Knowledge Management System
Theme 7

Skills and Competences Development and

Innovative Pedagogy

Slovakia

(Draft)

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This background study was prepared for the eKnowVet database of the European Centre for the Development of Vocational Training (Cedefop). There are in total 11 themes in the database broken into detailed topics (the so-called islands). The study served as a basis for a more precise analysis of Theme 7 – Skills and competences development and innovative pedagogy. Respective paragraphs and references in the text are coded in accordance with respective codes of the database. These codes are applied by the member states, and visitors of http://www.trainingvillage.gr, button National VET Systems, could find under them information about respective topics across the Europe.

Societal limits of research before 1989

There is no tradition in anticipation of skill needs in the full sense and there is no widely accepted research know-how in this field. In the period of command economy after World War II till 1989 growth economy forecasting and labour market studying were ideologically biased. Diminished market forces rigidly replaced by the so-called scientific planning made research on anticipation of skill needs irrelevant. Fighting for selling products was replaced by supplying ordered goods and services for the domestic market, and by political negotiations and decisions within the international cooperation among communist countries and their allies. Development in respective sectors of economy was subordinated to political decisions within the Council of Mutual Economic Assistance (COMECON) dominated by the Soviet Union. Based on the political decision, e.g. Slovakia developed strong military industry requiring supply in experts in mechanical engineering and skilled workers in metal processing. Planned growth in respective sectors of economy was accompanied by calculation of additional labour force, and subsequently by regulation of graduates of respective schools. In the early phases of communist regime an unlimited growth of economy was expected and elementary cost benefit analysis was not considered relevant. In 1960s naivety of this approach was also recognised by decision makers. In final two decades of the communist regime limits of command economy were transparently manifested by growing tension between planning and real results of economy. Finally, annual plans of enterprises were as a rule corrected by the end of year, and made up to pretend success and avoid conflict with the political power. Furthermore, politically ordered full employment caused low productivity and producing for the stock became a rule. Research aimed at studying demands of the national economy and a balance between supply of graduates and workforce demands were dominantly descriptive. Research concentrated on assistance to general directorates within respective sectors of economy to estimate replacement of elderly workers and distribute entry numbers among vocational schools under the surveillance of respective sector. As the management of economy at all levels was subordinated to the political power and efficiency of management was of minor significance, quality of research was not important. Development of know-how for studying market of goods and services as well as labour market was finally irrelevant. Furthermore, after 1989 any experience in research in this field became obsolete.

VET programming before 1989

In the past requirements of labour market and/or entrepreneurs were reflected in the educational content via "Methodological Cabinets" (metodické kabinety) and "Commissions" (komisie) established at the Research Institute in Education (VÚP, Výskumný ústav

pedagogický). They were responsible for the development of content for study and training branches and their sub-specialisations. Permanent members of cabinets and commissions were grouped from representatives of VET schools, higher education institutions, as well as representatives of practice. The last mentioned provided for the transfer of requirements (required knowledge, skills, habits) on individual professions or groups of professions into curricular documents (called pedagogical documentation). The so-called "characteristics of profession fields" were elaborated as important instruments for identification of required abilities/skills and competences. Characteristics were comprehensively written documents prepared in structured form describing basic information (of non-pedagogical character) on analysed profession fields. They were elaborated predominantly by experts from individual sectors of economy the respective profession fields belonged to. Characteristics represented a basis for further elaboration, which also included experts in pedagogy. Their task was to highlight information included in characteristics from pedagogical and organizational points of view, and making use pedagogical and psychological terminology.

An additional source of information on required abilities/skills and competences was represented by analyses of "Qualification Catalogues" (kvalifikačné katalógy), which were backed by legislation and used to assign to workers respective tariff wage category.

Thus, even before 1989 alignment of content of VET to labour market needs was based on the analysis of shortages in originally valid curricular documents, on the reflection of prognostic materials dealing with developments and changes in professions, and stimuli from practice from members of respective commissions, however all within limits and deformations of command economy.

Clash of cultures in terminology

One segment of anticipation of skill needs however remained studied in a valid way all the time: "skills and competences" of school graduates. Nevertheless, other terms describing learning outcomes were traditionally used.

With some simplification one could say that education as a science in Slovakia developed within cultural frameworks shared with Germans. There is a difference between education sensu stricto and upbringing similarly to "Bildung" and "Erziehung" in contrast to the integral English term "education". Results of education/learning are traditionally studied in terms of "K-S-A", i.e. "knowledge" ("vedomosti"), "skills" ("zručnosti") and "attitudes" ("postoje"). This omnipresent triad is often complemented by "values" linked to attitudes, and "habits" seen as automatised skills. All these terms correspond with the German equivalents. The basic triad K-S-A has been also applied for description of profession/vocation as well as with regard to individual and his/her intrapersonal and interpersonal quality. From this traditional point of view, speaking about "skills and competences", as happened within EQF and learning outcomes discourse, is considered very confusing.

Before addressing this it is however necessary to clarify the Slovak terminology in more detail. There is no appropriate Slovak word for skills encompassing both mental skills and manual skills. The Slovak term "zručnosti" correspond etymologically to manual skills as it is derived from the word "hand" ("ruka"). As a consequence, there is a diversity and almost chaos in overcoming a risk of misunderstanding the term "zručnosti". There are diverse solutions suggested depending on academic schools.

- Some use the term "zručnosti" as the general term and add explanatory adjective "mental" ("mentálne") when it is important to indicate that not manual skills are meant. At the same time however, the term "mentálne zručnosti" is subjected to criticism due to inner inconsistency between "mentálne" and "zručnosti", as the second word refers to the word "hand".
- Therefore many experts use the term "spôsobilosti" as the general equivalent to "skills" and "zručnosti" strictly in the sense of manual skills.
- Recently the term "spôsobnosti" (precisely identified, however ancient and forgotten in the modern Slovak) is promoted as the general equivalent to "skills" under the strong influence of the academic who is heading the terminological commission of the Ministry of Education (MŠ, Ministerstvo školstva).

In currently valid curricular documents the first approach was adopted and the term "zručnosti" is used as the equivalent of the term "skills". In the document introducing the curricular reform already in pipeline the third approach is adopted and the term "spôsobnosti" is recommended as an equivalent of "skills". In the mainstream however the second approach dominates.

The word "kompetencia" is traditionally dominantly job or position related. It has two interrelated connotations: the first one being "entitlement to act" (e.g. with "competent officer" one means the "officer who is appointed to deal with respective agenda", while the quality of his/her skills to run agenda is not discussed); the second one is related to "ability to perform", which was already demonstrated or in which it is believed in by the speaker. The first connotation is much more used, but this word is also gradually adopting new connotations due to international influence.

In the "Millennium project", the National Programme for Forthcoming 15 to 20 Year adopted by the parliament in 2001, international discussion about key competences is reflected in the following way: "to achieve affective performance of jobs it is necessary to develop in students the key competences". Further, six competences were identified (terminology of Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning is often used): communication in mother tongue, social

competences explicitly including also "learning to learn", problem-solving in a creative and critical way, digital competence, health maintaining, civic competence. The Millennium as a policy document gradually influenced curriculum development, as will be discussed later. In parallel however, among theorists of education discussion evolved independently.

Currently, two trends need to be confronted and also need to be terminologically covered. Within the first philosophy more holistic approach is considered inevitable. The aforementioned approach of three items K-S-A (and sometimes also values and habits, which could be also considered subsumed under the three) is considered fragmented, and in general, looking for agreement on an overarching term is highly welcomed. The term competence seems to be very appropriate for many. In such a case the situation is similar to the French composite definition of competence containing "compétence-savoir", "compétence-faire" and "compétence-étre". Understanding of this term as an overarching term containing knowledge, skills and attributes is very appropriate also for psychologists who were much more influenced by pragmatic philosophy. A dominant share of educators and psychologists are used to refer to Bloom's taxonomy and used to work with K-S-A triad. Furthermore, within the term "competence", the "ability to use" is gradually much more stressed.

Although pragmatism was introduced into Slovak education by educational psychologists with some roots in Dewey's progressivism between World Wars I and II, period after World War II was dominated by debating on the content to be taught, and concentration on the input and process conditions was significant.

Putting stress on outcomes has become pronounced since 1989, after the call for making teachers free from overregulation by MŠ. Later it has gained the power with the increasing British influence (even taylorism in managing education) since late 1990s and also by the European discourse on the shift from educational inputs to learning outcomes. At the time being, this shift is the major topic in the educational theory and practice.

Nevertheless, there is a lot of confusion caused by the clash of diverse philosophies and terminological structures concerning using the term "competence" in EU documents.

Thus, the EQF related proposal SEC(2005) 957 defining learning outcomes in the triad "Knowledge", "Skills" and "Personal and professional competence" has been considered partly strange, in particular due to the content of the last item composed of four sub-items (i) Autonomy and responsibility (ii) Learning competence (iii) Communication and social competence (iv) Professional and vocational competence. A Slovak speaker would consider "Personal and professional competence" more appropriate as a general term containing all: relevant "knowledge" and "skills" related to both profession and individual, as well as results of general and vocational education and would recommend to redefine the third item to be

close to "compétence-étre" (and in both aspects of "compétence-étre": as the individual as well as the worker). He/she would consider the first three sub-items (i) to (iii) as important skills (more precisely personal or interpersonal) and would wonder why the forth sub-item, which is in fact very well known problem-solving (comprehensive ability to apply knowledge, skills, etc. are placed exactly there and where for instance another comprehensive virtue (creativity) should then be placed). Further development leading to reducing categorisation of learning outcomes to "knowledge, skills and competences in terms of autonomy and responsibility" is therefore welcomed as clarification and simplification, however seen as using the term competence restrictively.

Putting stress on "making use of", and "to apply", has been recently related to the term competence when willing to stress a shift from education to learning, and from input to outcome. It is in line with practice. Under Bloom's influence, action verbs were recommended for use for curriculum developer when working on the so-called basic pedagogical documents.

"Skills and competences" in the practice of programming

Skills and competences are specified in curricular documents (predominantly in graduate's profile (profil absolventa) and subjects' syllabi (učebné osnovy)) for individual study and training branches. They are specified as required knowledge in general education, required knowledge in vocational education, required skills, specific personal prerequisites, characteristics and abilities. Curricular documents have a firm structure approved by MŠ, valid since 1st April 2004, which has to be followed by all developers. The introductory part of graduate's profile presents overall characteristics of graduate (Part 1), with requirements (Part 2) to be fulfilled by the graduate in general education (Part 2.1) and vocational education (Part 2.2). Within vocational education requirements are elaborated in more detail with regard to required knowledge (Part 2.2.1) and required skills (Part 2.2.2). Required personal prerequisites, attributes and abilities are set at the end of graduate's profile.

Thus, this approach is compatible with the original EQF approach to learning outcomes description with "Knowledge", "Skills" and "Wider competences" focusing strongly also on "inter and intrapersonal skills" within the third category. The component "autonomy and responsibility" is so far less reflected and seems neither be reflected within the reform already in progress, in contrast to recent development in EQF.

In June 2007 the government adopted the Resolution No. 489/2007 to initiate a curricular reform allowing for increasing autonomy of educational institutions. With a two-level approach to curricula development schools will have a final say in curriculum development by developing the school educational programme (school curriculum). The state represented by the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) will

remain responsible only for development of state educational programmes within 22 integrated study and training branches (state curriculum). State curricula will be based on the Standard of Secondary VET (SSVET) developed by ŠIOV and approved by the MŠ on 10th July 2002. Subsequently, a manual for the development of the state curricula was prepared by ŠIOV in 2003. All aforementioned documents refer back to Millennium and key competences; however competences were finally formulated in an updated version and a different structure. A graduate's profile within each of the state curricula for all 22 integrated branches will be composed of key competences, general competences and vocational competences.

Key competences are as follows:

- Communicative and social-interactive;
- Intra- and interpersonal (including learning to learn);
- Creative problem solving;
- Entrepreneurial;
- Digital (ICT);
- Civic ("to be a democratic citizen").

All key competences are further detailed with regard to ISCED 2, 3C and 3A levels, respectively, in SSVET; they are valid for all students and studies of respective ISCED level.

General competences are to be elaborated in cooperation with the National Institute for Education (ŠPÚ, Štátny pedagogický ústav), which is responsible for general education and dominantly reflect cognitive aspects of learning outcomes. General competences are considered as the prerequisite for lifelong learning. They will be based on standards of general education detailed with regard to ISCED 2, 3C and 3A levels, respectively, in SSVET; they are also valid for all students and studies of respective ISCED level. Standards are composed of the following components: language, social science, mathematics, natural science, aesthetics, physical culture, and simultaneously formulated in two forms: content based and student performance based.

Vocational competences must reflect job profiles and professions/occupations and are to be elaborated in cooperation with social partners by ŠIOV. They will be based on standards of vocational education detailed with regard to ISCED 2, 3C and 3A levels, respectively, in SSVET for each of 22 integrated study and training branches. Standards are also formulated in the two forms: content based and student performance based.

Currently there is no VET of ISCED 2 level introduced, however introduction of this level VET is programmed and therefore included into SSVET. The standard of VET for ISCED 4 and 5 levels had not yet been prepared, but it is inevitable to do so for institutions offering post-secondary studies, and for secondary schools offering the so-called upper professional

education (vyššie odborné vzdelanie), that is content related rated and classified by statisticians as ISCED 5B level.

070101 Policy development on anticipation of skill needs

Current national policy priorities and initiatives on anticipation of skill needs

In 1990s dominated by introduction of market economy, fundamental restructuring of industry and high unemployment, anticipation and forecasting of skill needs was not demanded. In 2000s, with gradually reducing supply of skilled workers seeking jobs, in particular after accession into EU, attracting new investors and at the same time opening doors for workers to new labour markets, anticipation of skill needs developed to the hot topic. Nevertheless, anticipation of skill needs is not reflected as an urgent research field. A shortage of labour force, predominantly in blue-collar professions, is so urgent that not the research but an immediate policy intervention is urged. Very often regulation of admission to general education and ISCED 3A VET is required by employers. Furthermore, after years of the freedom of schools to adjust to students' (and their parents') preferences, interventions of educational authorities into the structure of study and training branches offered by VET schools are required. Although schools recognise importance of placement of graduates in the labour market, their policies are dominantly shaped by current financial regulation. Being financed per capita they are pushed indirectly to reflect preferably students' desires in order to gain subsidies rather than to look for graduates' future on the local or regional labour market. There is no fiscal instrument widely used to benefit schools for fulfilling requirements of local/regional employers.

Large employers started to contract VET students in order to secure supply of labour force, however, small and medium-sized entrepreneurs usually expect educational authorities to assist them by governmental regulations. Huge structural problems caused by breaking links between VET schools and the world of work (which was inevitable in the period of restructuring economy) overshadow the urgency of the development of fine instruments like research aimed at anticipation of skill needs. Many important players show the tendency to think in command economy pattern, understanding anticipation of skill needs as an instrument funnelling required numbers of labour force to respective work places. Whenever there is anticipation of skill needs or similar expression used in policy papers, it must be therefore deciphered what kind of measure is in fact meant.

According to the 2006 Manifesto the government "will provide for the coordination of vocational education and the labour market, adaptation of the apprenticeship and educational areas of specialisation to its requirements, including support for the creation of new fields of study... The government will support … vocational education … with the objective to prepare specialists with a better adaptation capability."

Based on the Government Manifesto, the Ministry of Education (MŠ, Ministerstvo školstva) declared i.a. following VET priorities:

- create a system of coordination of vocational education for the labour market;
- elaborate a proposal for criteria for the participation of employers' and employees' associations in vocational education;
- continuous and permanent cooperation between employers' and employers' associations, professional guilds, and the central bodies of state and local administration for the implementation of new study and training branches.

Subsequently the following tasks were identified for 2007 Work Plan of the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania):

1.6 Elaborate the proposal of the system of coordinating VET and the labour market.

1.7 Elaborate the background material for the proposal of motivation criteria for participation of entrepreneurs in VET.

1.11 Analysis and study of labour market needs, economy development, technologies and new qualification requirements concerning professions.

1.12 Monitoring of vocational education from the long-term labour market needs point of view, educational offer of schools, development of interest in training in VET schools and of situation and possibilities in cooperation between labour market institutions and the school system, employers' requirements and needs concerning preparation of graduates.

First two tasks have been already fulfilled.

In the document the Proposal of the System of Coordinating VET and the Labour Market, approved by MŠ in March 2007, ŠIOV proposed to create sectoral boards for VET at the national level (if appropriate, also regional sectoral boards), and regional boards for VET. Sectoral boards should focus on identification of labour market needs. Regional boards should express their agreement or disagreement concerning the network of VET schools, structure of training/study branches, planning of the number of students, quality control, and allocation of financial means. The document explicitly mentions analysis and forecasting of "changing qualification needs in the development of new or innovation of existing educational programme (analysis of needs), setting out overall characteristics of work activities within

respective profession (analysis of profession/occupation), developing new and monitoring existing qualification standards, etc." Furthermore, ŠIOV proposed to elaborate a detailed sectoral and regional analysis of labour market needs till June 2007 and to propose methods for identification and monitoring educational needs for the labour market till December 2007. See the Sectoral Analysis of Employers' Needs and Graduates' Readiness to Enter Labour Market in the Slovak Republic in 070103.

In the document the Proposal of Motivation Criteria for Participation of Entrepreneurs' Associations and Entrepreneurs in VET", elaborated by MŠ and ŠIOV (approved by MŠ in September 2007), it is proposed to prepare, in cooperation with the Centre of Labour, Social Affairs and Family (ÚPSVaR, Ústredie práce sociálnych vecí a rodiny), a model of long-term forecasting of labour market needs for VET needs till December 2007.

Both aforementioned measures signal clearly recognition of the gap in evidence for the purpose of the policy making. Nevertheless, this does not necessarily mean that respective players will be able to develop appropriate know-how for anticipation and forecasting of skill needs.

European Social Fund SOP Human Resources measure 3.3.B has been identified in support of forecasting labour market needs. In the mid of 2007 there were no activities taken within these measures, apparently due to missing expert capacities.

Furthermore, the ESF project the Creation, Development and Implementation of an Open System of Life-long Learning in the SR for the Labour Market also declared among its objectives "creating and implementing a system for monitoring, research and design of educational needs, derived from technologies applied in individual sectors of the economy". Nevertheless, finally with regard to "educational needs" only general statements were made without any attempt to objectivisation of "needs" in terms of "skills and competences". Thus, in contrast to original expectations project contributed to identification of future policies and recommendations concerning urgency of respective measures rather than to development of relevant know-how, not to speaking about implementation of the system. A sort of terms of reference for any further research in the field was offered instead. It is very likely that there were no experts available for both forecasting of skills needs based on macroeconomic model and surprisingly also for anticipation of skill needs based on questionnaires and/or similar soft techniques.

On the other hand, there are very promising efforts coming from regions. There are six pilot projects in progress within ESF SOP Human Resources and one project within SPD NUTS II – Bratislava Objective 3 aimed at the development of learning regions. In all seven regions (only the Nitra region was not able to participate) anticipation of skill needs has been recognised as a precondition of any efficient action. Thus, all regions already carried out or intent to do a research in this field till 2008. The most promising example seems to be the Banská Bystrica region (http://www.celozivotne.sk/). All these regions could undoubtedly

welcome methodological assistance. It will be crucial to link this project activities with self-governing regions' responsibilities towards the regional development. In the regions, e.g. Banská Bystrica, where the cooperation of all players is successfully established, a progress is clearly visible.

Strengths and weaknesses of the national policy on the anticipation of skill needs

In 1990s dominated by fundamental restructuring of industry and high unemployment, anticipation and forecasting of skill needs was not demanded and research capacities were drastically reduced. Employers were used to find appropriate workers among the unemployed. In particular after accession into EU, fixing the mismatch between supply and demand on the regional labour market developed into an urgent issue. Labour market economists and sociologists as well as macroeconomists able to run forecasting models are demanded, however not available for publicly funded research.

Furthermore, it must be taken into account that all policy makers are under the pressure of employers suffering from a lack of labour force. A demographic decline, fast-growing economy (recently over 9% GDP) and much more competitive salaries abroad contribute to this heavily. Thus, immediate action is urgently demanded by employers rather than a long lasting research applicable in far future. This might be counterproductive to intentions to boost research efforts.

