



**Ministry of Education and Sports Republic of Serbia
Vocational Education and Training Reform Programme**



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Policy and Strategy Development For VET in Serbia

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1. Introduction

Consistent with the terms of reference of the vocational education and training (VET) Reform Programme one component is dedicated to overall policy and strategy (a green paper). *The Concept for Vocational Education*, put forward for public discussion at the beginning of the year, initiated this process,. Since the *Concept for Vocational Education* established a general framework and a starting point for the overall modernisation of vocational education, the present programme activities represent the continuation of this process and provide the necessary conditions for an overall strategic document for the improvement of VET in Serbia. Six special working groups¹, covering particular key aspects of vocational education have been established in order to present these activities in an effective way. These are:

1. Demand and Supply in Vocational Education;
2. Teacher Training;
3. Assessment and Quality Assurance;
4. Governance;
5. National VET Planning;
6. Finance

During October 2004 – January 2005 the working groups were engaged in the preparation of documents which will, together with *the Concept Paper*, constitute an overall strategic development document for the further modernisation of VET. Representatives of 18 different stakeholders participate in the working group activities, largely representing the Chamber of Commerce of Serbia; the Ministry of Education and Sports; the Ministry of Labour, Employment and Social Policy; the Ministry of Economic Affairs with Foreign Countries; the Ministry of Finance; the Ministry of Economy; the National Employment Service; the Pedagogical Institute; the Union of Employers; the Trade Unions; the Mechanical Engineering Faculty, University of Belgrade and the Technical Faculty from Cacak; the secondary vocational schools from Sombor, Kraljevo, Belgrade, Novi Sad, Cacak. Pozega, Nis and other cities; the professional institutions.

This draft document “Development of Policy and Strategy for VET” represents the logical continuation of the “Concept for Secondary Vocational Education in Serbia” formally accepted by government and provides a basis for the further development of VET in Serbia.

The recommendations that follow also build on the modernisation measures already undertaken by government and assisted by the EU VET Project in Serbia. These include legislation, new institutions at national level; human resource development for the full range of actors in the system, labour market information, the experimental development of curricula and curricular organisation, organisational and management innovations. The assumption must be that these recommendations will be supported by the succeeding EU VET project and the TOR will be consistent with this ‘green’ and the forthcoming ‘white’ paper.

¹ The list of Working Groups members is available at Annex 1 of this document

2. The socio-economic context and development of Vocational education and training in Serbia

2.1. The global context

Modern tendencies in market economies indicate that education and the development of human resource capacities are the highest priorities in national strategies for social, economic and technological progress. Ongoing socio-economic changes, accelerated scientific and technological development, especially the expansion of modern technologies require a highly educated population capable of active participation in social processes and the use of new technologies. Developed societies therefore become learning societies. Regarding the situation in Serbia, the process of reconstruction and the transformation of education is a precondition for the entire social and economic development of the country. Investments in education and human resources therefore have the nature of fixed inputs. For that reason, educational policy is not only about the creation of human resources but a more basic element of overall social progress.

“The current recession tendencies in both the domestic and the world economy are destabilising the prospects for economic growth, implying cyclical unemployment. Therefore, finding systematic solutions for the operation of an open labour market system and the reduction of unemployment represents the main challenge.”²

Regarding the situation in Serbia, a development strategy needs to be market orientated especially towards the core of small and medium enterprises. The risk for Serbia is an inadequate educational structure for the population as a whole and a lack of skills and competences in the labour force towards the demands of the economy and labour market. Global labour market competitiveness requires high levels of qualification and competences promoted by the national employment policy. As a result, government support of economic development and increase in employment has to be directed to the improvement of the labour force - towards competences, the creation of new jobs, entrepreneurship, the promotion of labour market flexibility, the provision of public security and social participation.

This process means that that Government priorities in 2004 – 2006 period are:

- The improvement of the macroeconomic outcomes of the country;
- The creation of a modern market economy;
- The achievement of a meaningful approach to the EU.

The precondition for social and economic transformation in Serbia and its integration with the EU is that the population possesses the social competences necessary for successful participation in society, that is an educated and adaptable labour force prepared to accept new technologies in the work process and ready for mobility at both regional and at occupation sector levels in the search for employment. Modernised and reformed vocational education and training (VET) is a precondition for social and economic development.

² Working Draft of National Employment Strategy for May 2004

2.2 VET in Europe

During the late nineties the development of education in Europe had a new momentum set by the *WHITE PAPER ON EDUCATION*, whose main goal was the *harmonisation of education, training, employment and the demand for their further development within an overall future European framework*.

