT" (for lower secondary schools), or "Pedagogy of ICT" (for lower secondary schools). Future teachers often choose two specialisations/subjects and one of them could be ICT. There also exist a special certificate in "ICT in education" and a three semester course in the programme of lifelong education for teachers in primary, secondary and vocational schools – "ICT Coordinator".

At the following Czech university Faculties of Education, there is also a possibility of a Ph.D. programme with specialisation in "ICT in Education".

1. Charles University, Faculty of Education, Prague
2. University of South Bohemia in České Budějovice, Faculty of Education
3. University of Ostrava, Faculty of Education
4. University of Hradec Králové, Faculty of Education
5. University of West Bohemia, Faculty of Education

SIPVZ "Information Literacy" Project

At the end of 2006 in the framework of SIPVZ, the National Strategy for ICT in Education, almost all teachers were trained in the basic ICT user skills and 84 % of them passed level "Z" test of this course (certifying basic ICT skills), with 13.4 % reaching higher level ("level P"). Since the MoEYS stopped its financial support, the targets of SIPVZ are successfully fulfilled only in some active schools. In other schools there is stagnation in both further training of teachers and introducing modern technologies in teaching. As a part of the European Social Fund grant, many seminars for teachers are being offered. The problem is that their content is aimed only at general work with computers and the methodology for the application of ICT in particular subjects is missing.

5.2. ASSESSMENT SCHEMES

During initial teacher education there is only one compulsory one-semester ICT course to be passed (this became compulsory about 2 years ago), which provides future teachers with basic ICT competence. Additionally, there is a wide range of optional ICT courses (use of Web 2.0, working with Moodle tools, etc.). In the profile of the graduates from Faculties of Education, no ICT competence is defined. Students undergo only one compulsory assessment of their ICT knowledge: the exam in the basic ICT subject.

Further assessment took place during the mass ICT training of teachers within the framework of SIPVZ (see 5.1.) until 2006. Presently, there are discussions within the teachers' professional community about the career structure and standards of the teaching profession. ICT competences are an important issue in these discussions.

5.3. ICT IN TEACHER EDUCATION

As mentioned above, during initial teacher education there is only one compulsory ICT subject to be passed after a one-semester course which provides future teachers with basic ICT competence. Additionally, there exists a wide range of optional ICT courses (use of Web 2.0, working with Moodle tools, etc.). In the profile of the graduates from Faculties of Education, no ICT competence is defined. Above mentioned above, this means that the only compulsory assessment of trainee teachers is the exam in the basic ICT subject.

Initial education of future ICT teachers has a different study programme composition. For more information see 5.1.

At the moment there is no specific policy for ICT education of in-service teachers. The **National Strategy for ICT in Education (SIPVZ)** was meant to last till 2010 but after the parliamentary elections in 2006 it was unexpectedly terminated without any substitute. An important part of the SIPVZ programme was teacher training for the use of ICT in education.

At the end of 2006 there were 291 information centres and 745 SIPVZ training centres, most of which are now closing because of lack of finances.

In-service teacher training is not compulsory and in-service teachers can also enrol for the study of "**ICT**

Coordination" to become a school ICT coordinator. (This is allowed only to teachers with advanced ICT knowledge, typically ICT teachers, and with a Master's degree from a Faculty of Education or a Master's degree in other specialisations including the so-called "pedagogical minimum" study. A further condition is two years' teaching experience.) This training last 1.5 – 2 years and the main objectives are:

- to deepen and widen graduates' competences in the methodology of effective usage of ICT in schools
- subsequently to introduce other teachers to the use of ICT in lessons
- the creation of a school ICT plan
- qualified planning and management of the fulfilment of ICT service standards

School ICT coordinators either receive special benefits or a reduced teaching load. Their main function is however not well defined and in practice ranges from simple server administrator to the role of a methodologist advising on ICT development in education at a particular school.

At present, new series of seminars/training courses for heads of primary and secondary schools is being prepared. These seminars should teach directors how to plan ICT development of their school and how to auto-evaluate usage of ICT in the school education programme. This initiative stems from the professional union and is not directed by MoEYS.

5.4. TRAINING THE TEACHER TRAINERS

Potential teacher trainers in ICT can take Bachelor degrees with specialisation in "Information technologies in education", and then choose "Pedagogy of ICT at secondary schools" in Master study programmes. Some Czech universities also offer a three-year Ph.D. programme, "ICT in education":

1. Charles University, Faculty of Education, Prague
2. University of South Bohemia in České Budějovice, Faculty of Education
3. University of Ostrava, Faculty of Education
4. University of Hradec Králové, Faculty of Education
5. University of West Bohemia, Faculty of Education

These people are specialists in ICT in education and they can later be recruited as teacher trainers. The great majority of teacher trainers are recruited from ICT coordinators. To become an ICT coordinator, it is necessary to pass a three-semester course in the specialisation "ICT Coordinator".

5.5. INCENTIVES

In-service teachers can receive special allowances for further education which can also be used for ICT courses and seminars. At the same time teachers can receive a monthly special bonus to their salaries for special activities in school – usage of ICT in the lessons can count as this special activity.

School ICT coordinators either receive special benefits or a reduced teaching load. Annually there are the national eTwinning prizes, which are incentives for teachers.

OTHER SOURCES OF INFORMATION

MŠMT – Ministry of Education, Youth and Sports: www.msmt.cz

VUP – Institute for Pedagogical Research: www.vuppraha.cz

UIV – Institute for Information in Education (offers statistics): www.uiv.cz

ČŠI – Czech School Inspectorate: www.csicr.cz

NIDV – National Institute for Further Education: www.nidv.cz

STEPS (Study of the impact of technology in primary schools) – Czech Republic report

EUN Interactive Whiteboard Working Group (IWB WG) – Czech Republic report

Learning Resource Exchange Working Group – presentations about Czech Republic

Eurydice National summary sheets on education system in Europe and ongoing reforms, 2009 Edition: http://eacea.ec.europa.eu/education/eurydice/documents/eurybase/national_summary_sheets/047_CZ_EN.pdf

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ANNEX

National Education Framework