At the same time, in contrast to 1990s there is a huge demand for labour market intelligence. There are many simple surveys conducted (see 070102) indicating the need for data. It is the proper time for efforts to increase validity and reliability of research instruments and alignment of local methodologies to international standards.

It must be clearly stated that revitalisation of research capacities and employment of new experts with competitive salaries is a precondition of any further progress in this field. The Skillsnet project of Cedefop could offer support for starting, and the ESF for co-funding the development of know-how in order to secure valid data collection in the future. National authorities should assist in identification of institution responsible for research nation-wide and/or offering methodological support for local/regional authorities with regard to anticipation of skill need based on survey. ŠIOV in the education sector, and Trexima Bratislava, Ltd. (Trexima Bratislava, s.r.o.) (see 0702) in the labour sector are very likely candidates. Furthermore, the Slovak Academy of Sciences should be assigned a task to apply already developed macroeconomic forecasting system also in this field.

All surveys already conducted on anticipation of skill needs were focused on labour market needs and therefore disregarded from specific target group. On the other hand there are specific groups addressed concerning skills. Unemployed are surveyed within regular activities of labour offices in order to prepare their Individual Action Plans and identify appropriate training. Disabled are addressed within many anti-discriminatory measures, i.a. by

ESF projects aimed at increasing their employability. The category of low skilled in Slovakia is dominantly composed of Roma, thus measures identified within the Office of the Plenipotentiary of the Government of the SR for Roma Communities (Úrad splnomocnenkyne vlády SR pre rómske komunity) and co-financed by the ESF aimed at improvement of education and increasing employability of Roma must be mentioned here. However, none of these activities with impact on identification of skills and development of skills at respective groups at risk needed by labour market can be labelled as pure initiative on anticipation of skills needs itself.

070102 Legal, administrative and institutional framework

There are no legal regulations that define action for anticipation of skill needs and there is no institution primarily involved in the process of anticipating skill needs. There are only some policy papers indicating importance of this kind of activities foreseeing further actions (see 070101). Expert commission established at the State institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) for all sectors of economy should however according to Article 2(2) of their statute issued by the Ministry of Education (MŠ, Ministerstsvo školstva) "provide for harmonisation between social, individual and economic needs and labour market needs within VET". In fact, these commissions could be very helpful in refinement of questionnaire ŠIOV used within the document the Sectoral Analysis of Employers' Needs and Graduates' Readiness to Enter Labour Market in the Slovak Republic (Odvetvová analýza potrieb zamestnávateľov a pripravenosti absolventov pre vstup na trh práce v Slovenskej republike) (see 070103), approved by MŠ. Pushed by the urgency of solving the problem of lacking workforce many bodies perform some surveys.

- Regional chamber of commerce and industry in Žilina appointed to do so by national headquarter;
- Self-governing regions and large municipalities with regard to elaboration of their Development Plans;
- Sectoral employers' bodies e.g. Automotive Industry Association of Slovakia (Združenie automobilového priemyslu v SR) with regard to the estimation of numbers of missing professions and subsequently the need to change profiles and numbers of VET graduates;
- ESF learning regions project coordinators with regard to elaboration of learning regions plans.

070103 Methods, approaches, practices and tools used

As there is no specialised institution and know-how developed for skill needs anticipation, it is possible to report only about partly related initiatives. The Institute of Economic Research of the Slovak Academy of Sciences (EÚ SAV, Ekonomický ústav Slovenskej akadémie vied) has developed an econometric model based on application of the Error Correction Models (ECM) methodology. This model is used for the projection of the economy development of the Slovakia Republic, however, forecasting is not focused on detailed labour market needs development. There is no institution engaged in a similar initiative, as e.g. within Cedefop Skillsnet project Medium-term forecast of occupational skill needs in Europe. Slovakia E3ME employment projections developed by Cambridge Econometrics within Skillsnet project were provided to EÚ SAV. It is hoped that EÚ SAV will join the Skillsnet project since 2007.

Information on shortage or surplus of skills and occupations is exclusively based on surveys and analyses of available labour market data. Within the education sector the assertion of graduates on the labour market is carried on the annual basis by the Institute of Information and Prognoses of Education (ÚIPŠ, Ústav informácií a prognóz školstva). This analysis is based on registered unemployed data of labour offices and education sector data on the number of graduates of respective groups of study and training branches. Aggregate data is available for types of schools and respective regions. Nevertheless, statistical data reflects supply rather than demand, moreover within the limits of registered unemployed, and therefore does not reflect matching training and required skills in respective occupations. Educational authorities in response to such data usually threaten with reducing volumes of branches and merging of schools. Subsequently, counsellors make aware parents and students about problems and schools try to open new studies to attract more students. Thus, these studies as well as similar studies of the Centre of Labour, Social Affairs and Family (ÚPSVaR, Ústredie práce sociálnych vecí a rodiny) offer a limited feedback for schools and career counsellors, but data collected within these studies cannot offer a positive feedback and cannot replace anticipation of skill needs surveys.

In the labour market sector, there is no research of this kind as the research capacities of the former Research Institute of Labour, Social Affairs and Family (Výskumný ústav práce, sociálnych vecí a rodiny) were drastically reduced by several merges. Nevertheless, a private institution Trexima Bratislava, Ltd. (Trexima Bratislava, s.r.o.), which was assigned by the Ministry of Labour, Social Affairs and the Family (MPSVR, Ministerstvo práce, sociálnych vecí a rodiny) to develop the National Register of Occupations (národná sústava povolaní) has the capacity to fulfil this task. Currently, Trexima develops the Integrated System of Typal Positions (ISTP, Integrovaný systém typových pozícií) (see 070203), which enable Trexima to establish and maintain excellent contacts with the world of work in all sectors of economy. It is expected that MPSVR will expand Trexima's mission.

In 2007, there were for the first time two surveys conducted directly aimed at anticipation of skills/occupation needs. The first one resulted from the meeting of the minister of education with employers and was carried out by the Regional Chamber of Commerce in Žilina in cooperation with all regional chambers. Based on questionnaires filled by 115 subjects a number of graduates from VET schools required by all eight regions and respective sectors till 2011 were estimated.

Table 1: Number of VET school graduates employers plan to employ in 2007-2001 by regions

Sector	BA	ZA	TN	TT	NR	BB	PO	KE	Total
Mining	0	30	0	0	0	50	0	0	80
Metallurgy	0	83	0	0	0	10	0	0	93
Metal Engineering	17	3 685	55	5	400	1 160	132	189	5 643
Electrotechnics	36	720	11	0	42	556	0	2	1 367
Chemistry	0	68	39	0	475	10	33	8	633
Food-processing	0	0	0	0	0	7	0	0	7
Textile	0	98	0	0	0	69	0	40	207
Wood-processing	0	0	0	0	0	250	0	46	296
Polygraphy	0	44	0	0	0	22	0	0	66
Construction	300	473	0	25	240	5	40	21	1 104
Agriculture	0	0	0	1	0	0	0	6	7
Retail and services	1	103	0	2	31	53	9	107	306
Healthcare	0	41	0	0	0	0	0	13	54
Total	354	5 345	105	33	1 188	2 192	214	432	9 863

Source: Slovak Chamber of Commerce and Industry (SOPK, Slovenská obchodná a priemyselná komora)

Notes:

BA – Bratislava region, ZA – Žilina region, TN – Trenčín region, TT – Trnava region, NR – Nitra region, BB – Banská Bystrica region, PO – Prešov region, KE – Košice region

It is significant that over 50% of required graduates are expected from mechanical engineering studies followed by electrotechnics and construction - the three booming sectors. Furthermore, the numbers needed in the Žilina region and out of this numbers for mechanical engineering are apparently high. It is caused by the requirements of new strategic investor in the automotive industry and his suppliers. In contrast to 9 863 graduates of VET schools, only 265 graduates of grammar schools are estimated to be employed. For comparison, in 2005/2006 school year there were 19 522 and 58 886 graduates from grammar and VET secondary schools, respectively. Out of VET schools, there were in total 16 460 ISCED 3C graduates who are not entitled to continue in tertiary education. These graduates should be ready to enter the labour market that according to estimations depicted in the table above expects to absorb annually about 2 000 graduates only.

Disregarding the data obtained from the survey, interesting qualitative data has been collected concerning VET in respective sectors in response to the requirement to indicate changes in training of secondary VET students.

The second survey the Sectoral Analysis of Employers' Needs and Graduates' Readiness to Enter Labour Market in the Slovak Republic (Odvetvová analýza potrieb zamestnávateľov a pripravenosti absolventov pre vstup na trh práce v Slovenskej republike) was carried out by ŠIOV, in order to specify employers' requirements "on key knowledge, skills and competences of future graduates of secondary VET schools". Thus, this survey was also limited only on the part of labour force. The survey was carried out making use of a questionnaire. Respondents were selected according to OKEČ classification from employers' representatives from all eight regions. Most of respondents came from the private sector (80%). The smallest share came from cooperative enterprises. There were no representatives of state enterprises. The results from the questionnaire indicated i.a. employers' requirements for key competences, knowledge and skills of graduates of secondary specialised schools (SOŠ, stredná odborná škola) and secondary vocational schools (SOU, stredné odborné učilište). The following three competences of SOŠ graduates are considered by employers as the most important:

- Responsibility (for themselves, to members, teams, for results of the enterprise);
- Reading and understanding of work instructions;
- Ability to solve a problem task, situation or phenomena.

The three most important competences of SOU graduates are as follows:

- Responsibility (for themselves, to members, teams, for results of the enterprise);
- Reading and understanding of work instructions;
- Ability to work in team.

Employers worded the requirements on competences, which should lie in the very focus of schools in educating and training their students. With regard to study branches graduates, the most needed competences identified by employers are as follows: information gathering and sorting skills (64.3%), information processing and evaluating skills (64.1%). With regard to training branches graduates, the most required competences are as follows: reading and understanding of instructions (47.9%), responsibility for themselves, to members, teams, for results of the enterprise (45.7%), adaptability and flexibility (45.7%). From the education level point of view, employers prefer the graduates with full secondary vocational education (i.e. with a "maturita" school-leaving certificate), followed by graduates with secondary vocational education (i.e. with a certificate of apprenticeship). The lowest interest is in graduates with a final certificate (i.e. without a certificate of apprenticeship). Almost a half of respondents (46%) preferred graduates with specialisation. There is also great interest in manually skilled graduates (30%). The analysis has also specified lacking profession in respective regions.

No doubt, both surveys will need improvement from the methodological point of view. Questionnaires were prepared ad hoc and will need refinement in order to increase validity and reliability. A current format exclusively based on self-reporting with no inbuilt corrections must be refined in the future. The Cedefop's Skillsnet project could offer international experience to do so.

The first sectoral survey aimed at anticipation of skill need was elaborated within the automotive industry sector. The Automotive Industry Association of Slovakia (ZAP, Združenie automobilového priemyslu Slovenskej republiky) precisely set the number of workers and professions needed till 2010, and also detailed skills required for individual professions, in particular as a consequence of progress in technology. This analysis together with the subsequent reform of VET in this sector also attracted employers in other sectors, and similar surveys were conducted and/or are planned in other sectors. Nevertheless, similarly to the survey of ZAP the methodologies are very simple based on ad hoc questionnaires. The same applies for surveys conducted by self-governing regions and project coordinators of ESF projects on learning regions (see 070101 and 070204). Indeed, there is a strong demand for methodological advice in this field and for identification of a body professionally dedicated to this. As the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) is very limited in its research capacity and its focus on secondary VET, Trexima will very likely develop research capacities in this field.

070104 Building partnerships and raising awareness

There are no specific partnerships aimed at anticipation of skill needs. Nevertheless, there are partnerships able to assist in this.

There are sectoral expert commissions established at ŠIOV. Although they are dominantly engaged in curricula issues they also have to contribute to identification of needed skills, and provide for advice to reflect skill needs by VET learning outcomes and estimation of needed graduates numbers. These commissions also contain social partner experts and could offer valuable support for validation of future research instrument for anticipation of skill needs. Furthermore, according to policy paper Proposal of the System of Coordinating VET and the Labour Market, already adopted (see 070101) sectoral VET councils and regional VET councils are to be established on the tripartite basis. Although they do not exist yet on legal basis, there are in regions already established informal links between respective VET players. It depends on activity of officers of self-governing offices to what extent these partnerships are efficient and influencing regional policies. The National Programme for Learning Regions adopted by the Ministry of Education (MŠ, Ministerstvo školstva) in May 2007 and relevant ESF projects are expected to contribute to the improvement of quality of regional partnership substantially.

Conferences and seminars are the main tool for both sharing experience and raising awareness concerning this. In 2007 there were three specialised VET conferences where anticipation of skills needs was pronounced as important tool for improvement of VET and maintaining the rapid growth of economy; the conference organised by trade unions in Bratislava in February 2007, the conference organised by the Chamber of Commerce in Žilina in April 2007, and the conference organised by the Ministry of Labour, Social Affairs and the Family (MPSVR, Ministerstvo práce, sociálnych vecí a rodiny) in cooperation with MŠ in June 2007 in Bratislava. Furthermore, there were many seminars organized and planned by sectoral players, e.g. the hotel and tourism industry in September 2007, agrosector in November 2007.

There is no evidence on main users of initiatives conducted concerning anticipation of skill needs. It is however assumed that regional policy makers are the most attracted (because of closer contacts between policymakers and employers), followed by national policy makers permanently imposed to criticism of individual and institutional lobbyists (which is however as a rule less personal in contrast to regional situation).

070105 Financing the anticipation of skill needs (incl. statistics)

All anticipation of skill needs activities conducted so far was financed from the institutional means of researching body. There were no means earmarked for this kind of activity, except means identified in support of European Social Fund SOP Human Resources Measure 3.3.B. Allocation of EUR 4 673 941 was envisaged for 2004 - 2008 for carrying out 10 surveys of labour market needs, 20 studies of key occupations and establishment of a functional electronic system of mapping labour market needs. This generous funding was not used, but it is expected that this will happen within the next programming period 2007-2013. Furthermore, it is much more likely that some researchers will apply for research grants in this field within some national grant schemes in 2008.

Definition of the term

There is a difference between using the term "qualification" within science and legislation.

According to the glossaries of terms qualification is considered a set of abilities represented by knowledge, skills and attitudes resulting in competence to perform respective occupation. Qualification is obtained within education and training and formally confirmed by awarding a relevant certificate. Sometimes certification of achieved education is identical with confirmation of qualification. Very often however additional requirements are stipulated by law. Now and then social science experts forget that qualification is the legislative term or consider qualification as automatic consequence of completed education and training.

It might be surprising that there is no explicit definition of the term "qualification" in the Slovak legislation. Sometimes legislatively technical description is used, e.g. in Act No. 477/2002 Coll. on recognition of vocational qualification (Zákon č. 477/2002 Z.z. o uznávaní odborných kvalifikácií), vocational qualification is defined as a sum of requirements according to relevant legislative norms. In 2007, Act No. 293/2007 Coll. on the Recognition of Professional Qualifications (Zákon č. 293/2007 Z.z. o uznávaní odborných kvalifikácií) executed transposition of EU Directive 2005/36/EC. Nevertheless, this act put stress on certification of vocational qualification rather than vocational qualification itself. Vocational qualification is a capability to perform … confirmed by a certificate on vocational qualification …, according to §2(e) of this act.

Act No. 311/2001 Coll. Labour Code (Zákon č. 311/2001 Z.z. Zákonník práce) makes use of this term in a common sense of "ability to perform" relevant activities. There is no clarification of the term "qualification" offered and it was left up to other legislative norms to specify requirements necessary for confirmation of qualification. There is a specific pattern used in respective legislative norms considering the qualification as the conjunction of

- achieved education;
- specific qualifying conditions, sometime described as specific vocational capabilities;
- experience already gained in respective field;

of which only the first one, or the first two, or in some case all three are required and must be justified in a way stipulated by law.

Furthermore, any employer can specify in detail additional requirements for successful completion of tasks within specific job. Individual who is not meeting these additional

requirements is considered not qualified for this job although he/she can be fully qualified for occupation related to this job.

There are three fundamental laws stipulating qualification requirements:

- Act No. 312/2001 Coll. with regard to state service (Zákon č. 312/2001 Z.z. o štátnej službe);
- Act No. 553/2003 Coll. with regard to public service (Zákon č. 553/2003 Z.z. o odmeňovaní niektorých zamestnancov pri výkone práce vo verejnom záujme a o zmene a doplnení niektorých zákonov);
- Act No. 455/1991 Coll. on self-employment with regard to small craftsmen (Zákon č. 455/1991 Zb. o živnostenskom podnikaní (živnostenský zákon)).

Besides this, there are additional laws and decrees specifying in detail qualification requirements for specific professions, e.g. Act No. 315/2001 Coll. on Fire Fighting and Rescue Corps (Zákon č. 315/2001 Z. z. o Hasičskom a záchrannom zbore) or the Decree of the Ministry of Education No. 41/1996 Coll. Professional and Educational Competence of the Educational Staff (Vyhláška Ministerstva školstva č. 41/1996 Z.z. o odbornej a pedagogickej spôsobilosti pedagogických zamestnancov).

For HRD managers in state/public organisations the so-called "Catalogues of Work Activities" represent a legislative background for assessment of wage categories and respective wage of employees. In these catalogues examples of work activities are listed and assigned to respective categories. These examples also contribute to the description of qualifications; this is why the term "Qualification Catalogue" was earlier used. The most comprehensive information about qualification is offered in the form of "Analytical Sheets" to respective work positions which are also used as an instrument for updating or supplementing these catalogues.

Development of qualifications and job profiles

Original research efforts in this field are related to the term "characteristics of profession fields". Profession field was considered as a general term of interrelated professions because of similar technological procedures. Identified work tasks and activities related to these professions (main and complementary) were described in the document titled Characteristics of Profession Fields. These analyses were conducted in 1970s under the guidance of the Research Institute of VET (Výskumní ústav odborného školství), today the National Institute of VET (Národní ústav odborného vzdělávaní) in Prague. These characteristics were used for programming curricula in the educational reform introducing secondary vocational schools and the network of study and training branches structurally valid till today. These kinds of analyses were dominantly focused on mechanical engineering and subsequently expanded to

other sectors. Interestingly, analyses of skill needs in mechanical engineering rooted in the regime crisis of 1960s (resulting in democratisation process known as 1968 Prague Spring), when communist leaders recognised lagging of then Czechoslovakia behind originally less developed and/or by war destroyed Western democracies. Analyses of profession fields finally resulted in identification and description of graduates' profiles of respective study and training branches. Graduates' profiles in a simple version for the first time appeared in 1980s. In fact, it happened as a consequence of the decrease in competitiveness of industry. Thus, the crises of mechanical engineering of 1960s and more urgently in 1970s resulted in first impulses to the shift from input to learning outcomes in planning VET curricula. This impulse had not been maintained in 1990s, although under the influence of Birks, Sinclair and Associates, Ltd. strategic study, an initiative started to develop occupational standards. Under the PHARE programme the Research Institute of Labour, Social Affairs and Family (VÚPSVR, Výskumný ústav práce, sociálnych vecí a rodiny) developed 300 occupational characteristics (sort of prerequisites to final occupational standards), which had to be used for development of both occupational standards and educational standards. It was intended to develop it for all 3 000 occupations registered on the labour market according to ISCO-88 classification. 1996 government decision to prepare occupational standards and related educational standards was however finally cancelled, partly as the recognition of insufficient research and expert capacities for such a huge project, and partly due to the lack of finance for basal VET, not speaking about research in VET. The VÚPSVR PHARE unit, the Centre for Professional Information (CPI, Centrum profesijných infomácií), was finally dissolved, and VÚPSVR was gradually re-profiled and transformed into the Institute for Labour and Family Research (IVPR, Inštitút pre výskum práce a rodiny) with a different focus. Since that time, the only significant relevant player with research ambitions has been a private "specialised research-statistical and advisory-consulting organisation" Trexima Bratislava, Ltd. (Trexima Bratislava, s.r.o.), a daughter of Trexima Zlín, Ltd., a Czech private consultant in human resource development that became a major player in studying occupations in the Czech Republic. With the project the Integrated System of Typal Positions (ISTP, Integrovaný systém typových pozícií) it follows the tradition in research of profession fields. Its daughter Trexima Bratislava applies ISTP in Slovakia (see 070203).