THE WHITE PAPER established key principles for education in modern Europe –including the recognition of the lifelong learning principle. Since many European systems of education and training are characterised by various specific features and inflexibilities the *WHITE PAPER* should serve for the development of a modern European community. The Lisbon Declaration defined educational goals with three strategic objectives set for 2010:

- Improving the quality and effectiveness of education and training systems in the EU, in the light of the new requirements of the knowledge society and the changing patterns of teaching and learning
- Facilitating the access of all to education and training systems, in the light of the guiding principle of lifelong learning, fostering employability and career development as well as active citizenship, equal opportunities and social cohesion
- Opening up education and training systems to the wider world, in the light of the fundamental need to foster relevance to work and society and to meet the challenges resulting from globalisation

The Lisbon Conference defined key areas and milestones for the accomplishment of this strategic goal as well as the Conference of the Council of Europe in Stockholm 2001 and Barcelona 2002 and the amendments to European employment strategy. All contributed to a clear political agenda, not exclusively focused on education and training but connecting and bringing together other strategic segments including employment and social policy, information and communication technologies and research. However, education and training are central areas with key milestones as below:

Key milestones in European framework for 2010 are:

- To enhance the EU working population employment percentage from 61 to 70% in 2010 (67% in 2005),
- To enlarge the number of employed women from 51 to more than 60% in 2010,
- To enhance employment of women and men between 55 and 64 years of age up to 50 %,
- To decrease dropout rate (comparing with 2000) to 10 % or less,
- Average participation of Europe in lifelong learning should be at least 15% of the overall working population (between 25 and 64 years of age) and not less than 10% on the national level;
- From 2010 member countries will try to increase the number of women graduating in mathematics, natural sciences and technology;
- Enhance the percentage of adults from 25 to 64 years of age who are finishing postsecondary studies up to 80%;
- Increase successively the *per capita* annual investment in human resources;
- Complete the agreement on future tasks for educational and training systems;
- The development of a European framework should enable the definition of new basic skills secured through lifelong learning;
- Tools for better mobility of pupils, students, teachers, trainers and research staff will be defined;
- Increase employment levels, especially in the service sector..

2.3 Vocational education and training in Serbia - directions of the reform, the current situation

The basic goal for the further development of vocational education in Serbia relates to its contribution to technical-technological, socio-economic and individual development.

An initial step in this process has been the conceptualisation of the development of vocational education and the modification of the entire educational system to community and individual needs and possibilities. The Ministry of Education and Sports began preparations for the reorganisation and reform of VET in order to: secure qualitative improvements; to transform the governing and financial mechanisms; to engage stakeholders and social partners. All to provide an efficient transfer of knowledge but also to acquire competences among all actors in the educational process with full consideration of ethnic, cultural and linguistic differences.

During 2001 the Ministry undertook an analysis of the current secondary vocational educational system³, which served as the basis for the preparation of the strategy framework for the reform of secondary vocational education⁴, adopted by the Ministry of Education and Sports in 2002. to include:

- Complete and permanent access to VET for the entire population;
- Learning in accordance with the real needs and capacities of the learners and in compliance with community needs;
- Dissemination of learning possibilities through an institutional, programme,
- Pluralism in educational implementation and the networking of formal and informal education;
- Quality assurance and professionalism in the realisation of VET

The Reform process continued in 2003 with the definition of priorities as:

- Legislative changes in vocational and general education;
- The creation of new institutions in VET, which meant the launch of a decentralisation process;
- The introduction of a new intake system for the 1st year in secondary vocational schools;
- Changes in the curricula and the introduction of 27 new pilot profiles in 9 clusters⁵;
- The introduction of a modular approach in curriculum design;
- Teacher training for the introduction of new curricula and profiles.

³ Reform of Vocational education: from conversation into realization, Ministry of Education and Sports of republic of Serbia.

⁴ Strategy framework for development of Vocational Education in Serbia, Belgrade, 2002.

⁵ 9 clusters are: Agriculture and food processing (7profiles), Health and social care (8), Geodesy and construction (2), electro-technical engineering (2), Mechanical engineering and metal processing (1), Economy, law and administration (1), Chemistry, non-metals and graphics (3), Forestry and wood processing (1), Traffic (1)

3. Vision and mission for VET in Serbia

3.1 Vision and mission

The contemporary broad definition of VET secures for student and adults new recognised qualifications defining the knowledge, skills and competences needed and the professional preparation which will enable individuals to adapt to changing circumstances. The content of VET may address the demands from the labour market directly oriented to the job or occupation but it may also include general education and core skills for individual development.

Vision and mission for Serbian VET are based on the converging value systems in Europe and OECD countries and the economic necessities imposed by increasingly global economic conditions with an emphasis on human resource development and institution building. As above, the primary goal of VET is often viewed as one of providing citizens with both life and employability skills.

The strategic framework for the reform of secondary vocational education in Serbia (adopted in 2001.) predicted that the strategy for educational development has to adjust to the new challenges that bring prosperity, but also provide for adequately educated and retrained individuals in the nation as a whole. In order to provide the conditions and the prospects for the qualitative development of the human resources required (for the accelerated socio-economic development and establishment of the economy and society) the VISION for the further development of VET in Serbia is given as:

Vocational education in the XXI century is the performer and one of the key stakeholder of economic and social development, as well as the major factor in the improvement of modern social and economic relations. Highly qualitative education will create the experts who could participate in general international and domestic competition in all fields of the economy. One of the preconditions is the construction of an efficient and effective system of social partnership on all levels and through mutual participation of all the relevant institutions and stakeholders.

The younger generation is entering a world that is changing in all its spheres – economy, culture, politics, science, technology, social relations. In these changes, education has acquired one key role – it has become the instrument of harmony and integration within societies. Changes in the fields of technology and economy are fast, large, disciplined and led by knowledge, above all. In order to satisfy new demands, education must provide:

:

- The necessary cognitive and theoretical knowledge, and the acquisition of vocational skills, that are becoming more and more sophisticated in view of technological changes in the working process;
- Wide ranging competences are needed in modern production and the service spheres and not only for current production, but rather for continued life-long training and learning.
- VET that will support self-employment and increase productivity.