070201 Policy development on developing qualifications

The project the Integrated System of Typal Positions (ISTP, Integrovaný systém typových pozícií) successfully implemented in the Czech Republic has been accepted by the Ministry of Labour, Social Affairs and the Family (MPSVR, Ministerstvo práce, sociálnych vecí a rodiny) as an appropriate approach to the development of qualifications and job profiles. In fact, Trexima Bratislava, Ltd. (Trexima Bratislava, s.r.o.) has been assigned a task by MPSVR to

develop/update the National System of Occupations (Národná sústava povolaní). Through this Trexima will also become an important player in the development/update of the National System of Qualifications.

Slovakia responded positively to the European Commission initiative, and within the consultation process on European Qualification Framework an intention to develop competence based National System of Qualification and National Qualification Framework aligned to EQF was explicitly declared with professional estimation of the time "three-four years" to develop it. Thus, the first version of new National System of Qualifications should be prepared with the support by the ESF project till 2010.

Recognition of national authorities of importance to transform the existing National Qualification System and agreement on co-funding the development of National Qualification System by the ESF specific project are the major strengths. A lack of expert capacities is the major weakness. The time necessary for work, and in particular demandness of the task to identify relevant learning outcomes for respective study/training branches and competences for respective qualifications, are underestimated. There is a lot of experience gathered among people from the education sector to innovate curricula in terms of the content of learning. But the shift from input to learning outcomes has not yet been put into practice despite the full acceptance of importance of this process.

There is no policy initiative on qualifications development focused on specific target groups. I t is not considered an urgent agenda, exactly in this kind of specific formulation. With regard to respective groups at risk (e.g. low-skilled, immigrants, unemployed, SMEs, etc.) policies are usually aimed at achieving relevant education rather than qualification itself, because the low level of education is considered a reason of low or no qualification. In Slovakia, everybody is expected to achieve at least ISCED 3C level of education offering at the same time a qualification. E.g., a high share of non-qualified people among Roma is perceived as an urgent agenda, however, it is immediately interpreted as a consequence of their low level of education, because they usually fail to finish ISCED 2 level basic school, not speaking about ISCED 3C secondary vocational school. As the legislation to validate non-formal/informal learning is pending and methodologies to recognise experiential learning are underdeveloped, a return to the formal system of education and training is often seen as an appropriate solution for fixing this problem. With regard to this specific issue, importance and usefulness of competence based representation of qualifications for simple professions seems not to be fully recognised by authorities.

070202 Legal, administrative and institutional framework

There are no explicit legal regulations in support of action for new and changing qualifications and job profiles. Nevertheless there are several mechanisms to refresh already existing descriptions. Within its project the Integrated System of Typal Positions (ISTP, Integrovaný systém typových pozícií) (see 070203), Trexima Bratislava, Ltd. (Trexima Bratislava, s.r.o.) works on new description and at the same time reflects comments and proposal of users of its interactive services. Trexima is fully supported by the government in this activity and the creation of the National System of Occupations will be embedded into the Act on Employment Services in autumn 2007.

Furthermore, the development of new qualifications occasionally happens indirectly in response to the demand for the development of new study/training branches. The following is an example of this kind of process. The State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) has developed a new curriculum (in cooperation with a relevant expert commission and approved by the Ministry of Education (MŠ, Ministerstvo školstva) for the study branch 7663 6 a cultural-educational worker (kultúrno-výchovný pracovník) on request of social–pedagogical academies that recognised the demand for specialists for positions of free time animators serving guests at hotels, recreation resorts, cultural establishment, etc. Although there have been no occupation officially recognised and registered so far, the curriculum was prepared, and graduates have been already accepted at the labour market for seven years. This example shows that it is up to the quality and activity of experts in the sectoral expert commissions (odborné komisie) at ŠIOV, whether they contribute to the development of new qualification or not, although it is generally expected that occupation analysis and job profiles precede laying down education standards and description of graduate's profiles. Labour market needs indicate that this must not be a one-way process only. It is expected that coordination of activities of relevant players in development/updating of national qualification system will be stipulated by the new Education Act and/or by the new Act on Lifelong Learning already in process of preparation.

There has been no integrated National Qualification System covering all sectors and settings developed so far. Furthermore, there are many sectoral legislative norms regulating diverse professions and stipulating qualifications. Sectoral ministries as a rule stipulate required competences related to specific vocational capabilities (see 0702). The process of amendment is going on reflecting permanently labour market needs as there are close contacts between sectoral ministries and practitioners within the scope of their operation. However, while competence based approach is already accepted and promoted by MŠ in initial VET, this is not always a case of sectoral initiatives (see e.g. the Ministry of Transport initiative in *Cedefop Info 1/2007 Driving instructors look beyond borders*). Thus, much wider discussion about the National System of Qualifications with results embedded in legislation would be of benefit. There is a risk that a new Education Act as well as the Act on Lifelong Learning will be finally restricted in their focus, and the competence based approach will only be applied for initial VET and continuing VET in formal setting. Therefore, recently increasing voices in favour of elaboration of comprehensive VET Act should be welcomed.

The following table depicts responsibilities of respective players. MŠ is a crucial player in shaping the national system of VET from the curricular point of view, while the statistical classification of study and training branches is set by the Decree of the Statistical Office SR No. 571/2007 Coll. (Vyhláška Štatistického úradu SR č. 571/2006 Z.z., ktorou sa vydáva Štatistická klasifikácia odborov vzdelania). The Ministry of Labour, Social Affairs and the Family (MPSVR, Ministerstvo práce, sociálnych vecí a rodiny) is responsible for the National System of Occupations, while classification of occupations based on ISCO-88 is set by the Measure of the Statistical Office No. 16/2001 Coll. (Opatrenie Štatistického úradu SR č. 16/2001 Z.z., ktorým sa vyhlasuje Klasifikácia zamestnaní). Nevertheless, there has been no dominant player identified for the development of the National System of Qualifications so far.

Responsibility	Occupation descriptions NSO	Development of qualifications NSQ	Development of curricula NSVET
Political	MPSVR	Current situation: MPSVR; MŠ; Sectoral ministries* NSQ – not yet decided	IVET,CVET: MŠ LMT : MPSVR
Political-complementary	Other sectoral ministries	Employers organisations	Sectoral ministries*
Executive	Trexima	Current situation: ŠIOV; by sectoral ministries* appointed bodies NSQ – not yet decided (ESF project contractor)	IVET-ŠIOV and by sectoral ministries* appointed bodies Tertiary IVET – HEI** CVET, LMT – VET providers***
Advisory	Self-governing regions	Self-governing regions	Self-governing regions
	Employers	Employers	Employers
	Trade unions	Trade unions	Trade unions
	ŠIOV	ŠPÚ	IVET-ŠPÚ; CVET- ŠIOV

Notes:

NSO-National System of Occupations NSQ-National System of Qualifications, NSVET- National System of VET; IVET- Initial VET, CVET, Continuing VET, LMT- Labour market training for unemployed and job seekers

*Ministry of Health (Ministerstvo zdravotníctva), Ministry of Interior (Ministerstvo vnútra) and Ministry of Justice (Ministerstvo spravodlivosti) concerning professions related to IVET within their scope of responsibility and diverse ministries concerning specific vocational capabilities (skills) required by relevant legislative norms concerning specific regulated professions (see 0702)

** subjected to the accreditation procedure by Accreditation Commission (advisory body to the Government)

*** usually subjected to the accreditation procedure at MŠ

070203 Methods, approaches, practices and tools used

Methods for developing qualifications and job profiles

Trexima Bratislava, Ltd. (Trexima Bratislava, s.r.o.) is the only institution with some research activities in the field of job profiles, through its project the Integrated System of Typal Positions (ISTP, Integrovaný systém typových pozícií). ISTP is a set of information about the world of labour and methods of using the information to facilitate communication on the labour market. Typal position is description of activities, conditions at the work place and requirements to be met by regular job practitioner. The registry of typal position is one of important components of this project. Each typal position contains continuously updated information on requirements on a person performing respective related work activities or occupations. Data on the work content and on activities related to individual occupations is provided for by experts who, besides activities and description of work, also lay down conditions under which the occupation is usually performed. Thus, it is a sources of information for the education sector on requirements of labour market, employers, on current and future requirements (skills, competences) on performing profession (professions), and it consequently provide stimuli for innovation of the content or development of new study/training branches. Typal positions are used predominantly when laying down the graduate's profile as descriptions of typal positions create a basis for formulation of requirements on professional knowledge, skills and competences students have to acquire during their study. At the same time, descriptions of activities and examples of works presented in typal positions allow for matching/covering the typal position with the study/training branch which optimally meets typal position's requirements (i.e. all requirement are met), or when some requirements are not met. In the latter case typal positions bring information on further education (courses) a person interested in respective profession has to complete in order to meet all requirements and to be optimally qualified. Typal positions are available online (http://www.istp.sk). Common users can predominantly benefit from information presented on basic qualification, personal and health requirements on a job performer. At the same time interested persons can create their personal profiles based on a questionnaire aimed at analysis of their potential. They can compare their personal profiles with suitable positions available in the typal positions registry, and subsequently match them with job offers.

Nevertheless, studying changes in job profiles is inevitable for adjusting curricula to labour market needs, and therefore analysis of jobs is also partly done by ŠIOV within its responsibility to create new and innovate existing study and training branches. ŠIOV carries out this analysis making use of the DACUM method. DACUM is a method to carry out occupational analysis using a team work of experienced specialists guided by a facilitator.

It can be applied by curriculum developers within a first step of curriculum development, by employers from all sectors of economy and experts for description of work activities, assessment of performance, planning or support of further training. It is aimed at identification of both general areas of duties (responsibilities) within occupation and specific tasks performed by worker while fulfilling individual duties.

Within the DACUM method work is described/defined by practitioners with experience in respective occupations/job positions. Every task results directly from knowledge and attitudes the worker has to adopt if he/she wants to perform it correctly.

Occupational analysis is a process of identification of duties (general area of responsibility) within the occupation. At the same time it comprises identification of specific tasks performed by worker within individual duties. DACUM is an abbreviation for Developing a Curriculum.

The DACUM process was applied within the cooperation of the Saskatchewan Institute of Applied Science and Technology (SIAST), and the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) within the project the Improving the Quality of Slovak Vocational Education and Training (November 2000 – March 2002). The project contributed to the development of the system of the Slovak vocational education that would meet employers' needs, in particular in hotel and gastronomy management within SMEs.

The DACUM process was later used within the ESF SOP Human Resources project Improving the Quality of Vocational Education and Training in the Slovak Republic at ISCED 3C level (September 2005 – December 2007), carried out by ŠIOV (vynechaný celý názov). The project is aimed at the development of educational programmes for 15 groups of training branches. Within the project the needs and requirements of entrepreneurial sphere were analysed based on the questionnaire survey carried out in the Trnava, Nitra, Trenčín and Banská Bystrica regions, targeted in particular on employers. Priorities, trends and aims of employers were set, and the employers' needs and requirements concerning VET with a special focus on ISCED 3C level were documented. Employers identified duties and tasks for individual groups of occupations, which were ranked according to their importance. Based on the analyses the competence profiles for training branches graduates - 15 DACUM diagrams, were elaborated creating the background for the development of state educational programmes.

Developing qualifications and curricula

Within secondary IVET developing qualifications and curricula are interrelated. Approached by a school looking for attracting specific segment of trainees, or by employers looking for differently prepared labour force, ŠIOV is responsible for adjusting existing or designing new curricula. At the same time a new profession can be profiled regardless the fact whether it has been already officially recognised and explicitly addressed by relevant legislation. Only what

counts is acceptance by employers. Recently, 12 new branches were developed on request of employers or employers' associations, subsequently leading to new qualifications. The cooperation in adjusting IVET to labour market needs works as follows: ŠIOV is responsible to accept stimuli coming from employers, employers' institutions (employers' associations, guilds, federations, unions, chambers, etc.), regions and VET schools. These stakeholders identify the missing professions and set basic requirements on the graduate with regard to respective profession. Based on the concrete stimuli an expert team develops the content of a new study or training branch transforming the requirements of stakeholders into the draft curricular documents (called pedagogical documentation). The draft is reviewed and assessed by experts from the expert commissions (odborné komisie) established at ŠIOV. After assessment, formatting, and recommendation by the expert commission, the documentation of the new or innovated study or training branch is submitted to the Ministry of Education (MŠ, Ministerstvo školstva) that approves it or rejects it. MŠ confirms its approval by issuing the approval clause. After being approved the documentation for specific study or training branch becomes binding for all schools offering respective branch. The approved documentation allows school managements and teachers to make changes up to 10% of the weekly instruction hours and 30% of the content in individual grades, offering the possibility to include new knowledge resulting from both the development in science and technology and the need to adjust the content to current branch, labour market, regional or specific school needs.

Whenever "specific vocational capabilities" in addition to competences required within respective study/training branch at school are required by respective legislation, respective sectoral ministry stipulates in more detail what kind of competences and what kind of courses, exams and finally certifications are necessary. It is not known whether a competence based approach is applied. Although the competence based approach is widely promoted it is very likely that a traditional input based approach is also used. There is no evidence about methodology of programming VET in respective sectors, but it is assumed that the competence based approach is in progress. On the other hand, ministries usually approve proposals for additional training elaborated by a recognised VET provider or appointed experts and participate in final exams. Thus, it is finally up to the quality of programmers and the pressure of employers who are naturally interested in the competence based approach rather than traditional curriculum development, to what extend competence based approach is used.

070204 Building partnerships and raising awareness

Partnerships

Trexima Bratislava, Ltd. (Trexima Bratislava, s.r.o.) in its efforts to describe job profiles within its project the Integrated System of Typal Positions (ISTP, Integrovaný systém typových pozícií) (see 070203) heavily depends on cooperation with the world of work. Firstly, experts from practice are the source of information. Secondly, people from practice, in particular HRD managers are important users of one of the components of the project aimed at assistance to HRD managers to create work positions descriptions they need to cover by a new staff. Thus, in order to satisfy HRD managers the output of the project must be attractive for practitioners. On the other hand, there is a risk that descriptions of traditional positions/jobs are rather conservative and less competence-based as there is a lower demand for making use of their descriptions. Online instruments in the website and a vivid interaction of experts and public with respective sectoral managers of the project allow for assumption that in such an informal partnership a significant progress can be achieved. Nevertheless, methodological advice to achieve comprehensiveness and consistency will gradually become inevitable. The National System of Occupations will be finally completed with cooperation of all relevant players (state administration, self-governing administration, employers, trade unions) according to the Ministry of Labour, Social Affairs and the Family (MPSVR, Ministerstvo práce, sociálnych vecí a rodiny) and its amendment of the Employment Services Act already in preparation.

It is not yet clear to what extent already existing sectoral commissions and expert groups cooperating with Trexima will be employed in elaboration of the National System of Occupations and how the cooperation between labour sector/Trexima and the education sector/State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) and its tripartite expert commissions will be set. It is hoped and to recommend that sectoral councils and regional boards to be established in the future will be created to overarch activities of all already existing commissions and further fragmentation will be avoided.

The only existing legislatively based commissions are expert commissions (odborné komisie) affiliated to ŠIOV. Expert commissions are advisory bodies to the Ministry of Education (MŠ, Ministerstvo školstva) at the national level in VET issues. Their activities are regulated by the Principles of Establishing, Organisation, and Activity of Expert Commissions and Coordinating Council for Vocational Education and Training at Secondary Specialised Schools, Secondary Vocational Schools and Associated Secondary Schools in the Slovak Republic adopted by MŠ on 14th December 2001, valid since 1st January 2002. At the time being there are 15 expert commissions operating at ŠIOV, which includes 299 experts. The highest number of 149 experts representing 49.83% of all experts are pedagogues from VET schools. Compared to the past, the number of employers' representatives increased to 31 (10.37%), and the number of representatives of employers associations, federations, chambers, guilds increased to 48 (16.05%). Participation in commissions provide them with a possibility to enter the process of the development of educational content, and to present

specific requirements on knowledge, skills, competences in training with regard to specific occupation or a group of occupations. A much lower share of members represents sectoral ministries (15 members, i.e. 5.02%) and representatives of school establishers (12 members, i.e. 4.01%). Higher education institutions and other institutions (regional educational authorities, educational establishments) are represented by 11 members (3.68%) each. The lowest number of experts is from trade unions (5 members, i.e. 1.67%). ŠIOV staff members are responsible for organising expert group meetings, thus, most of them are appointed chairmen of individual commissions. Currently, there are 17 members (5.69%) of expert commissions coming from ŠIOV. Expert commissions meetings are also regularly attended by representatives of MŠ (the Vocational Education Department).

Within the expert commissions the so-called expert sub-commissions can be established for specific study and training branches. Their number is as a rule the same as the number of branches, which are under the responsibility of respective expert commission. Additionally, working groups can be establish to deal with partial tasks related to innovation of curricular documents (called pedagogical documentation), and the development of curricular documents for new or experimental branches. Expert commissions meetings are held as a rule twice a year. Meetings of sub-commissions are organized ad hoc following the expert commissions' needs and requirements. Meetings of working groups are organized ad hoc following the needs and requirements of expert commissions and sub-commissions.

There also exist many ad hoc partnerships usually based on diverse projects – and this is also their weakness as they are at risk of finishing activities after spending project's funds. It is a challenge for authorities to support dissemination of results and further supporting productive partnerships. Currently, there is no mechanism developed and institutional capacities assigned to do it systematically.

On sectoral and regional levels standing partnerships should be created according to the policy paper the Proposal of the System of Coordinating VET and the Labour Market, adopted by MŠ (see 070101). Currently, there are partnerships created in regions depending on the strategic depth of their regional planning. Partnerships created within the ESF learning regions projects is also expected to contribute to gaining experience making use of cooperation of regional players. It is hoped that this experience will also be utilised in the work of future regional VET councils and it is hoped that the project of learning regions will lead to sustainable results as this project is very strongly backed by the National Programme for Learning Regions adopted by MŠ on 15th May 2007.

Awareness

There are two crucial initiatives and tools for spreading awareness in dissemination information about new qualifications developments. The first is linked to the Trexima's project (see 070203). Network of expert commissions and specialised working groups is a natural instrument for this. Furthermore, a forum at the Trexima's website www.trexima.sk attracts not only insiders but also a wider public, as i.a. visible from FAQ and proposals to enrich a database from visitors of the website.

In the education sector it is again a network of expert commissions at ŠIOV primarily focusing on curriculum development, but inevitably also addressing qualifications development.

A very acute mismatch between the supply and demand on the labour market (and not just in terms of lacking quantity for some working positions, but also in terms of mismatch of skills supplied and demanded) makes this issue an urgent topic of conferences and workshops. Regardless whether organized by state or self-governing authorities or employers, the development of qualifications and prevention threatening crisis on the labour market is discussed by all. The difference between policy makers and employers is as follows: Employers expect measures to secure labour force for their current businesses and future development. Policy makers are gradually increasingly concerned about much more efficient exploitation of human capital and warn against recruiting overqualified people instead of making use of appropriate segment of labour force. Furthermore, the government recently started stressing the state aid only for foreign investors in branches with higher added value and warns against making Slovakia a country of assembling workshops.

Although guidance and counselling professionals can make use of Trexima's website and usually cooperate with regional/local labour offices, guidance and counselling service professionals (with many private firms on this market) are much more effective with regard to high skill end than with regard to blue-collar professions. Therefore, much more online resources would be welcomed in order to help counsellors at schools and a public itself to overcome mistrust resulting from the crisis of blue-collar professions, in particular in machinery, during the period of restructuring economy in 1990s. Furthermore, a progress in technology must be much more pronounced and reflected, otherwise lagging behind of Slovakia in the development of economy will be petrified (despite the current high growth of GDP). In this sense, more and better structured information for public would be welcomed.

070205 Financing the development of new qualifications (incl. statistics)

There is no earmarked financing scheme for the development of qualifications introduced and there is no statistics available about sources used for activities related to it. It is impossible to isolate and specify amounts spent for relevant activities within the crucial institutions Trexima Bratislava, Ltd. (Trexima Bratislava, s.r.o.) and the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania), as well as among other diverse players co-financing activities of experts in diverse commissions (travelling and the time spent while working in commissions). The ESF is expected to become an important source of funding despite a comparable modest start. The ŠIOV's project Improving the Quality of Vocational Education and Training in the Slovak Republic at ISCED 3C level, with the budget of SKK 4 288 726 is worth mentioning (EUR 1 = SKK 35.4424 according to ERMII central rate of 19th March 2007). There were some means invested also within seven projects on learning regions and within the ESF national project the Creation, Development and Implementation of an Open System of Life-long Learning in the SR for the Labour Market. Much larger investment is planned since 2008; i.a. for the development of the National System of Qualifications (originally two projects with SKK 200 million and 240 million budgets were unofficially proposed).

0703 INNOVATIVE PEDAGOGIES: GENERAL BACKGROUND

There is no officially recognised definition of innovative pedagogy and it is in fact not considered important to define it. It is considered self-explanatory, naturally composed of two terms of which the first refers to the change. This change is usually described as introduction of new ideas or material products and their utilisation within the respective process.

Introducing "something new" to what already exists in

- planning interaction between a learning facilitator and a learner;
- performing interaction between a learning facilitator and a learner;

can be labelled as an innovative pedagogy.

Innovation is expected to contribute to improvement, however, some conservative thinkers warn of liberal innovative approaches finally harming the quality of education and threatening society (see e.g. www.konzervativizmus.sk)

Traditionally, innovativeness in teaching practice refers dominantly to educational methods and organizational forms, as the content (syllabi) and teaching plan have been centrally determined. Innovativeness with regard to other segments has been usually seen as reforming and has been regulated by the state. The crucial reform and in fact a reform introducing the VET system with an increased status is from 1970s. It led to implementation of the system of VET study branches (ISCED 3A) and training branches (ISCED 3C), and significantly to introduction of ISCED 3A study branches at secondary vocational schools.

After 1989 more space for changes in syllabi and teaching plan has been offered to schools. About 30% in the content to be taught and 10% in teaching plan - allocation of lesson hours to respective subjects, can be affected. This space for innovativeness should be expanded by the decentralisation of curriculum development proposed in the new Education Act to be prepared by the end of 2007. Based on policy papers already approved and legislative principles already adopted, all schools will be allowed to develop their own school educational programmes reflecting competence based state educational programmes to be elaborated as obligatory guideline valid for studies within the relevant cluster from the identified 22 clusters of current study and training branches (see 0701).

Aforementioned "educational programmes" are considered an equivalent of Anglo-Saxon term "curriculum". This term has been gradually domesticated in theory and practice of education since 1990s. Therefore, there are many contexts, in which this term is used. In the glossary of terms from 1995 the Basic Terms in Pedagogy and Andragogy (Základné pojmy v pedagogike a andragogike) five contexts were identified. Depending on the accent, experts use the term as referring to the programming or to education/learning process or even to its outcomes results, just to name the three most important contexts. The Secondary VET Curriculum (Kurikulum stredného odborného vzdelávania), a manual for the development of educational programmes published by ŠIOV in 2003, defined a curriculum as a set of general goals of education and key competences (knowledge, skills and attitudes) to be achieved by students and suggested to understand in general the curriculum as existing in two forms: a national educational programme and a (detailed) school educational programme.

Although the responsibility to modernise VET curricula is legislatively anchored (see 070302) it is not possible to speak about tradition in reforming/renewing/modernising VET curricula unless pronunciation of changes in the content to be taught. Education sector experts traditionally worked on the content (syllabi) of respective subjects, rewriting it almost permanently. Although employers were always interested in competences, there were no marked efforts to elaborate these requirements into detail. Despite interesting efforts to study requirements of occupations/professions, the large "modernisation reform" of 1970s finally resulted in long-lasting debates on unified syllabi and teaching plans. "Adjusting to technological development", "increasing attractiveness of VET and encouraging a parity of

esteem between general and vocational education", "reducing memorising and supporting learning with full understanding and creativity" were among the most promoted motions of this reform. Nevertheless, respective goals were in the best case just partly achieved and remain valid till today.

Complementary to the centralised reform efforts, innovations in "methods and forms" were encouraged. A return of project education originally introduced into schools in the period between World War I and II, cooperative and collaborative education, pronunciation of problem solving and even constructivist approaches were visible in teaching practice at schools.

After 1989 explosion of innovative efforts and high motivation of schools to break with limits of centralism and ideological regulations vanished very early, and since 1991 with a huge decrease of living standard and a crisis of state enterprises, the only strong impulses for innovations in pedagogy came from international projects. Two impulses are worth stressing: PHARE twinning schools projects showed that bottom-up reforms are viable and that partnerships of schools could become a source of inspirations for change. Training in the curriculum development and in particular modularisation paved the way for both future competence based curriculum and to international cooperation and later mobility of students, teachers and trainers. Unfortunately, both these impulses were insufficiently supported by authorities; schools and individuals willing to innovate/reform were left alone.

Community programmes and in case of VET schools the Leonardo da Vinci programme remain the only important source of innovativeness till mid 2000s. Recently, industries discovered the education sector and recognised the importance of shaping schools for their businesses needs. Special programmes for students and teachers sponsored by the business sector, e.g. in ICT, developed to important stimulator for innovativeness (see 070303).

070301 Policy development on innovative pedagogies

There are two important innovation policies marked at the time being. The first results from the technological pressure and criticism concerning slow introduction of ICT into education and urgency in fighting digital divide. Both employers and the government recognised that it is crucial for the economy to bridge the gap identified i.a. by the e-Europe programme related reports. Although Slovakia is still lagging behind according to international comparisons, there is a positive trend visible. In early 2000s there were only few activities aimed at supporting ICT in education; the INFOVEK project, excellently prepared however suffering

from a lack of finance, and the Open Society Fund granting scheme in support of ICT activities of schools and individual educators. Although the official INFOVEK project is still suffering from the lack of funding from public sources, the situation is positively changing due to the strong involvement of private subjects (e.g. Telecom, Microsoft) in the need of ICT skilled workers or interested in selling ICT products, and due to the funding from the ESF. There are large opportunities to boost ICT skills of all segments of population by ESF projects. All schools were equipped by ICT laboratories and wired to the Internet within large modernisation projects in 2004 and 2005. Currently, schools are busy with exploring opportunities of ICT technologies and they are still insufficiently making use of e-pedagogy due to the late modernisation of equipment. It can be expected that exploration of e-pedagogy opportunities will naturally be a subsequent phase of the process of ICT introduction. Although there are many activities aimed at e-pedagogy, teachers of mathematics, science and informatics are affected dominantly, as they are as a rule more positive towards ICT. It has been expected that e-learning will become a crucial instrument within open and distance learning. In fact, e-learning is presented as an important instrument in almost all educational ESF projects, but there are some barriers of wider application already identified:

The lack of means leads to making use of an open source learning management system with own time consuming administration. The same applies to the development of resource centres, hampered by a lack of appropriate background materials (for the development of learning objects) in the Slovak language. Limits of classical e-learning were also recognised, and an appropriate mixture of synchronous and asynchronous communication is considered a crucial point. It is expected that the Concept Paper for Informatics and Informatisation of Education (Koncepcia informatiky a informatizácie školstva) adopted by the Ministry of Education (MŠ, Ministerstvo školstva) on 13th March 2007 will provide for the systemic improvement in the field. There were 15 items identified within Chapter 5 of the policy paper related to the content of education. Subsequently, the Project on Informatics and Informatisation of Education was elaborated and adopted by the MŠ in June 2007. This project offered priorities, objectives and detailed proposals of projects with indication of deadlines and sources of means including means from ESF, ERDF and 7th Framework Programme. Worth mentioning are 2010 benchmarks - 10 pupils per computer at basic schools (ISCED 1 and 2), 5 students at secondary schools including VET schools, as well as at higher education institutions. Education/learning supported by ICT in extent and quality comparable to schools in advanced EU countries will become a special item within quality assessment of schools. Among eight MŠ priorities there is one priority addressing e-learning at schools indicating support for maintaining the learning management system, and one aimed at creating a resource centre of educational software and digital learning content meeting standards set for respective educational programmes.

The second crucial policy concerns the introduction of the curricular reform following the government resolution No. 489/2007. So-called state educational programmes in 15 ISCED 3C streams are in the process of preparation, and 22 ISCED 3A streams will be developed subsequently. State educational programmes will be based on the Standard of Secondary VET (Štandard stredoškolského odborného vzdelávania a výchovy v Slovenskej republike) approved in 2002. In future, educational programmes will be elaborated for currently not existing ISCED 2 level of VET, as well as for ISCED 4 and 5, which is at the time being insufficiently backed by legislation due to ambiguous coverage of post-secondary non-tertiary VET and non-university VET higher professional education by current legislative norms. A competence based approach should be adopted within the state educational programmes. For each programme three sets of competences should be addressed: six key competences (see 0701), relevant general competences and relevant vocational competences. All competences should relate to "performance standards" elaborated within the Standard of Secondary VET, and reflect "content standards" of respective subject set in the same document. After adoption of the new Education Act schools will be expected to develop detailed school educational programmes, which should reflect regional specificities including labour market needs, and should be elaborated in close cooperation with regional players. It is not clear so far to what extent modularisation/unitarisation will be used, it is however expected that under the pressure of two forces – mobility of students, teachers and trainers, and preparation towards gradual development of ECVET – modularisation will be accepted as an advantage. Although a new two-tier system has been under discussion for over five years, all curricula innovations currently follow the traditional pattern of curriculum approved by state, leaving some room to schools for changes within 10/30 formula (up to 10% of weekly hours and up to 30% of the content). Nevertheless, all innovations in 2000s show the clear tendency towards identification of learning outcomes and using a competence based model.

While ICT policies affect both IVET and CVET, the curricular reform is almost exclusively IVET focused. In fact, even the renewal and development of the National Qualification System is IVET dominated, and efforts to overcome sectoral barriers and develop the overarching National Qualification System and National Qualification Framework covering all sectors and settings will require long-lasting concerted efforts.

Strengths and weaknesses

Importance of innovations and even a reform is widely recognised, and after the period of plain rhetoric it seems that national authorities will have to finalise the pending legislation because of a huge pressure of industry. Booming economy and an open labour market cause fighting for the labour force, and consequently reforming CVET and supporting real introduction of LLL make the reform efforts going beyond traditional focus on IVET. In contrast to 1990s and early 2000s there are also means for financing reforms. Although the

fiscal policy remains very restrictive and public funding of education is insufficient, there are new resources open in the private sector and the ESF. Within the ESF Operational Programme Education, Priority Axe 1 Reform of the Education and Vocational Training System and Measure 1.1 Transformation of Traditional School into Modern One, the first specific objective exactly addresses innovations in programming as well as innovative pedagogies in education and training. Among proposed activities modularisation, unitarisation, project based leaning, ICT supported learning etc. are exactly mentioned.

On the other hand, large expectations from the ESF might be considered the weakness. Long years of insufficient public funding resulted in a lack of capacities to support innovations and reforms. There is a lack of experts and therefore Slovakia insufficiently monitors crucial European movements in VET (in particular quality assurance, but also other Copenhagen activities). Institutions managed by ministries, which should support implementation of policies, are compared to richer EU countries underdeveloped, not speaking about research capacities unable to offer data for evidence based policies to decision makers.

Although the restrictive fiscal policy must be in general appreciated, the reluctance of the Ministry of Finance (MF, Ministerstvo financií) towards any measures aimed at stimulating co-financing of VET must be questioned. All measures, like levy-type funding, tax incentives, learning accounts, have been rejected until now.

Thus, a high share of soft money from projects under conditions of low developed institutional capacities creates a risk for any further reform/innovation efforts. Many ESF projects within the newly designed Operational Programme Education with the generous budget over EUR 726.8 million in five priority axes for 2007-2013 could be endangered in full quality implementation by an irregular inflow of funding and low own disposable means of project coordinators, as recorded in the past ESF programming period. Furthermore, monitoring capacities and subsequently dissemination mechanism are insufficient, which limits benefits from successful projects. Impulses from Community programmes, in particular Leonardo da Vinci, could be much more valorised, and the same refers to the ESF. It is valid for monitoring and dissemination of good practice from finished domestic projects, as well as other relevant projects of EU countries.

Liberalisation of curriculum development in early 1990s by introduction of the aforementioned 10/30 formula showed that innovativeness and openness towards reforms substantially depends on attitudes of pedagogical staff, extent of contacts with similar educational institutions abroad, and support/pressure of employers. With regard to the curricular reform now, there is a risk of insufficient expertise in the change from learning inputs to learning outcomes. Thus, it might happen that the curricular reform will concentrate on changes in learning contents and modernisation of equipment.

There are no policies on innovative pedagogies focusing on specific groups, however there are policies addressing specific group needs. Within these policies innovative approaches could be inevitable, e.g. there are many specific policies concerning the Roma minority,

which require an innovative approach. Sometimes, although innovativeness can be seen a major topic of the initiative, someone could say that it is exactly an example of the policy of innovative pedagogies focusing on specific groups; e.g. there is a programme for financing development projects of schools "E-learning for socially disadvantaged students and physically/mentally disabled students" (see 070302). Nevertheless, since 2008 within the Operational Programme Education the third of five priority axes "Support to Education of Persons with Special Educational Needs" will open calls exactly for this kind of activities.

070302 Legal, administrative and institutional framework

Innovative pedagogies and modernising VET curricula are considered a tool for quality assurance, and therefore extensively addressed by legislation, usually without making a strict difference between innovations in curriculum development and innovations in pedagogies, as innovations in pedagogies are considered being under the responsibility of schools:

- According to § 48 of the School Act – 29/1984 Coll. (Zákon č. 29/1984 Zb. o sústave základných a stredných škôl), as amended, central bodies have to provide support for schools with regard to the content and education modernisation.
- According to § 5 of Act No. 596/2003 Coll. on State Administration in Education and School Self-government (Zákon č. 596/2003 Z.z. o štátnej správe v školstve a školskej samospráve), a school director is obliged to submit the school development document for commenting to the school board (rada školy), and for approval to the school establisher. § 9 lays down obligations of self-governing regions to discuss the school development documents, and proposals for implementation of new study and training branches with school directors and territorial school boards (územná školská rada). § 24 lays down competences of territorial school boards, including the obligation to comment on the school development documents, and proposals for implementation of new study and training branches. Following § 14 Ministry of Education (MŠ, Ministerstvo školstva) is assigned a managing authority with regard to experimental verification, management, organization, content and educational process at schools.

Subsequently to the aforementioned § 14 on experimental activities, the Decree of MŠ No. 376/2005, regulating details and conditions for experimental verification of objectives, content methods, organisation and management of educational process in schools and school establishments (Vyhláška MŠ SR č. 376/2005 Z.z., ktorou sa upravujú podrobnosti o podmienkach a pravidlách experimentálneho overovania cieľov, obsahu, metód, organizácie a riadenia výkonu výchovno-vzdelávacieho procesu v školách a v školských zariadeniach), lays down conditions to be fulfilled by schools, which intent to implement innovations.

It is of practical importance in two cases: when the school requires financial subsidy for carrying out the experiment and when a new curriculum or education/programme is to be set or changes are induced above the 10/30 formula (see 070301). These experiments are based on project proposals evaluated by the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) and its respective expert commission (odborná komisia), and approved by MŠ. ŠIOV annually evaluates experiments at VET schools, making three types of recommendations:

- to continue the experiment;
- to finish the experiment and disseminate its result by approving curricular changes and/or introducing new study/training branches; and
- to finish the experiment and not support disseminations.

As ŠIOV monitors all experiments approved according to the aforementioned decree, it also announces to MŠ experiments, which were not carried out in the respective monitoring period. Finally, curricular changes verified by the experiment are embedded into the official curricular documents (called pedagogical documentation) in the format approved by the MŠ within its regulation CD – 2004 – 3280/6821-1:093 of 3rd March 2004 and valid since 1st April 2004.

Furthermore, based on the same § 14 MŠ issued Guideline No. 6/2005 – R of 20th May 2005 concerning provision of financial means to school establishers for development projects (Smernica č. 6/2005-R z 20. mája 2005, ktorou sa určuje postup pri poskytovaní finančných prostriedkov zriaďovateľom škôl na rozvojové projekty), among which Graphic Systems in VET, "E-learning for Socially Disadvantaged Students and Physically/Mentally Disabled Students" and Open School projects are worth mentioning. The governmental programme "Open school" (Otvorená škola) launched in 2004 supports the philosophy to turn the school into an educational, cultural and social centre of surrounding community, to change it into the innovative spin off open to the needs of young and old learners from neighbourhood.

Moreover, based on § 8 of Act No. 523/2004 on Budgetary Rules in Public Administration (Zákon č. 523/2004 Z.z. o rozpočtových pravidlách verejnej správy), as amended, MŠ supports 9 categories (some of which VET related or with a VET component) of activities listed in the Ordinance of MŠ No. CD 2006-141/348-1:sekr on Providing Subsidies in the Powers of MŠ (Výnos MŠ SR č. 2006-141/348-1:sekr o poskytovaní dotácií v pôsobnosti MŠ SR) regulating subsidies to public and private legal subjects, and even individuals. This norm is complemented by Guideline No. 3/2007-RI of 15th February 2007 with the same title, specifying in detail subsidy procedures. Among subsidised activities in 2007, language

certificates for school graduates or practical training of primary school pupils in driving rules could be mentioned. Calls for project proposals under both procedures are published on the MŠ portal www.minedu.sk. There were 12 schemes offered by MŠ in 2007.

MŠ informs about own schemes and other subjects' schemes in support of innovative pedagogies, as well as about diverse innovative activities and experience within the Pedagogical and Organizational Guidelines (Pedagogicko-organizačné pokyny) issued on annual basis. In 2007 edition, there were 34 items listed within Section 1.4 Competitions, Projects and Programmes, and 41 items within Section 1.5 Information on Educational Activities of Schools and School Establishments. The listed items can but need not to be explicitly VET related. Even in negative case they may contain a VET component.

Introduction of innovative pedagogies is not legislatively regulated, and is in full responsibility of teachers if implemented within the classroom or workshop, and in the responsibility of school directors and affected pedagogical staff if going beyond this framework. The following example is offered for explanation: If schools carry out experiments in e-learning in several subjects of the educational programme it is fully up to them and they do not need approval, provided they do not request financial contributions from MŠ, and changes in the curricula do not affect more than 30% of the content.

In contrast to CVET, IVET secondary schools are not allowed to replace traditional face-to-face education by e-learning; they can use it as a complementary instrument. There is no specific legislative framework concerning provision of ICT, as ICT is legislatively covered by general provisions mentioned above. Of course, there are many ICT related initiatives, many of them supervised by MŠ. The detailed information is available within the Project on Informatics and Informatisation of Education (see 070301).

Institutions and bodies involved in the curriculum development and innovation projects, and their roles and responsibilities are offered in the following table.

Table 2: Current VET curriculum development (and innovations in curriculum) players'
roles

Institution	Initiation changes	Development	Advising	Approval
School	x	x		
School establishers*	x	x		
Social partners	x		x	
ŠIOV staff experts	x		x	
ŠIOV affiliated commission	x	x	x	
National Institute for Education	x***	x***	x***	
Ministry of Education	x		x	x
Other ministries	x		x	x****
State School Inspection**	x		x	

Notes:

* including municipalities and self-governing regions

** State School Inspection (ŠŠI, Štátna školská inšpekcia) governmental body, independent from MŠ in its activities according to the law, however with the Chief School Inspector appointed by the Minister of Education

*** National Institute for Education (ŠPÚ, Štátny pedagogický ústav) participates in curriculum development and innovations evaluation with regard to general subjects taught in VET schools

**** In case of VET schools under their responsibility; it affects Ministry of Health (MZ, Ministerstvo zdravotníctva), Ministry of Interior (MV, Ministerstvo vnútra) and Ministry of Justice MS (MS, Ministerstvo spravodlivosti), because of health schools, police schools, school for justice ward, etc.

Within the policy paper introducing the legislative proposal of the new Education Act establishment of the Curricular Board (Kurikulárna rada) providing advice to the minister with regard to innovations in content, pedagogies and management is presented. This board should also comment on state (framework) educational programmes (see 0701), for VET schools in the process of elaboration by ŠIOV and subjected to the approval by MŠ (and MZ, MV and MS in case of specific schools under their professional supervision). School educational programmes must be in concord with state educational programmes. This should be guaranteed by the establisher of respective schools that elaborated their school educational programmes and it could be checked by the State School Inspection.

070303 Practices of innovative pedagogies

Application of innovative pedagogies is fully up to teachers and trainers. Nevertheless, it often depends on supportive mechanism, whether they are applied effectively. Innovative

impulses, besides own initiatives of teachers and trainers proud of their professionalism, come from in service training, educational authorities and business world.