In order to respond to these demands and fulfill its role, imposed by the new social-economic context, the MISSION of VET implies:

- Secondary vocational education has to be **attractive** and has to offer an approach to everyone- students, adults, people with special needs, those who don't have the appropriate qualifications, etc;
- Secondary vocational education has to be **responsive** to the needs of the labour market on all levels;
- Secondary vocational education has to be **widely determined**- to place the basis for life long learning the continuous training and to prepare young people for the active community;
- Secondary vocational education has to be **flexible** including in that flexibility, the systems of assessment and certification, curricular programmes and the links between formal and informal provision
- Secondary vocational education has to be **effective**-to enable all the participants to reach the highest qualification levels and further education progression;
- Secondary vocational education has to be based on **cooperation** and has to include all the relevant partners- such as the government, social partners and parents;
- Secondary vocational education has to be **the integrative part** of the total educational structure, each level has to be the preparation for the next level and to provide the passage from education into and training and back;
- Secondary vocational education has to be **rational** and to use optimally available resources/equipment in order to provide all types of education, qualifying and training;
- Secondary vocational education has to be **simple** especially regarding the internal structure of the system and the shared responsibilities of implementation.

3.2 The objectives of VET

The general objectives of VET enable possibilities for youngsters and adults to gain **skill, knowledge, attitudes (work competencies)** needed for work and employment, further education and learning. More precisely –VET should provide:

- The acquisition of occupation skills and qualifications, or relevant competencies, attitudes; knowledge and skills required for work in a particular field of work;
- Gaining of initial and continuous VET and improvement;
- Obtaining the necessary pre-conditions for employment and economic independence.
- Development of abilities, talents, potentials and self-fulfilment and further education.

3.3 Development principles for VET

The modernisation and development of VET are based on the application of several basic principles

3.3.1 *Partnership:*

VET is the mutual responsibility of different stakeholders:

- a) Social partners- state, employers, and unions,
- b) Interest groups: chamber of commerce, vocational unions, high-school institutions, science-research organisations, non-government organisations, institutions for secondary vocational education and their associations, student's parents and
- c) Students and other individuals.

3.3.2 Partnership is present:

- On all the levels of social organisation (national, regional, local);
- In different domains of organisation and the realisation of education (policy, system planning and organization, creation of the plan and programme);
- In management of the schools or the educational institutions;
- In the realisation of the different roles and responsibilities of clients (users and promoters of education).

3.3.3 Decentralisation

- Application of the partnership principle in education implies decentralisation:
- In the management of the education system and school, or organisation for education;
- In forming the programmes and modules and
- In establishing the system of schools, in the creation and implementation of admission policy.

3.3.4 Equity

Secondary vocational education is available to all population categories, (disregarding sex, age, nationality, religion and race) that fulfil the entry criteria for types of programme and educational levels. Access implies not only the right, but also the actual possibility for education participation, which means that secondary vocational education is acquired: a) in accordance with the needs, wishes and the possibilities of those who learn⁶, b) in accordance with the social possibilities and the needs of the regional and local communities.

3.3.5 Openness

Secondary vocational education is the communication channel and the open system for the distribution of knowledge, skills, abilities and working competencies, in which there are real opportunities:

- entrance, exit, repeated return, according to the needs of the individuals and (or) the labour market;
- vertical and horizontal access and movement;
- connection with the forms and programmes of training in enterprises and in the labour market⁷

3.3.6 Programme variety

VET schools develop the programmes and modules of different types of VET for different target groups (the young, the adults, the employed, the unemployed, people with the special needs).

3.3.7 Organisational variety

School is the basic, but not the only institutional form of VET. It is necessary to provide:

- alternative organisational forms, with varying legal status
- different stakeholders, who fulfil the legal conditions to conduct secondary vocational education;
- creation of one's own tempo and the method in the development of competencies and acquirement of knowledge and skills, which is one of the key steps toward the democratization of education and qualitative education and learning.

⁶ Organisation and delivery of education, training and teaching needs to be adjusted with psycho-social characteristics of the students, in accordance with their life and everyday situation (recognition of family related and professional roles and responsibilities) is why this principle addresses equality of conditions for education of young and adults.

⁷ Possibility of using the enterprise resources in the process of learning and retraining (programme, materially-technical and personell).

3.3.8 Professionalisation of the work of teachers and associates

Continuous vocational training of the teachers, instructors and coordinators of teaching/professional practice in the vocational fields is a direct condition for modernisation of VET.

3.3.9 Importance of Outcomes

Education, teaching and learning in VET are based on the notion of outcomes, the defining of what students know and can do following the education process. Assessment may be divorced from process; i.e. competences may be assessed independently of the learning process and its duration.

4 The Demand for VET

4.1 Needs and requirements from society, the economy and the labour market

Today's world according to analysis⁸ is in transition from an industrial era into an information and communication age, often described as a learning society,.

This requires various types of learning which lead towards permanent and lifelong learning, employment and the personal development of every individual. New demands and needs are the product of three major, internally connected factors:

- The broad diffusion of information technologies;
- International economic competition requires better efficiency, more quality and much more innovation
- Changes in work organisation.