It is typical for in-service training institutions that they initiate innovations based on alternative pedagogical approaches and/or recommendations of educational psychologists. Quite often it leads to campaigns, and education periodically faces trendy waves: project based learning, collaborative learning, group learning, constructivism based learning. All these more or less traditional instruments are modified under the influence of computer assisted learning. In contrast to general education, innovative pedagogies in VET can strongly focus on classroom management. Adjustment to progress in technology (and not just ICT based) is dominant for innovations, and innovative pedagogies naturally answer to the respective technological challenge. Here are some examples of this kind of innovations:

EUR 2.5 million on the new equipment was given to three VET schools and one higher education institution to adjust VET to the needs of strong automotive industry investor. The following is the case of one of aforementioned VET schools.

The new equipment of 25 diagnostic devices and four process simulators of EUR 245 702 was instrumental for the total reconstruction of curricula from the content point of view, and inevitably also pedagogies, as students work with modern devices corresponding to technology already used in plants. Worth mentioning from the curricular point of view is that a new alternative subject "Diagnostic of Motor Vehicles" was developed with a modern design based on units and learning outcomes.

A private company specialised on specific software solutions offered 1 000 licences of graphic software with a teacher manual to 80 VET schools. Subsequently, teachers were trained to adopt new skills. Furthermore, in cooperation with educational authorities there is a six-year history of the national competition within which secondary school students are awarded diplomas and rewards sponsored by this private software specialist. This activity is worth mentioning due to the extraordinary commitment and investment of this private firm. Many other CAD/CAM projects are financed from public sources.

In 2007 within the development project scheme of the MŠ (see 070302) the "Graphic Systems in VET", 63 projects were submitted and 22 supported. Of course, implementation of software cause huge changes in pedagogy and without innovative approach its efficient introduction is impossible. Important instruments in support of innovativeness are diverse awards and competitions. Here are some examples.

- In 2007, the Slovak Telecom Award was organised for the second year to attract pedagogical staff not specialist in informatics to ICT assisted education. Innovations verified in practice by respective innovators compete for three financial rewards in each category (basic schools, secondary schools and schools for SEN students) and for enrolment into the library of good practice. In 2007, 38 projects of secondary VET schools were promoted in the dedicated website www.cenast.sk for further dissemination.
- In 2007, 16th VET schools exhibition JUVYR (acronym for "JUnior a VYRoba" - "Junior and Production") in Bratislava is organised by the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) to promote excellence in VET schools, to raise self-esteem of VET students and attractiveness of VET. It is expected, that JUVYR could serve as a national basis for identification of nominees for Euroskills and Worldskills competitions.
- The International Training Firms Trade Fair is organised annually by the Slovak Centre for Training Firms. 121 training firms from 9 countries (68 Slovak and 53 foreign) participated at 10th anniversary fair in 2007. Training firms are extremely popular at secondary schools. They are included into the curricula to develop entrepreneurship skills among VET students. The Slovak Centre for Training Firms, which is offering simulation of all administrative processes necessary to establish and run a firm, successfully offered training in cooperation with labour offices also for the unemployed.
- Secondary schools students' professional activity (SOČ, stredoškolská odborná činnosť), a competition (at school, regional and finally national levels) in elaboration and defending projects initiated and developed by a student under the supervision of consultant from the educational staff from own school or an expert from practice; it is aimed at a specific topic interesting for the student and related to one of 17 scientific field categories.
- ZENIT, the competition of students in selected fields (in programming, mechanical engineering and electrotechnics in 2007) aimed at presentation of technical skills in assigned tasks within school, regional and finally national level contests.

There are also ad hoc competitions, e.g. Milk Competition in 2007 organised by ŠIOV to demonstrate knowledge and skills typical for agrosector (milking, laboratory skills demonstration, quality of milk products testing, etc.); and there are also activities of other sectoral ministries, e.g. the exhibition "Apprentice" co-organized and co-financed by the Ministry of Economy (MH, Ministersto hospodárstva) focusing on crafts and/or activities of other subjects. There are also traditional competitions (Olympiads) in academic skills aimed at presentation of knowledge and skills related to respective subject matters attractive predominantly for grammar schools, but also open for students of VET schools .

There is no evidence allowing for comparison of innovativeness between IVET and CVET. Nevertheless, innovativeness is substantially based on personal openness towards innovations. The only difference is that within IVET, schools are pushed to innovativeness by diverse innovation mechanisms of educational authorities or the partnership of educational authorities with other players, while in CVET the pressure to innovativeness is almost exclusively market driven. As CVET/LLL delivered to adults is compared to EU 2010 benchmark very low, one can assume that despite many CVET providers on the market some innovation stimulation schemes should be rethought. A strong response of education and training providers to respective calls of ESF indicates a high potential, e.g. there were 109 projects approved within 2004 SOP Human Resources call within Measures 3.2 and 3.3A aimed at the priority "Improved qualifications and adaptability of people in employment and of those entering the labour market". However, impact and sustainability of these projects has not been clear so far.

No doubt, ESF SOP Human Resources and NUTS II - Bratislava Objective 3 offered a lot of opportunities for innovative people and for implementation of innovative pedagogies. Within aforementioned 109 projects there were e.g. projects aimed at the development of learning schools coordinated by in-service training institution Methodological-Pedagogical Centre (MPC, metodicko-pedagogické centrum) in Banská Bystrica, reform pedagogies in education coordinated by regional educational authority in the Trnava region, innovation in didactics focused on increasing the quality of assessment of educational process coordinated by the MPC in Bratislava, and many projects aimed at introduction of ICT into education and learning.

Later there were additional calls for demand driven projects open, comprising in total about 700 demand driven projects. Moreover, there were many ESF national projects containing innovative components allocated to institutions selected by MŠ. The list of national projects, as well as the list of demand driven projects are available at http://www.minedu.sk/index.php?lang=sk&rootId=1122.

In IVET, innovative pedagogies cannot be separated from content based curricular changes. It is significant for the current stage of reforms that debating key competences dominates within new designs of curricula and elaboration of curriculum development manuals for teachers. Within respective documents, key competences (see 0701 with listed six competences) have been stressed since 2004 regulation CD – 2004 – 3280/6821-1:093 of MŠ. Thus, although there is a trend towards competence based curriculum development visible, learning outcomes as specified by the European Qualification Framework instrument have not yet been applied.

As the curricular changes finally elaborated and/or agreed by the relevant expert commission must be finally approved by MŠ, both is available: the pressure to innovation from authorities and statistics about innovations already experimented. The following table offers data about

experiments in study and training branches in VET schools in respective years by the level of education.

Table 3: Number of experiments in VET schools in respective years by the level of education

Experimental branches	School year									
	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07
SOŠ ISCED 3A	7	10	4	4	5	5	7	17	3	6
SOU ISCED 3A	19	16	18	16	8	10	9	11	5	0
SOU ISCED 3C	17	17	17	9	1	2	5	12	0	9
SOŠ ISCED 5B	12	13	15	17	14	15	3	6	0	0
Gradual*	6	4	4	5	2	2	1	0	0	0
U ISCED 2C	0	0	0	7	7	6	6	6	5	3
Total	61	60	58	107	87	89	79	108	40	56

Source: ŠIOV

Notes:

Data does not include experimental branches at schools under the Ministry of Health (Ministerstvo zdravotníctva), Ministry of Interior (Ministerstvo vnútra) and Ministry of Justice (Ministerstvo spravodlivosti)

SOŠ – secondary specialised school (stredná odborná škola)

SOU – secondary vocational school (stredné odborné učilište)

U – vocational school (učilište) affiliated to SOU

* within gradual studies students start VET programme without fixed terms of study completion. They can finish at ISCED 2, ISCED 3C or ISCED 3A levels depending on their wish and performance.

In addition to the tabled experiments, there were specific PHARE projects aimed at transformation of VET programmes into modular forms between 2000/2001 and 2004/2005 school years, about 50 each year. In 2006/2007 school year 38 experiments were finally assessed.

It is not possible to make a difference between sectors concerning innovativeness of VET schools driven by the initiative of pedagogical staff. On the other hand, it is visible that VET schools with links to growing industries, such as mechanical engineering, electrotechnics, constructions, and in particular the automotive industry, benefit from innovative impulses from businesses, in contrast to schools with industries in decline, e.g. the textile industry. A specific case is three sectors with a shared supervision of MŠ and respective sectoral ministry. In the health sector, innovations are strongly promoted by the Ministry of Health (MZ, Ministerstvo zdravotníctva) and professional organisations, e.g. the Chamber of Nurses. Little is known about innovativeness in schools in the interior and justice sectors. It can be

assumed, based on available methodological documents for initial and in-service training of pedagogical staff, that pedagogical staff driven innovation is similar to other VET schools.

Given the fact that international contacts stimulate innovation, Leonardo da Vinci projects offered welcomed opportunity for innovative schools and other educational institutions. There were four, three and two pilot projects with Slovak coordinators approved within the Leonardo da Vinci programme in 2004, 2005 and 2006, respectively. The following list of projects contains hyperlinks to the websites of projects approved in 2004 and 2005:

SK/06/B/F/PP – 177437 European Certificate for Renovation and Rebuilding in the Construction Sector

SK/06/B/F/PP – 177436 European Virtual Laboratory of Mathematics

SK/06/B/F/PP – 177443 Vocational Education and Training for Quality of Life Through eHealthcare and Well-being

SK/06/B/F/PP – 177450 Education Quality Evaluation of Long-life Learning

SK/05/B/F/PP-177435 Teaching and Learning in Virtual Learning Environments for Water Management

SK/05/B/F/PP-177433 Development of European Project Management Training by Multicultural Teams of Trainers from Six European Countries

SK/05/B/F/PP-177423 Competencies Development through Self-learning in Services SME

SK/04/B/F/PP-177401 Improving the Communication Between Labour Office Advisers and Their Clients

SK/04/B/F/PP-177421E-learning for Introduction and Management of Tele-working

Furthermore, Slovak subjects also participated as project partners, e.g. 18 pilot projects with Slovak partners were approved in 2005. The list of these projects is available at http://193.87.15.11/kompendium/structure/frame.cfm?rok=05&jazyk=EN.

The list of 2006 projects is under preparation and will be available at http://193.87.15.11/kompendium/structure/frame.cfm?rok=06&jazyk=EN.

07030301 e-learning in VET (incl. statistics)

Results of the survey on e-learning launched in 2005 by Cedefop, complemented by comments and explanation, are available in a comprehensive article "ICT in schools in Slovakia from the Policy Making Point of View" published in proceedings of the 2005 conference Virtual University '05 (http://virtuni.eas.sk/rocnik/2005/?main=data/program). In that time, 50% of schools reported financial barriers hampering their ICT related activities. It was reported that ICT and e-learning was based predominantly on the initiative of enthusiasts

and that the regular pedagogical staff was insufficiently trained. A situation has been improving year by year since then, however Slovakia is still lagging behind the EU average in many indicators. It is significant and visible also from older statistics that educational institutions are a weak point, and they suffer from the digital divide rather than other institutions or individuals.

As visible from Table 4 performance of Slovak enterprises is above the EU25 average. There is however a warning signal coming from comparison of 2004 and 2005 statistics indicating a slower growth compared to many other countries. An in-depth study would be necessary to clarify whether it indicates natural limits for application of e-learning in training or barriers of growth. It would be necessary to decipher diverse types of activities labelled as e-learning and compare it with type of training needed for respective enterprises.

Table 4: Percentage of enterprises using e-learning applications for training and education of employees, by size of enterprise in 2006

Country	2006	
	SMEs (10-249 employees)	**Large enterprises (250 and more empl.)**
EU25	20	42
SK	35	55

Source: Eurostat, Information society statistics; on-line database, download 28/11/2006

Note:

The survey population consists of enterprises with 10 and more full-time employees and with the main economic activity in NACE sections:

D – Manufacturing, F – Construction, G – Distributive trades, H – Hotels and accommodation, I – Transport and communication, K – Real estate, renting and business activities.

O – Services (groups 92.1 – 92.2 only: motion picture and video activities, radio and television activities.

In Table 5 lagging behind is evident in the indicator concerning using Internet in education and training. Data is in particular low with regard to formal education and no doubt intervention from authorities should be required.

Table 5: Percentage of individuals having used the Internet in relation to training and education within the last 3 months, by purpose and age groups in 2006

Country	Age group	For formalised educational activities (school, university, etc.)	For other educational courses related to employment opportunities	For post educational courses

EU25	16-24	28.5	11.5	13.1
	Total 16+	8.7	8.5	8.7
SK	16-24	14.1	5.7	14.1
	Total 16+	4.8	3.9	4.8

Source: Eurostat, Information society statistics; on-line database, download 28/11/2006

Note:

The population of individuals consists of all individuals aged 16 to 74 (some countries collect separate data on other age groups).

From activities of individuals presented in Table 6 (53% of youth compared to 40% for EU25) it is visible that low readiness of educational institutions to make use of Internet in education and training rather that a lack of skills of individuals should be blamed for a low share of individuals using the Internet in education and training (14.1% of youth compared to 28.5% for EU25 in Table 5).

This seems to be confirmed by data about the Internet used by individuals in Table 6, and data indicating accessing the Internet from a place of work in Table 7.

Table 6: Percentage of individuals having accessed the Internet in the last 3 months, by place of access and by age groups in 2006

Country	Age group	Place of education	Place of work (other than home)
EU25	16-24	40	13
	Total	8	23
SK	16-24	53	14
	Total	11	26

Source: Eurostat, Information society statistics; on-line database, download 28/11/2006

Note:

The population of individuals consists of all individuals aged 16 to 74 (some countries collect separate data on other age groups).

Table 7: Percentage of individuals having accessed Internet at least once a week in 2005

Country	Use Internet at least once a week						Have never used Internet					
	Total	M	F	S	E	U	Total	M	F	S	E	U
EU25	43	49	38	79	55	32	43	39	47	7	29	48
SK	43	47	39	79	49	26	42	38	45	2	35	53

Source: Eurostat News Release 45/2006

Note:

S – student, E – employed, U - unemployed

It would be welcomed to compare data from Table 6 with similar data about accessing the Internet from households, as the share of households wired to the Internet is comparably low, as visible from other statistics.

Table 8: Percentage of Internet access by households and enterprises in 2006

Country	Proportion with Internet access		Proportion with broadband connection	
	Households	Enterprises	Households	Enterprises
EU25	52	94	32	75
SK	27	93	11	61

Source: Eurostat News Release 146/2006

It is expected that data about access to the Internet will improve soon, as provision of broadband Internet is booming. Similarly it is not expected that access to training and adoption of skills would be a limiting factor. Recent data for Slovakia from Table 6 concerning this is about the average in EU25 but a boom in learning, formal or informal is expected to follow raising accessibility of Internet from households.

Table 9: Percentage of individuals having obtained IT skills, by way/place of education/training in 2006

Country	In formalised educational activities (school, university, etc.)	For other educational courses related to employment opportunities	For post educational courses
EU25	21	11	17
SK	26	12	15

Source: Eurostat, Information society statistics; on-line database, download 28/11/2006

Furthermore, there many schemes in support of ICT and e-learning training; two are worth stressing: Family of ECDL training based projects were co-financed by ESF to train officials

and teachers, and the INFOVEK partial project "Digital Sturism at Schools", as both were included into the National Reform Programme elaborated to implement the Lisbon strategy.

For explanation, under "Sturism" 19th century movement aimed at improvement of education level of the Slovak nation led by Ľudovít Štúr is meant.

Many dedicated websites are sponsored to support innovativeness linked to ICT among teachers and students. Besides official portals of the Ministry of Education (MŠ, Ministerstvo školstva), www.moderna.skola.sk and http://www.infovek.sk/predmety/index.html, there are also other dedicated websites, e.g. websites of the NGO P-MAT www.p-mat.sk aimed at education in mathematics, science and economics, with related websites, e.g. www.modernyucitel.net maintained in co-operation with Microsoft (international project Partners in Learning), www.investland.sk aimed at the development of skills and competences in economy, www.ucmeradi.sk for teachers of science. In 2006 this NGO worked within ESF on further development of the virtual world of economy within its Investment portal by the project "Virtual Manager" and offered free training for primary and secondary teachers of mathematics, science and informatics in developing key competences of students and training of teachers in e-learning.

Although distance education in secondary and tertiary levels is traditionally offered in a wide extent, opportunities of ICT enabled learning are insufficiently used. There is no real pressure to modernise provision of learning to make it more flexible and individualised. As already mentioned, introduction of ICT and e-learning courses is dominantly a result of enthusiasts. Two strong e-learning communities are organised around universities, the two most important being the Slovak University of Technology in Bratislava and Technical University in Košice. They both organize important national events on annual basis, the Virtual University conference (http://virtuni.eas.sk) and the ICETA conference (http://www.elfa.sk/ICETA-2007/en/index.php). Papers from these conferences offer background information for understanding e-learning environment in Slovakia. Provision of e-learning courses is in progress, however this progress is substantially influenced by two forces: personal and financial support from authorities (rectors, schools and school directors), and from the power of players interested in maintaining project results after the project completion.

As Moodle is a country dominant LMS, the provision of e-learning can be best monitored at http://moodle.org/sites/index.php?country=SK, listing Moodle users.

Although ICT is a crucial impulse for modernising VET, and modernisation of equipment of education providers is evident, e-learning potential has not yet been sufficiently utilised. It will take time to translate new policy papers and new financial opportunities (predominantly

ESF) into practice. The crucial point is to turn booming 2006 and 2007 project activities into sustainable development.

The role of ICT and e-learning is almost exclusively in adjusting provision of learning to the individual learner's needs, and needs of society and economy facing permanent development in technology. Of course, it could help maintain an access to quality VET and to keep low drop out rates. With regard to access to secondary VET and drop out rates in secondary education Slovakia is among best performing countries in the EU. As visible from statistics the only problem hidden behind excellent figures is lagging behind of the Roma minority. With regard to their low socio-economic status other instruments and not just ICT/e-learning must be used to attract Roma to VET and prevent high early school leaving rates among them. On the other hand, ICT and e-learning can be very helpful in increasing access to individualised tertiary VET, and increasing numbers of technology branches graduates despite increasing numbers of tertiary students. Slovakia is among the EU countries with a lowest share of tertiary educated population (while being among the top EU countries in the share of secondary educated population).

It makes little sense to differentiate between IVET and CVET. The border goes rather between public and private subjects, and services offered for free and services for fee. Moreover, as the ESF provides for remarkable means for CVET, in particular for training in enterprises and training for the unemployed, further improvement in this segment is expected. It will depend on coherence in policies funded from the ESF in 2007-2013 within the Operational Programme Education, and modernisation initiatives covered from the state budget and/or private sources aimed at the improvement of the situation in schools, whether current lagging would be removed or not.

07030302 Barriers to implementation

There are no barriers for introducing innovative pedagogies into schools unless the fatigue of teachers and trainers caused by decreasing status of their profession, and long-lasting insufficient financing of both schools equipment and staff. Interest in innovations is still surprisingly high, as visible from responses of schools to diverse calls and competitions, readiness for innovations must be however more rewarded and conditions for it improved. The policy of low investment in education resulted from persuasion of the Ministry of Finance (MF, Ministerstvo financií) that means in the education sector are spent inefficiently, followed by reluctance to increase investment in education, and no doubts also in inability to measure the return on investment in education and/or value it. Innovativeness in education is

impossible without creation of environment stimulating learning of learners and rewarding activities of its facilitator.

In contrast to general innovativeness, specific activities e.g. those within the Copenhagen process are essentially authorities driven. This also affects a shift from input to learning outcomes driven programming of education/learning. The currently valid regulation of the Ministry of Education (MŠ, Ministerstvo školstva) CD – 2004 – 3280/6821-1:093, as well as training of future curriculum developers is key competences focused. It will take some time to introduce EQF linked innovations into practice. Although curriculum developers put stress on learning outcome and content of education is gradually less and less prescribed, clarification of a curricular reform in terms of practical implementation is insufficient. It is expected that within elaboration of the new National System of Qualifications and National System of Occupations the methodology and practice of identification and assessment of relevant learning outcomes will become a central piece of further reforming efforts.