A change of the economic policy of the State means a different structuring and organisation of vocational education, especially in secondary schools. In order that VET successfully responds to the needs of the economy, labour market and community, it is necessary to:

- Establish systematic networking with the all social partners and stakeholders (employers, trade unions, chamber of commerce, various associations, state institutions and government bodies);
- Create joint responsibility among social partners (state, employers, trade unions and chamber of commerce) for the implementation, programming and functioning of VET;
- Secure that the demand from the labour market influences the development and the volume of vocational education in key areas of work and profiles;
- Involve social partners in the evaluation of the needs and demands of the labour market and in defining and structuring educational profiles, assessment of the outcomes (external committees for final examination, craftsman and specialised exams, certification);

⁸ Change role of the Government and other stakeholder in vocational education and training: Training policy and systematically employment in sectors, ILO

- Systematically arrange cooperation and joint activities between the Ministry of Education and Sports and Ministry of Labour, Social Care and Employment (especially in areas of adult education, employment, certification and accreditation, continuous education, life long learning.);
- Launch systematic mechanisms for the further institutional development of vocational education at a national level including the establishment of a National Vocational Education Council and appropriate vocational institutions).
- The roles and relationships among the social partners need formal recognition.

Central strategic direction for joint action of all stakeholders in the vocational education process should enable VET to be:

- Compatible with converging European standards;
- Provide opportunities for everyone to acquire vocational qualifications;
- Secure a new relation between vocational and theoretical education and create new relations between schools and companies;
- Apply lifelong learning principles.

4.2 Competences and Core Skills

For the individual, learning for employment means developing skills in order to find, keep and change job or generate a self-employment capacity. Such skills enable vertical and horizontal mobility and fast adaptation to technological innovations and new organisational approaches. Learning for employment from a labour point of view means the fulfilment of the lifelong learning principle and the individual acquisition of competences, supporting the security of the job and future mobility. Employment skills for enterprises and employers represent the ability of their work force to promptly respond on new job requirements and build up the competence of the enterprise. For the State it means the creation of an adaptable work force in accordance with labour market demands. However, learning does not automatically imply employment, because it depends more on individual capacity for transfer of key competences from one position to another.

Economic competitiveness at the global labour market requires high levels of adaptability. The consequence is an increased demand for workers with a better skill range, able to work individually, who are adaptable in the production process and with polyvalent capacities. Consequently, the concept of competences is changing, instead of a traditional perspective on skills and pure technical knowledge, employers insist and require more general, especially communication skills, problem resolving, and team work. On the other hand, the labour market is passing contradictory demands because employers are seeking for individuals who are highly adaptive (generally oriented) but who can instantly work at specific tasks (expert).

VET must respond to such demands, to enable the young, and adults to acquire the necessary knowledge, skills and competences in order to get employment but at the same time, to provide a broad general basis and fulfil personal plans, further education and improvement.

According to contemporary wisdom, key knowledge, skills and competences leading toward employment include:

- Intellectual abilities;
- Social and interpersonal skills and knowledge (communication, team work, decision making, responsibility);
- Business and entrepreneurship knowledge and skills (entrepreneurship skills, creativity and innovativeness, self-employment);
- Multiple technical skills and knowledge.

Acquiring competences (whether work based specific or core) becomes a prime task for education and training. In Europe, two approaches exist in regards to adaptation and application of skills and competences in the vocational curriculum.

- Promoting core⁹ and generic¹⁰ skills,
- Promoting key competences and broad professional competences.

In practice, these two approaches are very often interrelated and networked.

According to contemporary understanding **the competence** is defined as possession and appliance of knowledge in accordance to defined learning outcomes¹¹ and standards corresponding to the work post and other professional requirements.

Core skills¹² represent transferable, multifunctional packages of knowledge, skills and abilities, required by an individual necessary for realization of personal goals, development, participation and employment.

This definition especially emphasises transferability and the adaptability of core skills in many situations and contexts. Multifunctional characteristics imply that the competences acquired might be used for the achievement of various tasks but also in resolving different problems. Core skills are a requirement for personal self fulfilment in life, work and learning for every individual.

In this context the acquisition of core skills should enable the realisation of three basic goals on the personal and as well on the community level:

- Personal fulfilment and development in the life of every individual (cultural capital): Core skills should enable individuals to achieve professional goals and personal desires related to lifelong learning;
- Active citizenship and involvement (social capital): core skills should enable the active participation of every citizen in society;
- Employment (human capital): ability of every individual to gain and achieve employment at the labour market.

The lack of equilibrium between the supply and the demand on the labour market in Serbia, raises the whole question of how both to organise supply side responsiveness and demand side specification of need and requires:

1. A definition and agreement between the Ministry of Education and Sports, Ministry of Labour, Chamber of Commerce and Union of Employers in the form of special regulations on the system and procedure for the definition of new profiles.
2. These procedures would allow for a unique system for all profiles, their validity, efficiency and sustainability. Key competences for all educational profiles are integrated into the package.
3. Redefinition of the structure for existing profiles and especially the knowledge, skills and competences acquired by students at the end of three or four year educational provision. It implies a review of current profiles and labour market information and skill need analysis tools for labour market needs.

⁹ *Skills*: adequate knowledge and experience required to perform specific task or job and/or product of education, training and experience which is characteristic of technical knowledge jointly with “know how”

Basic skills are including literacy and IT knowledge

¹⁰ *Generic skills*: skills supporting lifelong learning which include not only literacy and IT skills (basic skills) but also communication skills, problem resolution skills, team work, computer skills and continues education.

¹¹ Learning Outcome – the set of knowledge, skills and competences required for further education, initial training.

¹² European Commission: IMPLEMENTATION OF “EDUCATION & TRAINING 2010” WORK PROGRAMME, WORKING GROUP» BASIC SKILLS, ENTREPRENEURSHIP AND FOREIGN LANGUAGES”, November 2003

This activity represents one of crucial joint actions between the world of vocational education, schools, social partners and the labour market in redefining existing fields of work.

4. Establishing a flexible vertical and horizontally mobile system of formal and informal VET.
5. Establishing equality between qualifications acquired by formal and informal routes.
6. Establishing certification and accreditation system across formal and informal vocational education and training.

4.3 Occupational standards

A first requirement is the involvement of a broad range of stakeholders, with leadership from employers and trade unions. This is critical to the success of the development of standards and in particular occupational standards (OS). The very nature and content of OS dictates that the primary input must come from the social partners. But this is not always the case, because even employers are not often the prime movers in OS development which emanates from public employment and training institutions, including the Ministries of Labour and Education, which need OS. And, when they lead OS work there is sometimes a tendency for their representatives to shape procedures and outcomes in a manner that may not conducive to good OS development (i.e., it has a supply, rather than a demand, perspective). There needs to be a clear recognition, particularly by employers and trade unions as well as other key stakeholders (government, unions, enterprises and their associations, and professional/technical associations) of the need for OS if the development process is to be successful.

Occupational standards must reflect ongoing economic and technical changes in the economy that result in changing skill demands in the labour force. Before embarking on the development of OS, stakeholders need labour market information (LMI) to provide “early warning” and identify priorities for standards development in occupations that are:

- in high demand, which makes them a high priority for standards development;
- changing rapidly, meaning existing standards need updating;
- represent a large percentage of the work force and require specialized skills for their performance; and
- are in new emerging fields of work.

Social partner advisory groups, sometimes referred to as focus groups, are often used to obtain LMI and are one of the qualitative methods of obtaining information on employment and economic trends. Three levels of committees are conventionally used: national multi sector tripartite committees to give general trends, sector-specific committees to give more focused input and occupation-specific committees to give very direct input on a group of similar occupations to assist in development of a particular occupational standard. These committees can provide useful information and can help interpret information from other sources.

The standard national nomenclature of occupations is a document developed by all countries and is an integral part of the national document, which is in compliance with a similar international paper – **International Standard Classification of Occupations (ISCO)**. This document is a starting point and the foundation for the launch of the standardisation process, especially in vocational education. This document foresees the methodology and procedure for revision and additions, especially nowadays when occupations are emerging and closing down faster than ever due to technological and scientific progress, developing and established occupational standards should be in relation with one or more occupations from the Standard Nomenclature of Occupations.

There are several key elements in the definition of occupational standards:

- Occupational standards are a measure for achievements which worker should perform in order to finish his tasks.
- AN occupational standard is, in most cases, a document containing: the name and code of the occupation, the level of demand, occupational competences and description of standard of occupation; area of work; key activities; knowledge; skills (basic practical knowledge, vocational theoretical knowledge, general knowledge). The occupational standard is the basis for the design of curricula and modules.
- Occupational standards are the basis in defining expectations from the labour market on the process of work.

4.3.1 Occupational Standards in Serbia

Previous practice was characterised by the use of differently defined standards by different agencies especially related to the employment service and official statistics.

Previous official documents (standards):

- Social agreement was on the unique basis of the qualification for the occupation;
- There existed a unique classification scale for each vocational background;
- Code records of the occupation and the vocational background (regulated by the decision of the unique codex of codes for introducing and coding of the facts in the working field-“Official gazette SRJ”, 9/98);
- The law of the activity classification and the register of the arranging units (“Official gazette SRJ 31/96);
- Occupation classification of the Institute for statistics created and applied in the Census 2001.

One of the priority issues for the further reform of vocational education in Serbia is establishing a national classification of occupations, since the current nomenclature was adopted during the Social Federal Republic of Yugoslavia, when completely different social and economic conditions were in place. In its conceptual and structural approach this nomenclature is not comparable with ISCO – 88, especially in defining labour and occupation areas. In non-market centralised systems employment had the character of permanency and professional mobility was almost not visible. By contrast, the professional and territorial mobility of labour is a characteristic of the market economy reflected in frequent changes of occupations (five to seven during years of employment). Responsiveness to labour market demands, requires a definition of occupation as a cluster of related requirements and tasks performed by any individual”

The main reasons for starting the ‘revision project 2002’. (unique occupation nomenclature) and its adjustment to the international standard classification of occupations came from needing to change the practice of using different standards with an inadequate coverage of the occupations even in the existing nomenclature (because of the development of technology, organisation and labour market there is excessive simplicity), the absence of adaptability and change according to the international standards, Using the international standard classification of occupation is in order to use some existing solutions as a realistic way ahead.

Since the long duration of this process could slowdown activities in those educational areas linked with the nomenclature issue, it is necessary to develop and introduce a certain number of occupational standards (as a pilot) with consensus on the number and choice of occupations. Priorities may be set on the basis of several criteria which will secure that the ongoing activity does not depend on further development of nomenclature.