Slovakia was among worth EU countries in applying of ICT in society and economy, not speaking about introduction of ICT and e-learning into initial education and training. In spite permanent improvement, two remarks from 2004 criticism (see the article at the Virtual University'05 conference in 07030301) have remained valid:

- Slovakia is significantly lagging in e-government, and therefore a crucial positive incentive is missing, i.e. a "pressure on both: people to learn and schools to assist learning (...to adopt respective skills)" available spontaneously in countries with extensive provision of e-services;
- there is a lack of products ready to use in education in the Slovak language, as a consequence of a long-lasting under-financing and bran drain of potential developers of such products to better paid activities. This hampers e-learning and ICT-based learning in initial and continuing education substantially.

Although, in contrast to recent years there are many stimuli and supportive actions to introduce ICT and e-learning, they as a rule affect the most active. A systemic approach with a wide impact must start with teacher training colleges and in particular with teachers of teachers. A lack of adequately trained learning facilitators is caused by uncompetitive salaries offered to them in the public sector and it will be a hard task to stop long-lasting brain drain.

In contrast to early 2000s relevant policy papers were adopted by decision makers (the Concept Paper for Informatics and Informatisation of Education (Koncepcia informatiky a informatizácie školstva), see 070301, the Strategy of Lifelong Learning and Lifelong Guidance and Counselling (Stratégia celoživotného vzdelávania a celoživotného

poradenstva), see 0706, and the Concept Paper for the Professional Development of Teachers in a Career System (Koncepcia profesijného rozvoja učiteľov v kariérovom systéme), see 0704, and relevant legislation is under preparation (a new Education Act and a new LLL Act, for both see 070202, and the act on the status of pedagogical staff at schools and school establishments, see 0704).

More means are available or financing innovations however, basal funding from the state budget remained insufficient. Financing based on soft money from projects is very vulnerable and threatened by a lack of means after completion of projects. Furthermore, many educational institutions experienced many administrative obstacles with regard to implementation of ESF projects very often caused by the lack of disposable means from preliminary funding of activities. There is a thread that superficial modernisation instead of "in-depth changes" might result as a consequence of imbalance between personal/institutional professionalism driven and project driven innovations. The major problem, which will remain unsolved, is unattractiveness of teacher and trainer positions for quality young professionals.

070304 Building partnerships and raising awareness

Partnerships for innovative pedagogies and VET curricula modernisation

Partnership building at local and regional levels dominantly depends on activities of self-governing bodies. After decentralisation reform they are major players in shaping regional development policies including educational policies and innovative activities. At the local level partnerships with partner cities from other countries, which as a rule comprise cooperation of schools, indirectly contribute to innovative impulses by comparison of learning environments in respective schools. Increasingly, at the local and regional levels employers are interested in contacts with schools as a consequence of lacking labour force. In particular new investors have to search for school capacities and their graduates' profiles, and contracts among enterprises and self-governing bodies increasingly emerge to guarantee a supply of skilled workers. Curricula innovations are always part of such cooperation, subsequently leading, at least partly, to introduction of innovative pedagogies. Regional Chambers of Commerce, originally institutionalised for business reasons, are becoming increasingly interested in education and training issues. Offices of self-governing regions and regional chambers of commerce are natural partners for cooperation, however specific VET focused partnerships on regional levels have not yet been institutionalised. Regional VET councils as well as sectoral councils have been in debate since late 1990s, however contacts among regional players are still informal or established ad hoc. It is expected that institutionalisation of such bodies will be completed under the pressure of policy (see task 1.6 in 070101) adopted by the Ministry of Education (MŠ, Ministerstvo školstva) in 2007. An important instrument in support of regional partnerships is the National Programme on Learning

Regions successfully progressing in six out of eight regions, as confirmed by the national workshop on learning regions organized by MŠ in September 2007. In the Nitra region a respective ESF project has not been launched, and in the Košice region the project seems to suffer from insufficient power of players participating in the project. This national programme linked to respective regional projects funded by the ESF is aimed at efficient alignment of education and training to local/regional labour market needs. It explicitly stresses the importance of involvement of all relevant players in cooperation going beyond traditional thematic and projects networking. Creation of knowledge clusters concentrating research and development and lifelong learning capacities to increase (sub)regional competitiveness is envisaged and hoped to origin gradually. The European Commission initiative to promote regional networks on lifelong learning is reflected by this programme.

At the national level the most important partnership is the Council of Economic and Social Partnership. The Council consists of 21 members equally representing three partners with seven seats each. Trade unions are represented by seven representatives of Confederation of Trade Unions (KOZ, Konfederácia odborových zväzov) and employers' representatives are composed of four representatives of National Union of Employers (RÚZ, Republiková únia zamestnávateľov), two of the Federation of the Employers' Association of Slovakia (AZZZ, Asociácia zamestnávateľských zväzov a združení Slovenskej republiky) and one of the Association of Towns and Municipalities of Slovakia (ZMOS, Združenie miest a obcí Slovenska). The Council concerts standpoints and recommendations and makes agreements with regard to fields set by the Tripartite Act No. 103/2007 Coll. Thus, before submission to the government crucial policy papers relevant to VET must be discussed in a regular meeting of Economic and Social Council. As a consequence the Council could provide for support of innovation rather than initiate it.

In contrast to this, the Council for VET (Rada pre OVP), an advisory body to the minister of education, could be considered a best platform for initiation of innovations. 15 tripartite sectoral expert commissions (odborné komisie) for secondary VET education affiliated to the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) are best suited for supporting as well as initiating innovations in the curriculum.

Although social partners may participate in decision-making processes in the curriculum development, as well as in education standards establishment and in qualification exams, their role in VET is primarily that of advisors to the state administration, as visible from the following table taken from 2007 Thematic Overview.

Level	**Responsibilities of social partners**	**Type of role (advisory/decision-making, direct/indirect)**

National level	Economic and Social Council (Hospodárska a sociálna rada)	consulting and concerting *
	Council for VET (Rada pre OVP)	advisory
	15 tripartite sectoral expert commissions for secondary VET education	Advisory in curriculum development and setting of standards
Regional level	Learning region partnership**	advisory
Regional level	VET/LLL councils in the process of being established	advisory
Sectoral level	According to the result of social dialogue (collective agreement at the master agreement level)	depending on agreement
Enterprise level	According to the result of social dialogue (collective agreement (kolektívna zmluva))	depending on agreement

Note:

* Decision-making till October 2004 under the name Council of Economic and Social Agreement, in practice it however did not influence LLL/VET issues substantially; advisory under the name Council of Economic and Social Partnership since December 2004 till April 2007

** Functioning in 6 out of 8 regions, not established in the Nitra region and in decay in the Košice region

The role of innovative approaches in building partnerships between education and the labour market

ICT created new opportunities for networking. It is hardly possible to imagine professional associations, special interest groups and other groupings without dedicated websites. ICT facilitates exchange of information via mailing lists, archives of documents and promotion of news. Chat rooms and discussion forums offer options, which are apparently not yet sufficiently used. There are no professional virtual communities established, however there is a very promising starting of a rich virtual community visible of educators at www.infovek.sk/forum and there are many starting communities at higher education institutions.

On the other hand, e-services offered by interactive portals are increasingly visited offering a place for advising between professionals and clients as well as between individual visitors. In particular young people make use of electronic employment services, e.g. www.profesia.sk, in provision of information about educational opportunities www.education.sk. Furthermore,

by the means of three databases www.skoly.sk, www.kurzy.sk and www.konferencie.sk students have access to information about schools, courses and conferences.

In 2001 cooperation agreement between MŠ and Cisco Systems was signed to promote internationally well known Cisco Networking Academy Programme and establish the network or local and regional CISCO academies at interested educational institutions. There are 47 academies around the country with modern equipment and trained staff able to offer e-learning programme providing about 2 800 students with Internet technology skills and networking technologies for by labour market urgently demanded IT professionals.

Besides two academic conferences crucial for networking of IT professionals, the Virtual University conference (http://virtuni.eas.sk) and the ICETA conference (http://www.elfa.sk/ICETA-2007/en/index.php), there exists an annual international congress on IT use in public administration. The ITAPA congress (www.itapa.sk) is aimed at speeding up the information society development attracting annually leading ICT players and decision makers offering the top level opportunity for sharing experience and networking between professionals of all sectors and background.

There are many initiatives and tools promoting innovations. Besides traditional instruments as seminars and conferences, public sector portals, such as the MŠ modernisation of schools promoting portal www.modernaskola.sk or diverse private portals sponsored by businesses and often coupled with competitions and annual awards, e.g. Slovakia Telecom Award for educators (www.cenast.sk) promote innovativeness. Through ESF and private sources, important financial impulse came to very well rethought INFOVEK project for years suffering from insufficient public funding. It is hoped that www.infovek.sk/forum will develop to the first address for educators looking for innovative impulses. It is worth rethinking one-stop-shop websites also for other professionals looking for innovations policy makers, local and regional educational authorities, employers concerned about innovative VET and diverse learning facilitators.

070305 Financing innovative pedagogies (incl. statistics)

Innovative pedagogies and curriculum developments are financed from diverse sources:

- from the state budget institutionally;
- from the state budget via grand schemes and specific actions;
- from private sources;

- from the ESF within restricted calls and direct orders and from the ESF through demand driven projects.

The State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) in cooperation with 15 expert commissions covering all study and training branches have to settle all innovative proposals concerning renewal or introduction of new curricula including evaluation of experiments aimed at testing newly developed curricula (see 070302). Costs of these activities are born by the state budget via the budget of ŠIOV. In addition to in kind costs related to servicing meeting of respective commissions at ŠIOV part of wages of ŠIOV staff engaged in these activities, travel costs of external partners of commissions are reimbursed. Furthermore extensive evaluations of experiments as well as reports about innovations to the Ministry of Education (MŠ, Ministerstvo školstva) are covered from the budget of ŠIOV dominantly through covering wages for allocated working time of staff.

Similarly, activities of the National Institute for Education (ŠPÚ, Štátny pedagogický ústav) affecting general subjects of VET curriculum are covered by the state budget via budget of ŠPÚ. Partly, also working time of diverse representatives of educational authorities starting of school directors, self-governing bodies on the local and regional level, regional school offices and ministries on the upper level should be mentioned as covered from the state budget and related to support of innovations, although innovators in action might see it differently. There are diverse competitions (see 070303) covered from the state budget (EUR 1 = SKK 35.4424 according to ERMII central rate of 19th March 2007):

- JUVYR with the International Training Firm Fair with SKK 1.052 million budget in 2007;
- Secondary schools students' professional activity (SOČ, stredoškolská odborná činnosť), a competition (in school, regional and finally national levels) with SKK 0.780 million budget in 2007;
- ZENIT, the competition of students in selected fields (in programming. mechanical engineering and electrotechnics in 2007) with SKK 0.308 million budget in 2007.

There are also ad hoc competitions, e.g the Milk competition in 2007 with the budget of SKK 0.138 million and there are also activities of other sectoral ministries, e.g. exhibition "Apprentice" co-organized and co-financed by the Ministry of Economy (MH, Ministerstvo hospodárstva) focusing on crafts and/or activities of other subjects with unknown budgets.

Innovators can be supported through specific intervention schemes promoted on annual basis in Pedagogical and Organizational Guidelines (Pedagogicko-organizačné pokyny), and through calls launched and promoted within the MŠ portal. There are general school development schemes addressing school establishers, and there are also theme specific

schemes addressing diverse players including individuals (see 070302). Means allocated for these schemes are decided ad hoc depending on the state budget possibilities.

There are two types of private investments in support of innovation. A typical example of the first type is a Telecom Award managed and financed by the Slovak Telecom (and supported by MŠ) aimed at support of innovative applications of ICT in education (with the budget of SKK 280 thousand just for awards in 2007). The second type of investments are strategic investments to innovate VET in order to guarantee supply of new quality workforce, e.g. reforms in the automotive industry or many activities of locally agreed cooperation between local employers and schools. Almost all private initiatives can be seen as public/private partnerships, since as a rule private investors seek for support from educational authorities. On the other hand, rather rarely, it is about joined financing from public and private sources; usually the dominant part of the budget comes from private sources.

The most important source of financing innovations is the ESF. It is worth stressing that within the ESF there were about 700 demand driven projects reflecting innovative ideas of applicants financed from the ESF and co-financed from public sources. The ESF however, according to its mission, supported innovations dominantly in CVET. There was no comparable opportunity for support of innovations in IVET. It could be expected that there would be many applicants interested in innovative projects in IVET.

Table 10: Number of projects committed in 2004-2006

	Number of projects	Funds contracted in SKK
SOP Human Resources		
Priority 3: Improved Qualifications and Adaptability of People in Employment and of Those Entering the Labour Market		
Measure 3.1: Adaptation of vocational training and education to the needs of the knowledge-based society	206	26 660 352
Measure 3.2: Development, improvement, and more extensive provision of further education with the aim of improving the qualification and adaptability of people in employment	266+70*	44 713 442
Measure 3.3: Development of career guidance and of systems for anticipating changes of qualification needs on the labour market		
Sub-measure 3.3.A: Development of career and job	86	7 710 290

advice		
SPD Bratislava Objective 3		
Priority 2: The development of life long learning and the support for research and development in the context of human resources quality improvement		
Measure 2.1 Stimulating and improving the provision for qualifications relevant to employers and businesses	148	536 605 704.90
Measure 2.2 Improving the quality of employment and competitiveness of the Bratislava Region by the human resource development in the area of research and development	66	346 418 109.05

Source: MŠ

*266 managed by MŠ and 70 by Ministry of Labour, Social Affairs and the Family (MPSVR, Ministerstvo práce, sociálnych vecí a rodiny)

The ESF was able to cover needs of innovations in CVET. There is however a risk that huge administrative barriers and high decommitment (estimated up to SKK 240 million, according the Monitoring Committee data from autumn 2007) might lead to the decrease in activities of minor contractors with limited budgets, and subsequently reduce their future innovative activities. A new Operational Programme Education for 2007-2013 will offer enough sources in support of both innovations in IVET and CVET, however, there is a risk that minor demand driven projects will be disadvantaged, because processing of many small projects is administratively more demanding than procession of few large projects.

0704 INNOVATIONS IN TEACHER TRAINING

Changes in training

If not further precisely stated, both pre-service training and in-service continuing training are meant here when using the term "training". Similarly, the term "pedagogues" will stand for all teachers, trainers and other learning facilitators.

There are three categories of new skills, which have to be taken into account in training of pedagogues:

- soft skills needed as a consequence of changing interaction between pedagogues and students/pupils;

- learning environment management skills, including new learning technology (e.g. e-learning LMS) and also development of "learning to learn" skills of students;
- new skills needed as a consequence of progress in technology related to the relevant subject/industry.

It could be said, that the first category is related to "understanding people", the second to "understanding learning", and the third to understanding the "world of work".

Within the first category diverse "pedagogical communication" courses were introduced in training of pedagogues in 1990s, followed by specific social skills training, which is considered inevitable as a consequence of changes in interaction between pedagogues and pupils and students. On the one hand, pupils/students are much more assertive, which is considered positive and should be supported by pedagogues despite additional demands on their work. On the other hand, destructive behaviour is much more present in classrooms and workshops, which needs to be mastered by pedagogues without disturbing the learning process. In contrast to 1970s and 1980s, when in-service training was dominantly aimed at the "renewed content", and performed by specialists in "didactics" and experienced practitioners, since 1990s psychologists have become the most demanded trainers in in-service training. Some soft skills training activities are inter-related with pronunciation of activity of learners rather than the activity of the pedagogue. In contrast to original stressing of the leading role of pedagogue typical for the regime before 1989, humanisation of education and student centred approach was highlighted after 1989. Soft skills training often relates to the changing environment at schools in terms of demonopolisation of information provision and increasing importance of facilitating role of pedagogues. Currently, attempts to improve facilitating skills are strongly linked with training in making use of ICT. Training to make use of ICT and computer assisted training itself is the second dominant feature of training after 1989. In 2000s it resulted in training in making use of e-learning. LMS Moodle has become the standard platform for creation of new environment in diverse educational institutions. It is expected that within the ESF 2007-2013 programming period all crucial and active educational institutions will work on enrichment of the provision of e-learning within their own LMS. Introduction of ICT has strong links to the third category. New technologies are often interlinked with ICT. Nevertheless, training of VET pedagogues to understand new technologies and introduce them to their learners appropriately cannot be done without cooperation with employers.

In contrast to the first category, where the supply of training is very rich, and to the second category, where the situation has been improving dramatically since 2004, there are many problems in the third category. Training to adjust to new technologies is as a rule offered only in sectors or with regard to professions with significant economic revival and strong demand in labour force. A typical example is the automotive industry where the curricular reform also is accompanied by training of VET pedagogues performed by training institutions established in cooperation of the industry and the Ministry of Education (MŠ, Ministerstvo školstva). In

other sectors and professions, where companies are not able to allocate means for training of VET pedagogues due to stagnation or decline in the sector, the technology divide between schools and the world of work is increasing. This applies also more widely. Substantial changes in curriculum and VET schools graduates' profiles occur preferably in "successful segments" than in "lagging segment", as there is much more clearer demand in the former segments needs than in the latter.

There are three important activities worth mentioning in addition to bottom-up driven changes.

VET teacher training providers led by the Slovak University of Technology in Bratislava (Slovenská technická univerzita v Bratislave) decided to follow international trends and developed VET teacher standards. These standards were applied within the so-called complementary pedagogical studies (DPŠ, doplňujúce pedagogické štúdium) which are obligatory for higher education institution graduates from non-teacher training programmes willing to become qualified VET teachers (see e.g. DTA Theme 6 Training VET Teachers and Trainers : Slovakia). Graduates from this teacher training in pedagogy must comply with 6 complex standards, represented by 40 indicators with explicitly set proofs. There are no similar standards set for trainer training and their complementary pedagogical study. A new decree of MŠ setting details on DPŠ and stipulating as a minimum 200-hour/4-semester study is in the pipeline and expected to be approved by the end of 2007.

Certification training aimed at the acquisition of lecturing skills has been developed by the Association of Adult Education Institutions in the SR (AIVD, Asociácia inštitúcií vzdelávania dospelých v SR) in cooperation with the Czech Association of Adult Education Institutions. Training consisting of eight modules offered in a distance form is proposed as an instrument for professionalisation of CVET trainers. A list of certified CVET trainers is available at http://www.aivd.sk/zoznam-certifikovanych-lektorov, and it is expected that certification of trainers will be gradually required by clients.

The Concept Paper for the Professional Development of Teachers in a Career System (Koncepcia profesijného rozvoja učiteľov v kariérovom systéme) was approved by the government on 18th April 2007. Subsequently, the act on the status of pedagogical staff at schools and school establishments is in the process of elaboration.

The main aim of the concept paper is to increase professional competences and quality of pedagogues at schools and school establishments through the development of requirements and conditions of their professional development and career growth. Professional standards create the basis for the career system, continuing training system and assessment and remuneration system. Defined are:

- Four career levels:

- o beginning pedagogue;
- o pedagogue;
- o pedagogue with the first attestation;
- o pedagogue with the second attestation;
- Two career positions:
  - o pedagogue specialist;
  - o leading pedagogical worker/manager;
- Three career paths, freely chosen by pedagogues in concord with their professional aims:
  - o towards maintaining of standard pedagogical competences throughout the life;
  - o towards acquiring expert pedagogical competences (completion of the first or second attestation);
  - o towards acquisition of specialised or managerial competences via specialised training in leadership.

(See also *Cedefop Info 2/2007 Improving the status of teachers is proving costly.)*

Changing needs and requirements

There is a full autonomy in provision of training of pedagogues and it is fully up to individual trainers of pedagogues to what extent they apply innovative pedagogies. As outlined before much more attention is offered to soft skills training, which require non-traditional approach and new techniques based on social learning, individualised approach and learning from own experience. Pedagogues have recognised that they need much more skills to motivate learners, to manage classroom, to make use of cooperative and collaborative learning appropriately, all this in order to allow quality learning of learners. From traditional skills one is becoming of crucial importance – it is formative assessment because quality feedback is crucial for individual learners. A new profile of VET teachers and new skills and competences to be pronounced in training are transparently visible from aforementioned content and performance standards of VET teachers.

Introduction of ICT is of specific importance, nevertheless it seems that it is insufficiently addressed within initial training. Ability to use ICT or apply e-learning is driven by interest of individuals rather than it is a result of systemic training of pedagogues. Teacher training colleges themselves are lagging behind in this field. Not surprisingly, it is a Slovak Technical University in Bratislava which in cooperation with NGO the Slovak e-Academy developed e-learning training for university teachers aimed at the development of e-learning skills and published manuals for each of five modules (Basics of E-learning, LMS, Authoring, Management and Administration, Videoconferencing). Nonetheless, it is clear that adjustment to the e-learning technology and detailed mastering of LMS options is easier to manage part

of the task. Pedagogy compatible with LMS and responsiveness to learners' needs is the highest challenge for both teachers and teacher trainers.