The proposed criteria for selection of occupation and standards are:

- Traditional occupations;
- Possibility for comparison with other countries;
- A high demand level from the labour market and high employment rates with a minimum possible time spent on the unemployment record book;
- Large student coverage, monitored for a number of years;
- Rapid sectoral employment opportunities.
- Interest of employers;
- Establishment of expert teams for the development of occupational standards.

5. The VET Supply Side

5.1 VET Supply

Regarding Serbia, the adjustment of VET to the needs of a market economy requires continuity of reform. Reform is a gradual process which can't be implemented only by the Ministry of Education and Sports, nor only by secondary schools (teachers, principals, association of the schools) but requires active participation from all stakeholders/clients who "deliver" their demands to the vocational education system – employers, companies, trade unions, employment services, Chamber of Commerce, Union of Employers, parents, students. It is necessary to reach joint agreement/consensus regarding the directions, character and volume of VET reform. This agreement has the following preconditions:

- Adjustment and adoption of legislation involving VET (as a joint process shared between the Ministry of Education and Sports, Ministry of Labour and other key social partners);
- Institutional and organisational development for the delivery of vocational education including the links between formal and informal vocational education;
- Learning under conditions and in a form which is in accordance with real needs and possibilities of learners, and in compliance with needs and demands of every local community;
- Increased financial investment and the involvement of new funds following discussion of improving the present financing approach to VET (see section 10).
- A regulatory agreement between the ministries of Education and Labour.

From the viewpoint of the development of a flexible labour market in Serbia, *continuation of reform activities needs to include*¹³:

- Flexibility and variety in approaches to learning and education – formal and informal;
- Development of a system for the accreditation of educational institutions, educational programmes, knowledge and skills acquired in informal education system and certification;
- Development of a national qualification framework and occupational standards,
- Securing a quality assurance system in vocational education based on the analysis of labour market needs;
- Increase in the capacity of craft schools in order to reduce the dropout rate;
- Exchange of relevant information related to labour market, business, possibilities for local development;
- Ownership and institutional homes for ongoing and permanent social dialogue in vocational education development and employment in accordance with labour market needs

¹³ Working draft of national employment strategy, May 2004

From the viewpoint of formal vocational education – *the further reform process should include:*

- Further improvement of curricula including a modular approach based on a learning outcomes approach, the introduction of new programmes, courses, a different organisational context and a re definition of professional practice regularised by agreement between the schools and social partners.;
- Further modernisation of content, organisation and methods of teaching, and overall work in the schools;
- Development of proper assessment and evaluation systems for student achievements;
- Creation of an appropriate balance between general and vocational education, theory and practice (based on the relationships proposed by the Concept for VET);
- Further redefinition of educational profiles in order to adjust them to economic reality;
- Provision of the conditions necessary for acquiring certification, diploma and qualification systems adjusted to European standards;
- Rationalisation of the secondary school network with the needs of the economy, labour market, employment policy and wishes and capacities of the students;
- Development of a ‘standards’ system for institutions, teachers, and educational programmes;
- Quality assurance of vocational education, permanent monitoring and evaluation of student and teacher results, schools and entire educational institutions;
- Securing better access to and horizontal and vertical mobility for the students inside VET;
- Creation of the condition necessary for the continuous vocational training and professional development of teachers (new role of the teacher, the introduction of new teaching methods (group work, interactive learning, project design, problem resolution etc.),
- Innovations in equipment and teaching material,
- Strengthening and autonomy of vocational schools in new conditions, networking with the local community, needs of the local economy, discovering new financial mechanisms;
- Management training and ‘qualifying/ licensing’ for new working conditions.

5.2 Educational standards

According to the traditional definition, ‘standards’ are measures or estimations of quality or level of achievements (results). Within VET, standards may be the official or specific demands put forward by employers and the labour market by vocational and professional organisations, or educational institutions. They might be based either on competences or programmes, or on agreed demands and expectations. Standards imply the criteria for implementation, accreditation and verification of appropriate institution or programme.

The content¹⁴ of a vocational education standard might be related to the duration of the education process, content, teaching methods, qualifications of teachers and associates, core competences, creation of modules, assessment and certification, conditions for enrolment, etc.

Standardisation in the system is initiated by activities which are recognised as **establishing** procedure in the definition of standards. Furthermore, the process is continued by the **introduction** of standards followed by the development of norms whose goal is making operational the intentions expressed in the general document defining standards. The framework is finalised with the **monitoring** process of the impact on the system. The definition of standards set up in form of this procedure represents the structure for future work on development of standards in area of vocational education in Serbia.

This is the process of designing, adjusting and preparing of standards which will be applied in the specific branch or in the area of activity. The approach requires support to the dialogue between key actors and

¹⁴ Dragan Djukic: Conceptual framework for development of occupational standards and qualifications, Belgrade, March 2003

reaching consensus in regard to all major issues concerning interested parties' specific interests. It further implies the creation of state **institutions** or **bodies** authorised by legislation or mandate to conduct specific tasks for the standardisation process. Among other issues, these bodies take care of:

- **The establishment of a coherent system of:** vocational, professional, educational and all others required standards;
- **The Appliance of Standards** as the affirmation of defined values and positions;
- **The Methodology** for the adoption of standards;
- **The Methodology** for the permanent development of standards;
- **The character and level of standards;**
- **The Measuring of achieved standards;**
- **The Duration and validity period;**

The VET Centre within the Pedagogical Institute is the key agent for the development of standards. For this task, the Centre is establishing direct cooperation with the Ministry of Education and Sports, the Ministry of Labour, vocational schools and their associations, the Chamber of Commerce, the Union of Employers and other social partners.

The creation of a standard system includes processing a large number of standards of different natures with the various stakeholders participating in the adoption procedure. The entire process requires coordination because standards should be part of an absolutely coherent, consistent and transparent system assessed from any point of view. This is necessary because the system of standards is the foundation for the adoption of large number of strategic goals such as:

- Impact on the labour market;
- Modernisation of the educational system in general and especially VET;
- The rationalisation of content and the realisation of the educational programme;
- The creation of an efficient educational system;
- The visibility of the national qualification system as a condition for an organised labour market and for social dialogue among the government, employers and trade unions.

The Characteristics of Standards are:

- **Quantitative standards** which reflect quantity, – productivity etc.
- **Qualitative standards;**
- **Combined Standards** containing characteristics of both subgroups and present in everyday practice;

Educational standards in Serbia will be initiated by special legislation and regulations and will consist of responses to demands prepared and addressed by the social partners, separate organisations, vocational associations, educational institutions, trade unions, employers association and others. The goal of introducing standards into an educational system is the fulfilment of the idea that any individual, process or part of the system should fulfil the established standard, level or measure of required demand (knowledge, skills, competences, facilities, equipment, vocational qualification, handbook, literature...)

Vocational education standards should enable clear and efficient responses from vocational education institutions to technical and technological innovations as well to changes in areas of work and organisational culture and to recognise and describe labour market needs closely related with the creation of educational programmes and entire educational systems in a transparent and precise way.

Most often vocational education standards represent the integration of the three components below although in some cases they had been adopted separately, which was the current practice.

- **The Profession Standard** component – employers and labour point of view;
- **The Programme Standard** component - educational point of view;
- **A Monitoring and evaluation component.**

.5.3 VET Qualifications

According to the international standard classification of occupations (ISCO – 88) ‘qualification’ has been defined as ‘the ability to perform tasks and fulfil duties within the framework of certain occupation ‘ and it includes:

- Level of qualification;
- The type of qualification

While this document defines four level of qualifications, there are six levels set up by another international document –International standard qualification of education – ISCED 1997.

On the basis of a comparison between the Yugoslavian nomenclature of occupations and the International standard Classification of Occupations and International Standard Classification of Education, the Serbian approach is outmoded.

Consistent with the *vision and mission of VET* in Serbia, defining the level and type of qualification and the adjustment of the current nomenclature to be compatible with the international documents undoubtedly is a priority at national level.

An established system of qualifications drives VET, enables the modernisation of programmes, creates a quality assurance system, secures the efficiency and employment of those coming from VET and assists their professional mobility on the labour market. A qualification system is a major player in securing that education responds to the demands of the labour market.

The introduction of a National Qualification framework in Serbia will support the development of a modern, relevant and flexible VET system. The main advantages of such a framework are:

- Securing that qualifications are adequate and relevant to economic and social needs;
- Improvement of approach, flexibility and development in vocational education;
- Improvement of quality of formal and informal vocational education;
- Providing conditions for the definition and consistent application of educational standards;
- Providing the conditions for implementation of vocational education (in formal and informal system) based on quality standards;
- Securing international recognition of vocational qualification acquired in Serbia.

In order to define and develop national a qualification framework in Serbia it is necessary that the key partners in this process –the Ministry of Education and Sports, Ministry of Labour, Chamber of Commerce and National Employment Service agree on the major principles, goals, tasks, levels and content of qualifications. Especially important is:

- Establishing a special body or institution responsible for managing the development of the national qualification framework;
- Adaptation of the classification and qualification system and agreeing the definition of qualification levels, in compliance with International Standards Classification of Education. (ISCED 1997);
- Adopting regulations and procedures for the creation of qualifications;
- Adopting regulations and procedures for assessment and certification;
- Adopting regulations and procedures for the accreditation of institutions delivering training and informal education.

A national qualification framework should preserve the set of joint goals adopted by the social partners and all stakeholders in VET; its development focus should rely on the tasks and goals offset in modernising VET and are a key part of strategic implementation. Therefore it is necessary to:

- **Clearly identify the purpose and volume of a National Qualification Framework, the results necessary to achieve, the short-term priorities, limitations and available resources;**
- Agree on the number, volume, character, and duration of levels of vocational education in Serbia, in compliance with International Standards Classification of Education (ISCED 1997); and on the basis of this agreement establish the structure for the VET system in Serbia.
- Define the process for management and the implementation of the national qualification framework and its institutional home.
- Develop strategies for accreditation, assessment and certification;
- Define the competences (ability) notion and key competences acquired within the VET system;
- Develop an overall action plan for a national qualification framework which will be the part of the general action plan for the further reform of VET.