Creation of learning communities from special interest groups supported by well animated discussion forums is in practice much more important than theoretical debating on identification of respective skills and competences. E-learning is naturally client centred and therefore, schools will be exposed to the strong corrective feedback or will lose their competitiveness.

In general, the changing role of teachers and trainers towards facilitation, animation and positive communication has been discussed for long years. In specific case with regard to e-learning further specialisation is caused by technology. Professionalisation is necessary as it is not efficient to mix different roles:

- LMS management and administration;
- authoring with a focus on resource management;
- authoring with a focus on learning environment designing;
- tutoring.

In CVET there are also other roles (also relevant in IVET) strongly visible

- identification of learning needs;
- learning marketing;

and in coincidence with human resource management roles related to continuing professional development and/or quality management can be added.

0705 INNOVATIONS IN ASSESSMENT

Assessment policies

With regard to policies for assessment practices in IVET secondary schools, the difference between assessment and classification (assessment resulting into categorisation in quality classes) must be reflected. The Methodological Guideline No. 15/2006-R of 7th June 2006 Regulating Procedures Concerning Assessment and Classification of Secondary School Students in the Slovak Republic (Metodické usmernenie č. 15/2006-R zo 7. júna 2006, ktorým sa upravuje postup hodnotenia a klasifikácie žiakov stredných škôl v Slovenskej republike) issued by the Ministry of Education (MŠ, Ministerstvo školstva) is the most important regulation of assessment and classification rules providing a legislative background for school specific decision (e.g. not to classify students' performance in a specific subject) and for final organization of respective activities. This methodological guideline complements

in detail relevant laws and decrees providing the basis for interaction between schools and parents. As a rule it is displayed together with the school specific decisions at the website of school that is willing to inform students and parents about their rights.

Traditionally, five-scale marking (with 1 for the best and 5 for the worst performance) is used. Criteria for categories/classes corresponding to respective marks are specified in detail. Furthermore, some assessment and classification rules are firmly set, e.g. minimum numbers of formal assessments finished by marking (out of which at least one oral examination per five-month term). Classification and in particular final classification presented in certificates issued after each five-month term, is quite strictly regulated as it might become a subject of conflicts between school and student/parents. Such complaints are further processed by the school director, the school establisher, the State School Inspection and even courts according to the aforementioned regulations. In contrast to this, the assessment done in a daily practice is in a full competence of teachers. There could be an agreement among respective teachers about assessment practice, in order to avoid discrepancies in assessment in respective subjects, but it is fully up to the teacher and his/her professionalism what kind of feedback he/she offers to students.

Diverse alternative assessment methods to complement or replace marking have been discussed for years. In 1980s a strong criticism of marking led to experiments with

- the so-called "verbal method of assessment" to escape from the rigidity of marking; and
- the so-called "points based assessment" represented by collection of points for respective tasks performed by students to reduce subjectivism of teachers and stress of students caused by unexpected examination.

After 1989, a full variety of methods coming from the international practice appeared in schools. Worth mentioning are

- wider introduction of tests;
- portfolio assessment.

It must be explained that classical multiple tests were originally rarely used and that very weak testing services were offered to schools before 1989. Therefore in contrast to the testing obsessed Anglo-Saxon school systems, introduction of diverse written tests has become trendy, and standardised tests have also been gradually introduced to measure outputs of students in the last year of basic school (the so-called "Monitor" of pupils of 9th grade) and of the last year of secondary school (that has been finally embedded into school-leaving exams).

Portfolio assessment becomes the most popular innovation in particular among schools willing to support self-directed learning and peer learning, to strengthen the feeling of

ownership and responsibility of students for results of their learning, and to increase transparency.

In some cases diverse portfolio based assessment methods are to be made official, e.g. in an experiment supervised by MŠ and the Automotive Industry Association of Slovakia (ZAP, Združenie automobilového priemyslu Slovenskej republiky), the methodology of setting annual works and portfolio works and criteria of their assessment is examined.

Introduction of e-assessment depends on the digital progress of respective schools. There are schools making use of digital assessment cards accessible for eligible persons, among which are of course parents, and there are even schools offering eligible persons a more detailed insight within their learning management systems. But there are also schools that are even not able to use PC based testing to process assessment in an easy and quick way.

Curiously, there are some barriers hampering usage of some assessment tools (e.g. group assessment when resulting in marking) newly emerging as a consequence of new legislation. It concerns students aged 18 and above and many schools offer students to sign a declaration of agreement on making their marks public, because schools are even not allowed to inform their parents about their marks, according to legislation on protection of personal data, when strictly applied.

Debating formative and summative assessment has been for long years an evergreen in all schools, although it happened under diverse names and within diverse campaigns. Ability to offer the quality formative assessment is a crucial feature of a quality teacher, and ability to capitalise from formative assessment makes a difference between learners. Therefore the interaction between teacher/trainer and learners concerning this is often addressed within in-service training. Despite all this, the most important innovation is about summative assessment. There is a new reform implemented concerning secondary school-leaving examination (see also *Cedefop Info 1/2005 Slovak secondary VET schools not happy to be a B*) based on the Decree of MŠ No. 510/2004 Coll. on completion of education at secondary schools and completion of training at vocational schools for special education needs students, vocational schools and practical schools (Vyhláška Ministerstva školstva Slovenskej republiky o ukončovaní štúdia na stredných školách a o ukončovaní prípravy v odborných učilištiach, učilištiach a praktických školách), as amended.

The previous school-based model, with teachers as both educators and examiners was abandoned, because it finally did not allowed for comparison of quality between schools, and because strengthened fighting for attracting students to enrol into school led to the decrease in

outcome quality. A new model of school leaving examination was introduced to stop softening quality standards. The most important change is represented by a two-component (internal and external) school-leaving exam. The new external component (currently only in mathematics and languages) is standardised test-based. Both individual score in percentage and the percentile is a quality reference stated in a final certificate, the former is relevant with regard to the decision on achieving the level of education, the latter is interesting for specialists in practice. With regard to general subjects the leaving examination is based on the sum of requirements on knowledge and skills of students framed by syllabi (i.e. the centrally set characteristics of the respective subject matter) and target requirements (which were framed by Decree No. 510/2004 Coll. and operationalised by the Catalogue of Target Requirements by the National Institute for Education (ŠPÚ, Štátny pedagogický ústav)).

In VET schools in addition to general subjects examination, a specific vocational exam is obligatory within ISCED 3A "maturita" school leaving examination. The VET exam is composed of the theoretical and practical components. The theoretical component contains up to 25 themes and the practical component up to 15 themes for each of 22 clusters of study.

Elaboration of themes is related to educational standards. Educational standards for these clusters were set in 2002 (see Standard of Secondary VET in 0701). These educational standards contain content standards and performance standards. Performance standards are exactly a first reference point for setting final examination themes. They were elaborated in terms of knowledge, skills and attitudes in curricular documents (called pedagogical documentation) making use of action verbs of Bloom's taxonomy. For the purpose of elaboration of respective themes, performance standards for each cluster were offered in a comprehensive way as "standardised target requirements" elaborated by the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania).

Furthermore in designing themes, the content standards, which are also set in curricular documents, must be reviewed and included into relevant themes. All individual themes are directly linked to respective performance standards and content standards. At the same time key competences that are itemised in curricular documents (for the list of key competences see 0701) should be reflected within the process of elaboration of themes.

Similarly, the practical component of vocational exam is competence based. Competence and skills including general and vocational skills should be reflected when rethinking themes of practical exam. Very often this practical component is designed in a form of the project (individual or group project), and it is also possible for students to make use of successful projects from students' professional activity (SOČ, stredoškolská odborná činnosť) and the ZENIT competition (see 070303) awarded at the regional or national levels. In case of group projects, e.g. in hotel academies, students are individually assessed; however, their success

substantially depends on the quality of performance of the whole team. In this kind of projects specific experience in assessment is demanded from assessors. Group assessment is promoted regardless of complaints of individual students in order to adjust students to team work and real life working conditions.

A specific ESF project the National Project of Continuing Education for Teachers of Vocational Subjects with Regard to Completion of Secondary Studies was designed to train educational staff of VET schools to meet requirements of the Decree No. 510/2004 Coll. This decree also set a legislative base for the reform of ISCED 3C final exams. A final exam is composed of two components: theoretical and practical. Similarly to ISCED 3A vocational exam, 25 themes for theoretical component and up to 15 themes for practical components must be elaborated in a way similar to ISCED 3A already described. Participation of social partners in assessment is encouraged by the aforementioned decree.

Impact of the introduction of innovation in assessment on the accreditation and qualification standards

Curricular documents currently set key competences (see 0701), general education requirements elaborated by ŠPÚ, and vocational educational requirements elaborated by ŠIOV. After the introduction of the two-level model of curriculum development general education requirements will be replaced by general competences (to be elaborated by ŠPÚ). Vocational educational requirements will be replaced by vocational competences (to be elaborated by ŠIOV). Thus, competences as an overarching term for knowledge, skills and attitudes (see also 0701 for clarification of terms and explanation of relation to EQF) is a crucial term with regard to both a shift to a competence based approach in the curriculum development, and a shift from learning inputs to learning outcomes.

The learning outcomes approach is visible from the methodology of elaboration of themes for the "maturita" school leaving examination. According to the methodological guide prepared by ŠIOV and applied within the in-service training of teachers, each theme elaborated for exams is considered a representative of the specific learning outcome. Thus, a set of such themes (elaborated by respective school) is considered as identification of relevant learning outcomes for the purpose of certification of completed studies. Links between respective components and terms (e.g. occupational standards, competences, graduate's profiles, performance standards learning outcomes) are depicted in the scheme in the annex. As already indicated (see 0701) learning outcomes in classification of European Qualification Framework (knowledge, skills and competences in terms of responsibility and autonomy) have not yet been used, however the currently valid approach is very close to this, as it needs to reflect only one additional category - competences in terms of responsibility and autonomy. Although the phrase "learning outcome" is not used in policy papers and training manuals

exactly in the same way as within the European EQF documents, the current process of the change might be rephrased also in terms of EQF learning outcomes.

Thus national assessment standards and national qualification standards could be seen as competence based in terms of knowledge, skills and attitudes. It is visible in new curricular documents currently developed according to regulation CD – 2004 – 3280/6821-1:093 valid since 1st April 2004 and in performance standards/"standardised target requirements" (see above) used for preparation of school leaving exams.

It is impossible to answer in a simple way the question, whether Slovakia has established national assessment, accreditation and qualifications standards.

There are national assessment standards set by "standardised target requirements" elaborated by ŠIOV (http://www.siov.sk/siov/dokhtm/1vzdprog/vykonovestandardy.htm) for the purpose of elaboration of testing themes for ISCED 3A school leaving exams. Similar approach is used in the process of finalisation studies in ISCED 3C level.

Accreditation standards are set without making use of this term by regulation CD – 2004 – 3280/6821-1:093, and through competence based methodology introduced within this regulation for the development of curricular documents all secondary schools offering respective studies have to adhere to. The lists of study and training branches changed as a consequence of diverse innovation pressure, including scientific and technological progress, and covered by new curricular documents in 2005-2007 are available at http://www.minedu.sk/index.php?lang=sk&rootId=317.

There has been no qualification standards officially set, but they are in practice represented by graduate's profiles composed of key competences, general education requirements/general competences and vocational education requirements/vocational competences elaborated within curricular documents of respective studies.

In higher education, participation in the Bologna process led to structural changes in all higher education institutions. They strictly follow the regulation about provision of studies in a credit format, in three cycles and in the form accredited by the Accreditation Commission (AK, Akreditačná komisia), which is an advisory body to the Slovak Government (www.akredkom.sk). Accreditation standards are based on criteria elaborated by the Accreditation Commission and approved by MŠ after commenting by academic community (www.svsba.sk/akredkom/kriteria.html). Accreditation documents of educational institutions are gradually reformulated in other to better respond to the requirements to base them on learning outcomes and competences. Nevertheless, it is a long lasting process.

In CVET, a difference must be made between provision of CVET on a free market, and CVET regulated by sectoral ministries. There are no standards set for CVET offered in a free market; it is fully up to a client and a CVET provider to find an agreement. Currently, this training does not lead to the certification of qualification.

Labour market training is regulated by the Ministry of Labour, Social Affairs and the Family (MPSVR, Ministerstvo práce, sociálnych vecí a rodiny). Competence based approach is gradually in progress as a consequence of identification of individual learner's needs within his/her Individual Action Plan and the freedom of labour offices to select training to match learner's needs. As a rule labour offices require training providers to offer courses accredited by the Accreditation Commission of MŠ (Akreditačná komisia Ministerstva školstva). Qualification can be acquired, however, it is a rare case, as the overarching National System of Qualifications covering detailed (sub)qualification to be acquired regardless of learning setting has not yet been established.

In other sectors, CVET is quite strictly regulated by sectoral legislation, which is rather traditional input approach based. Innovation reflects technological progress and requirements of employers, however, with no stress on learning outcomes/competences in formulation of respective documents. Nevertheless, there is a strong pressure on acquiring concrete competences induced by the practice, regardless of the vocabulary of documents and quality of descriptions of respective qualifications.

Facit: The National System of Qualification to be represented by the explicit document overarching all qualifications is in the process of development, which should be speeded up by a new lifelong learning act following the Strategy of Lifelong Learning and Lifelong Guidance and Counselling (Stratégia celoživotného vzdelávania a celoživotného poradenstva) adopted by the government on 25th April 2007. Elaboration of an overarching NSQ will require a lot of managerial work in order to bring together experts from diverse sectors to harmonise legislation in order to stick to the common learning outcomes/competence-based format. On the other hand, a lot of substantial work has already been done within IVET and it would be possible to expand the experience already gained there to cover all sectors and learning settings.

070501 Innovations in evaluation and quality monitoring

There are no quality-monitoring mechanisms to evaluate the processes of anticipating skill needs, as there have been no officially recognised valid instruments for anticipation of skill needs developed (see 070103).

New qualifications are usually developed in the line with new study/training programmes. In IVET it is subjected to regular process of quality check by expert commission (odborné komisie) of the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania) followed by the experimental verification. All running experiments are monitored by ŠIOV and evaluated on annual basis. Innovations within other sectors are monitored autonomously under the supervision of respective bodies established by respective sectoral ministries. No doubt, harmonisation will be needed during the process of developing an overarching NSQ.

Elaboration of job profiles is linked to the activities of Trexima Bratislava, Ltd. (Trexima Bratislava, s.r.o.) responsible for the development the Integrated System of Typal Positions (ISTP, Integrovaný systém typových pozícií), see 070203, followed by development of the new National System of Occupations under the supervision of the Ministry of Labour, Social Affairs and the Family, (MPSVR, Ministerstvo práce, sociálnych vecí a rodiny). The ISTP project is monitored and quality check provided by multipartisan commissions and institutionally by the Ministry of Education (MŠ, Ministerstvo školstva) and MPSVR. Furthermore, refinement of description and proposals of inclusion of new typal positions can also come from public via interactive website of the project, and in practice human resource managers from diverse sectors already do so.

Elaboration of the new NSQ as well as NQF could substantially contribute to the transparency and compatibility. Although there is an open policy and if there is anything missing on the web, everybody can get access to relevant documents based on the Act No. 211/2000 Coll. Free Access on Free Access to Information (Zákon č. 211/2000 Z.z. o slobodnom prístupe k informáciám), the current NSQ is very fragmented and not easy to understand. A dedicated website offering access to the new overarching NSQ and NQF must be developed.

Evaluation of innovative pedagogies

There is no specific mechanism to monitor innovative pedagogies, however there are institutions and mechanisms within which innovative pedagogies should be reflected.

All experiments officially approved by MŠ are monitored by ŠIOV.

The following table offers data about experiments in study and training branches in VET schools in respective years by the level of education.

Table 11: Number of experiments in VET schools in respective years by the level of education

Experimental branches	School year									
	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07
SOŠ ISCED 3A	7	10	4	4	5	5	7	17	3	6
SOU ISCED 3A	19	16	18	16	8	10	9	11	5	0
SOU ISCED 3C	17	17	17	9	1	2	5	12	0	9
SOŠ ISCED 5B	12	13	15	17	14	15	3	6	0	0
Gradual*	6	4	4	5	2	2	1	0	0	0
U ISCED 2C	0	0	0	7	7	6	6	6	5	3
Total	61	60	58	107	87	89	79	108	40	56

Source: ŠIOV

Notes:

Data does not include experimental branches at schools under the Ministry of Health (MZ, Ministerstvo zdravotníctva), Ministry of Interior (MV, Ministerstvo vnútra) and Ministry of Justice (MS, Ministerstvo spravodlivosti)

SOŠ – secondary specialised school (stredná odborná škola)

SOU – secondary vocational school (stredné odborné učilište)

U – vocational school (učilište) affiliated to SOU

* within gradual studies students start VET programme without fixed terms of study completion. They can finish at ISCED 2, ISCED 3C or ISCED 3A levels depending on their wish and performance.

In addition to the tabled experiments, there were specific PHARE projects aimed at transformation of VET programmes into modular forms between 2000/2001 and 2004/2005 school years, about 50 each year. In 2006/2007 school year 38 experiments were finally assessed.

The State School Inspection (ŠŠI, Štátna školská inšpekcia) within its regular missions should identify good practice examples, and both strength and weaknesses of pedagogies are subject of reporting to school establisher and within the annual report to all stakeholders.

The set of in-service training institutions elaborate annually a list of training activities to attract educational staff. In order to do so it is important to offer by teachers and trainers demanded services including those concerning innovative pedagogies. The list of in-service training activities on the national basis is annually offered by the Institute of Information and Prognoses of Education (ÚIPŠ, Ústav informácií a prognóz školstva) at www.uips.sk/vs/index.html.

There is no genuine quality assurance applied nationwide. There are only individual institutions interested in adoption of some quality assurance models, and it can be assumed

that quality check also relates to learning outcomes, however in wider systemic sense rather than learning outcomes as understood in relation to EQF. Similarly, quality check applied with regard to higher education institutions only indirectly relates to learning outcomes of students. The two legislative initiatives in IVET are as follows:

- According to the Decree of MŠ No. 9/2006 Coll. on the structure and content of reporting on educational activities (Vyhláška Ministerstva školstva Slovenskej republiky č. 9/2006 Z.z. o štruktúre a obsahu správ o výchovno-vzdelávacej činnosti, jej výsledkoch a podmienkach škôl a školských zariadení), schools and schools establishments have to submit self-evaluation report in detailed format within which i.a. SWOT analysis must be done, individual goals set in the school development document evaluated and measures to address weak points proposed. This report must be published on the website, after commenting by the pedagogical board (pedagogická rada) composed of staff, by the school board (rada školy) composed by stakeholders, and approval by the establisher.
- All higher education institutions will be subjected to the complex accreditation in 2007 and 2008, and later with a six year period. In case of six newly established institutions complex accreditation will be carried out in 2010. Complex accreditation is regulated by Act No. 131/2002 Coll. on Higher Education Institutions (Zákon č. 131/2002 Z.z. o vysokých školách), as amended, and by the Government Regulation No. 104/2003 Coll. on Accreditation Commission (Nariadenie vlády SR č. 104/2003 Z.z. o Akreditačnej komisii).

In secondary IVET it can be assumed that any kind of quality assurance will reflect learning outcomes, as they are set in detail in graduates' profiles within the list of knowledge, skills and attitudes. In tertiary education much broader descriptions are used within curricular documents submitted for accreditation. Therefore it will take much more time to introduce quality assurance instruments addressing respective learning outcomes.

In contrast to IVET where some segments of quality assurance have been already introduced by legislation, there is no comparable legislative pressure on CVET. It is fully up to respective providers whether they consider adoption of quality assurance profitable or bringing advantage on the market. Quality management is however widely discussed among training providers. A lot of experience concerning this and disseminates information about quality management has been collected by the Association of Adult Education Institutions in the SR (AIVD, Asociácia inštitúcií vzdelávania dospelých v SR). The best conditions for the introduction of quality assurance are within labour market training and it is fully up to initiative and quality of individual labour offices to what extend they apply quality assurance in the training of job seekers. In fact they should do this, as training providers apply for public

money and European tax money from the ESF to train trainees with precisely identified training needs. It is up to the MPSVR and Centre of Labour, Social Affairs and Family (ÚPSVaR, Ústredie práce sociálnych vecí a rodiny) how soon learning outcomes approach will be used to set criteria for quality assurance in labour market training.

A quality management system in lifelong learning and lifelong guidance should be implemented and respective national authority established by September 2008, according to the Strategy of Lifelong Learning and Lifelong Guidance and Counselling (Stratégia celoživotného vzdelávania a celoživotného poradenstva) adopted by the government on 25th April 2007.

0706 INNOVATIONS IN GUIDANCE AND COUNSELLING

The role of counsellors within all segments of guidance and counselling (see Thematic Overview 2007, part 0901) has completely changed after 1989.

Educational (school) counsellors (výchovní poradcovia) operating at primary and secondary schools were qualified subject teachers, often with special in-service training but without specific qualifications for career guidance and counselling. They dominantly took care about managing conflicts among students, and between students and educational staff, arranging for the assistance of specialists, e.g. psychologists from educational and psychological counselling centres; these centres network cover the whole country. Similarly, these counsellors assisted in delivery of information about occupations and possibilities for following study programmes. In particular, this service has been offered in totally new environment of market economy since 1990s. Furthermore, it is subjected to changes caused by local/regional impulses (e.g. entry of an important investor opening new working positions but also the crisis of enterprises followed by group dismissal) and by (trans)national impulses, in particular creation of the European labour market with increasing opportunities for Slovak citizens.

Since 1990s in-service training of educational counsellors, which was usually offered by methodological-pedagogical centres (MPC, metodicko-pedagogické centrá) in two-year programmes gradually developed from classical frontal lecturing to interactive training. It depended and still depends on the quality of responsible organizers at MPC to what extent and of what quality practitioners are engaged in this in-service training. As MPC have to attract trainees for their programmes, employment of new pedagogies based on interactions and learning by experience often within outdoor activities resulting in training of ready to use techniques of interaction with students and provision of up dated information, is attempted.

Nevertheless, training of counsellors almost exclusively based on in-service training of selected teachers is considered insufficient, regardless of the quality of the content of training. A new systemic solution is sought for both efficiency of the counselling system and in training of counsellors. According to the Concept Paper for Pedagogical and Psychological Guidance System and its Implementation into the Practice (Koncepcia pedagogicko-psychologického poradenského systému a jeho implementácie do praxe), approved by the government on 21st March 2007, stress is put on the quality of network of professionals engaged in career guidance and counselling rather than on individual professionals and institutions. Educational counsellors precisely seen as first contact specialists must have established excellent relations with other institutional players – in particular psychological counselling centres (PPP, pedagogicko-psychologické poradne, able to offer individual diagnostics in particular in case a school did not employ school psychologist, career guidance, and of course prevention services), local educational authorities (to assist in provision of information about further training of students), local/regional authorities and labour offices to inform about local/regional development plans and the situation on the labour market). Therefore, it is expected that educational counsellors will not be anymore considered teachers with additional function, but genuine professionals who might have at the same time teaching/training duties. Three career paths are identified. In the mainstream two-phase training completed by final exam is envisaged, followed by recognition of acquiring of new competences and new professional qualification resulting in better remuneration. Other career path will lead to acquiring managerial competences in guidance and counselling. Basic in-service training will offer refreshment of relevant competences for teachers interested in expansion of their duties in schools and schools establishments, and in financial bonus for this. All three career paths will be offered within accredited programmes designed in concord with guidance and counselling standards, which are in process of development. Similarly, it affects the special education counselling aimed at servicing students with special educational needs, as outlined by the Concept Paper for Special Education Counselling (Koncepcia špeciálnopedagogického poradenstva) also adopted by the government on 21st March 2007.

Furthermore, it is recognised that aforementioned services traditionally offered within formal learning setting must be expanded, as lifelong guidance and counselling (LLGC) services are gaining significance. The Strategy of Lifelong Learning and Lifelong Guidance and Counselling (Stratégia celoživotného vzdelávania a celoživotného poradenstva) adopted by the government on 25th April 2007 proposed to interlink the currently autonomous system of lifelong guidance and counselling (LLGC) and declared urgent need to increase the number of professionals experienced in policy making in this field. The most relevant measures are the introduction of the integrated system of LLGC backed by the governmental institution (8.5), the establishment of the national expert group to set quality standards for LLGC (8.6), the introduction the quality assurance system in LLGC (8.8), and the development of university study programme at the master level in LLCG (8.13).

Dissemination of innovative methods used for developing guidance and counselling mechanisms and learning from good practice examples has been addressed by several innovation schemes. In addition to international projects, e.g. Leonardo da Vinci with the important project MODILE-EUROCARCO coordinated by the State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania), and activities of the Euroguidance Centre, the European Social Fund played a role worth stressing. Two European Social Fund mirror projects managed by the Central Office of Labour, Social Affairs and Family (ÚPSVaR, Ústredie práce, sociálnych vecí a rodiny) were set to improve employment services by means of career counselling. Within the Sectoral Operational Programme Human Resources it was National Project VII the "Increasing the Scope and Quality of Employment Services via Information and Advice and Career Advice Instruments and Services". Within the project realisation period 1st July 2004 to 30th June 2005 individual action plans were drawn up for 85 940 job seekers and other career advice services were offered to 18 427 job seekers. In contrast to this success, within Single Programming Document NUTS II Bratislava Objective 3 National Project VII "Extension and Improvement of Employment Services through Information and Counselling and Specialised Counselling Tools and Services", with the project realisation period 1st June 2004 to 30th June 2005, long-term career advice services were not demanded due to high client turnover and a strong absorption capacity on the labour market. The National Project VII was followed by two national projects within SOP and two within SPD:

- SOP HR National Project VIIA aimed at the development of tools and forms of information services and career guidance and counselling for all interested clients for the period 1st August 2005 to 31st December 2006; and SOP HR National Project VIIB aimed at professional counselling for job seekers, for the period 1st December 2005 to 31st December 2007.
- SPD Bratislava Objective 3 National Project VIIA for the period 1st August 2005 to 31st December 2006; and SPD Bratislava Objective 3 National Project VIIB for the period 1st December 2005 to 31st December 2007.

Moreover, within Measure 3.3: Development of career guidance and of systems for anticipating changes of qualification needs on the labour market, sub-measure 3.3.A: Development of career and job advice, 86 projects were accepted by the Ministry of Education (MŠ, Ministerstvo školstva) within 5 consecutive calls since 2004.

The Research Institute of Child Psychology and Pato-psychology (VÚDPaP, Výskumný ústav detskej psychológie a pathopsychológie) in Bratislava through the project Affecting Career Planning via Counselling and Optimisation of Decision Making Process in Pupils' Study and Career Choice (Poradenské ovplyvňovanie profesijných záujmov a optimalizácia procesu

rozhodovania pri voľbe štúdia a povolania u žiakov) concentrated on elaboration of interactive counselling programme based on the analysis of already existing methodologies and instruments of psycho-diagnostics and career planning of pupils and students.

PPP in Martin within its projects Right Choice at Basic School, Future Success at the EU Labour Market (Správna voľba v ZŠ, budúci úspech na európskom trhu práce) has elaborated training for educational counsellors from basic schools to expand their competences. A course is significantly based on learning by experience and collaborative learning.

The Banská Bystrica Self-governing Region has recognised the importance of overcoming fragmentation of diverse guidance and counselling services. Through the project Counselling and Information System Focused on Study Possibilities at Secondary Schools within the Banská Bystrica Self-governing Region Assigned for Basic School Pupils in Their Career Choice (Poradensko-informačný systém zameraný na možnosti štúdia na SŠ v rámci BBSK určený žiakom ZŠ pri voľbe povolania), all relevant regional players were taken together to improve access to relevant information and alignment of education and training systems in the region to the labour market needs.

Similarly, the Trenčín Self-governing Region has recognised importance of career guidance and counselling, and in cooperation with the University of Alexander Dubček in Trenčín (Univerzita Alexandra Dubčeka v Trenčíne) a dedicated portal www.kamposkole.sk (Where after the School) containing seven sections with specialised e-services for educational counsellors, secondary school students and basic school pupils, was created within the project Training of Teachers – Educational Counsellors for the Career Guidance and Counselling Needs at Secondary Schools in the Trenčín Self-governing Region, making use of innovative methods (Príprava učiteľov – výchovných poradcov pre potreby kariérneho poradenstva na stredných školách trenčianskeho samosprávneho kraja s využitím inovačných metód vzdelávania).

Career guidance and counselling also gradually becomes a topic at higher education institutions. The Technical University in Košice (TUKE, Technická univerzita v Košiciach) is among frontrunners. Within the project the Proposal of Effective Career Guidance and Counselling System at TUKE (Návrh a riešenie efektívneho systému kariérneho poradenstva na TU), the quality service for both students leaving secondary schools in eastern Slovakia and students leaving TUKE should be offered by the Centre for Career Guidance and Counselling (Centrum kariérového poradenstva) http://sjf-kariera.tuke.sk/kariera1.html, in order to attract youngsters for professions in technology. A 26-lesson hour course Career Guidance and Counselling is offered for students, and 10-module training (1 full day/1 module) titled Career Counsellor is offered to secondary school staff.

European policy on the fields of anticipating skill needs

Unfortunately, Slovakia was not involved in the Skillsnet project of Cedefop. Anticipation of skill needs instruments used in 2007 (see 070103) were developed ad hoc without reflection of international experience. It is hoped that Slovakia will join the next phase of the Skillsnet project aimed at the development of common European questionnaire to identify skill needs. Very likely Slovakia will not be able to join European activities concerning the development of macro-economy model of forecasting skill needs, however, it is hoped that Cedefop's efforts will be at least monitored by experts from the Slovak Academy of Science (See 070103).

There are several international impulses for the development of new qualifications. From the education sector point of view they are visible in proposals to innovate or introduce new curricula or brand new study programmes. There are two sources worse mentioning:

- Inspiration coming from other educational institutions through diverse partnerships and international programmes;
- Innovation requirements from foreign investors looking for tailored training for their future employees.

There are no studies about international influence on innovative pedagogies, but international experience is undoubtedly reflected. On the theoretical level by theorists of education, e.g. a publication Innovations in Pedagogy (Inovácie v didaktike) by Ivan Turek issued by the Methodological-Pedagogical Centre in Bratislava in 2005, and in individual schools and classrooms by experienced practitioners.

Two systemic innovations are worth mentioning:

- ISTP project (see 070203) building on the original experience in the Czech Republic;
- Modularisation of IVET curricula, originally introduced by Scottish experience within the PHARE programme.

No doubt, EU-level initiatives are reflected by respective policy papers. EQF and EU employment guidelines for 2005-2008 have also a direct impact on diverse concrete measures in education and employment sectors. European documents are evidently reflected in the

National Reform Programme for 2005-2008, National Strategic Reference Framework for 2007 – 2013 and ESF programming documents.

It is hardly possible to assess a direct impact on introduction of innovative pedagogies. It is a general pro-innovative environment in the EU rather than particular document what counts. In contrast to this, with regard to skills and competences development a European debate on key competences and respective European documents substantially influenced the transition to the competence-based programming VET. The Copenhagen process has heterogeneous impact on policies. On the national level, the EQF is the most reflected instrument with a direct influence on the recognition of need to reshape the National System of Occupations and to elaborate a new National Qualification System. Introduction of ECVET is officially welcomed, however considered problematic by many theorists and practitioners when discussed in detail. On school and student levels, the most relevant Copenhagen instrument is Europass. ICT supported learning is currently a crucial innovation at schools, and e-services and subsequently e-competences are crucial topics of discussions about modernisation of society and supporting knowledge-based economy. There are two reasons for this.

- Slovakia is lagging behind due to ill decisions since 1990s when rhetoric dominated over reality, predominantly in two policies:
  - modernisation and decentralisation of governance, where decentralisation was not followed by modernisation;
  - education reform, permanently hampered by both a lack of investment in education institutions (among the lowest in percentage of GDP among current EU27 countries) and a lack of stimulation of innovation forces;
- Since 2004, increasing investment in school equipment (PC labs and connection to the Internet), as well as into e-competences of the educational staff dominantly covered by private investors and ESF sources created better conditions for innovative activities.

070701 Europeanisation of VET curricula

Since early 1990s under the influence of European policies, e.g. as set in the Green Paper on the European Dimension of Education Slovakia reflected a European dimension in education in many fields however with different impact. Mobility of students, teachers and trainers, and decision makers become very vivid and mutual learning affected within diverse partnerships of schools and of course community programme projects. Slovakia also joined Eurydice, the network of national observatories of ETF, and finally Cedefop networks ReferNet and TTnet. It must be however stressed that peer learning is seriously limited by the lack of English

command. Improving language competences and stronger support of mobility by co-financing from the state budget are the recommendations repeatedly appearing in monitoring of the impact of respective mobility instruments (see the MoVE-iT comparative study on mobility in IVET in 33 European countries elaborated by CINOP in 2006 and the National Report on Implementation and Impact of SOCRATES and Leonardo da Vinci programmes in the Slovak Republic 2000-2006 (Národná správa o implementácii a dopade programov Socrates a Leonardo da Vinci v Slovenskej republike).

With regard to the curriculum – developing awareness of European citizenship is considered one of the main tasks of schools. Within curricular documents (called pedagogical documentation) of study and training branches at VET schools an international and European dimension is comprised within the compulsory general subjects "Civics" and "Civic Education". It is also included within the optional general subject "Social Science Seminar".

Multicultural education and tolerance is part of general as well as vocational subjects. Obviously, it is strongly presented in study branches 7646 6 Upbringing and Nursing, 7649 6 Teaching in Kindergarten and Tutoring, 7661 6 Social-Educational Worker, 7663 6 Cultural-Educational Worker, within the optional vocational subject "Multicultural Coexistence". This subject should lead students to tolerance and understanding in multicultural environment. The content of the subject comprises talking about cultural diversity and cooperation among cultures. The key topic is cultural diversity and benefits of cultural exchange, i.e. mutual intercultural exchange of meanings, features and values. A European and international dimension is also promoted within other general subjects, as "History" or "Introduction into the World of Work", as well as within vocational subjects, as "Law Science", "Theory and History of Culture", "Basics of Tourism", "World Cultural and Natural Heritage".

A European dimension is also being strengthened within pre-service and in-service training of teachers. For example, a projects "Patriotism, Citizenship and EU" intended for secondary school teachers, methodologists and students of pedagogical faculties was designed and carried out by a civic association, the Centre for European Policy (CEP, Centrum pre európsku politiku, www.cep.sk), which is a member of the European Network for Education and Training (EUNET). The project resulted in elaboration of the working sheets Citizenship, Patriotism and EU to help design themes for lessons focused on a European integration, patriotism and citizenship. Very useful is also the book issued by CEP Europe of Values (Európa hodnôt).

Relevant courses are also offered within initial teacher training, e.g. European Dimension in School Practice (Európska dimenzia v praxi školy) at the Faculty of Education of Comenius

University (Pedagogická fakulta Univerzity Komenského). A list of relevant projects is available at www.keov.sk/keov.php?kat=projekty. Some fundamental textbooks on multicultural education and citizenship have been elaborated by the team around Erich Mistrík (see www.erichmistrik.sk/0public.html for information about Slovak and English books on this topic).

Proficiency in foreign languages is of crucial importance in strengthening the European dimension in education. Currently, the quality and extent of education of foreign language suffers from the lack of qualified teachers and insufficient equipment in schools, according to the SWOT analysis the Concept Paper for Foreign Language Education at Basic and Secondary Schools (Koncepcia vyučovania cudzích jazykov v základných a stredných školách) approved by the Ministry of Education (MŠ, Ministerstvo školstva). According to this paper all students should achieve Level A2 of the Common European Reference Framework at the end of basic school, and Level B1/B2 in the first foreign language and Level A2/B1 in the second foreign language by completion of secondary education. Nevertheless, this ambitious plan is endangered by non-competitive salaries at schools. Teachers of foreign languages, in particular of English, are much demanded, however student teachers are often discouraged to enter service due to low salaries.

Technological progress, in particular ICT is bringing students, teachers, trainers and decision makers closer together. They have learnt to make use of exchange of experience and advantage of living without borders. On the other hand, significantly for post-communist countries new values must be developed, in particular valuing entrepreneurship, and at the same time solidarity despite competitiveness.

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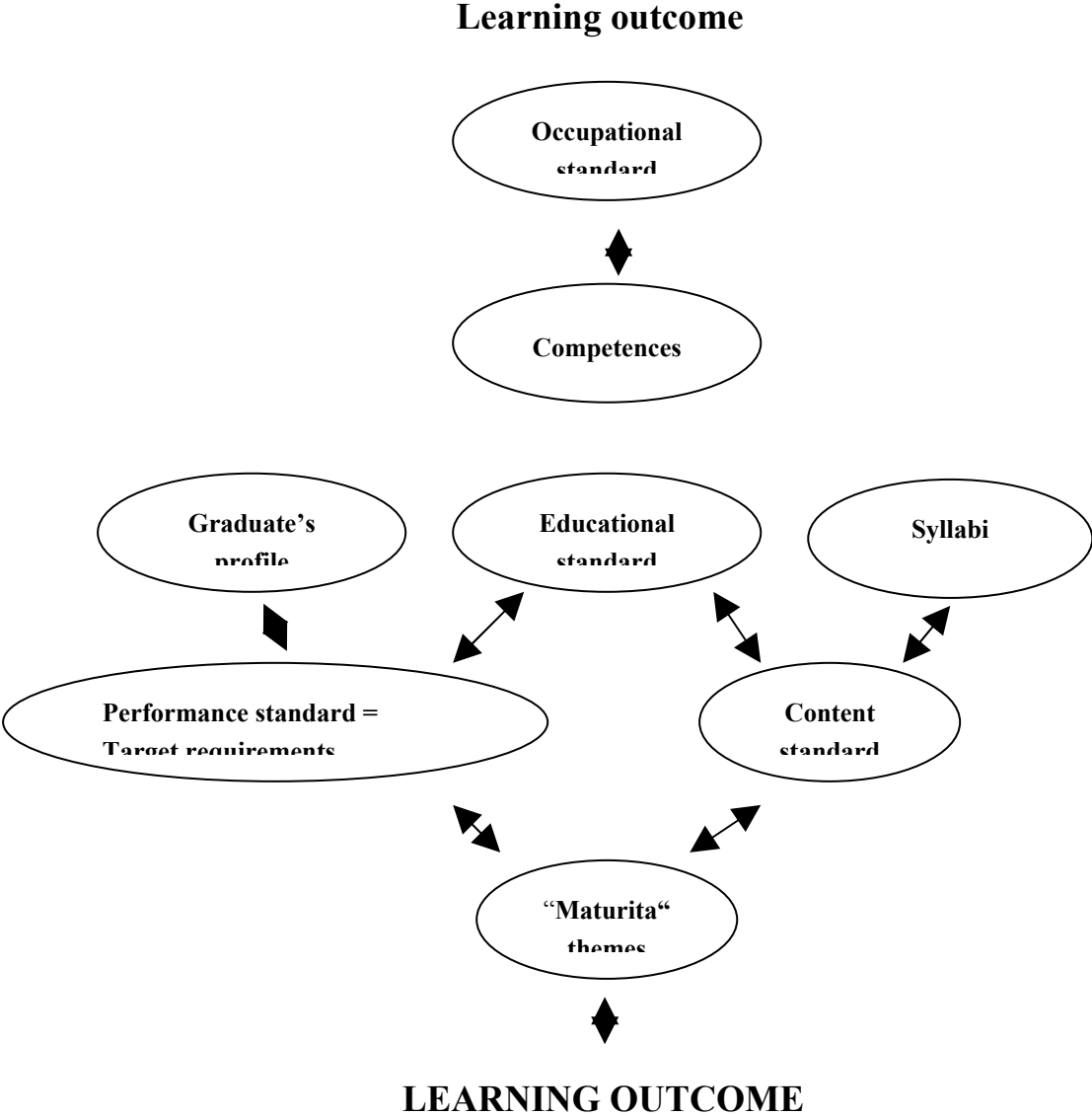
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Learning outcome

◆

Certification
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Source: State Institute of Vocational Education (ŠIOV, Štátny inštitút odborného vzdelávania)