Establishing a National Qualification framework will enable the development of an equitable system and open the possibility for broad profiles. An equitable system allows for different exit points, each providing an opportunity to enter from education into employment. After work experience, individuals could return to education in order to acquire the succeeding profile or qualification level. This would provide mobility, individual satisfaction but also easier adaptability and adjustment to changes in areas of work.

An equitable system should secure:

- Vertical and horizontal access through the overall education system;
- Knowledge, skills, abilities and key competences;
- Educational mobility (lifelong learning)
- Professional mobility and easier adjustment to new professions;
- Access to higher education levels.

5.4 Curricula in VET¹⁵

All procedures and activities in education and learning process are oriented on realisation of goals and outcomes and should be adjusted, well balanced but also diversified in order to fulfil broad social needs and specific needs of local community and individuals. Diversification of programmes, contents and teaching methods is one of most complex issue in reform of vocational education and training that will enable possibility to introduce various forms of programmes, related with the demands of the profiles or clusters and the needs of local community and the school. In this way possibility are open for introduction of new teaching methods especially in active teaching methods and different combination of theory and practice teaching.

In this process key elements are:

- Establishing balance between general and vocational education, theoretical vocational education and professional practice;
- Assuring vertical and horizontal accessibility within the programmes and inside one or several areas of work;
- Introduction of modular principle either in entire vocational education and training or within areas of work or within specific vocational schools or educational institutions;
- Networking with higher forms of education and enabling accessibility to higher education.

In accordance with it vocational education programmes are oriented on provision of knowledge, skills and competences among the students and the adults. Vocational education programmes should enable:

- Individual development of the participants;
- Improvement of the individual quality for job performance;

¹⁵ Development segment in secondary vocational education is elaborated in CONCEPT OF SECONDARY VET, January 2004

- Fulfilling the demands of work process in regards to acquired knowledge, skills and competences (key competences) from vocational education;
- Promotion of employment and lifelong learning;
- Further education and training.

Outcomes are clearly and unambiguously defined knowledge, skills and competences acquired after finishing specific programme, or educational and learning process. As such they are becoming basis for planning, organisation and realisation of vocational education and evaluation of achievements and complete education and learning process.

There is significant difference between simple “production” of outcomes and education oriented toward outcomes. In education which is oriented on outcomes, they are defined before beginning of educational process and are known to both groups - teachers and students, which are receiving adequate support in the form of completely designed approach in achieving the outcomes. It means that the outcomes are determining and defining educational and learning process and school or institution which is basing its activity on outcomes should:

- Identify the outcomes of specific programme, explaining it and make it completely public and available to everyone;
- Elaborate forms and types of organising teaching and learning process through which the outcomes are achieved, or through which student may be successful in reaching the outcomes.

The outcomes in vocational education and training are defined in compliance with occupational standards, concept and type of educational profile, with level and character of qualification and occupation.

5.5 Adult Education¹⁶

Significant social, economic technically technological and demographic changes which Serbia is faced with are imposing the need to create open and flexible adult education system which is combining all levels, types and forms of learning from primary to university, initial and continues, formal and informal education and opening possibility for lifelong learning, upgrading of human resources potentials and successful integration into European cultural and economic structures. Policy and strategy of adult education and training and identification of its immediate goals and tasks is based upon premise that adult education is:

1. Manifestation of lifelong learning and integral part of entire educational system;
2. Strong factor of economical development, higher productivity and economy competitiveness, improvement of employment and employability;
3. Corrective of regular educational system (provides second opportunity for acquiring relevant knowledge and
4. Innovative mechanisms of educational and learning systems (area reacting promptly to economy and labour market needs, technological innovations, where had been introduced and tested new profiles, programmes, skills, competences – flexible and open for new ways methods of teaching and learning);
5. Basic way to support personal development and possibilities of individuals to:
 - Be employed
 - Generate bigger income;
 - Acquire independence
 - Remains healthy and active;
 - Performs better jobs;
 - Secure family and encourage independence of their members/

¹⁶ Adult education concept is developed and the part of “Concept of Secondary Vocational Education”, “Adult Education Policy in Serbia” and “Adult education strategy in Serbia”.

Basic activities in this area will include joint actions of key stakeholders in vocational education and training in:

- Increasing participation of adult population in educational and learning programmes and projects;
- Establishing broad network between various institutions and organisations for adult education;
- Inspiring production of programmes, projects and educational and learning activities of the adults, relevant for social and economic development, for improved employability of working population (labour market programmes and continues education programmes)

In strategic-operational level it implies:

- Development and institutionalisation of social partnership and involvement of social partners into research and articulation of educational and training needs, programme design and validation of education;
- Development mechanisms and capacities for education management (adequate normative framework and establishing of adult education unit within the Ministry of Education and sports and Ministry of Labour);
- Development of system (institutions and procedures) of quality assurance and accreditation and certification as its basic component.

5.6 Delivery of VET

5.6.1 Secondary school network

One of basic preconditions for economic development is existence of educational institutions which will deliver required experts with various levels of education and competences for work. It will be possible if secondary school network is completely, or at least, partly synchronised with the economical structure at regional and local level.

Huge disproportion exists between the wishes of students and parents on the one side and capacities in the schools in specific clusters on the other. Inside three year programmes there is big demand for profiles in area of services, trade, catering and administration, while profiles related to production (in mechanical engineering, metal processing, mining etc.) are positioned very low at youths' wish list. In four year programmes demand for medical and commercial services, tourism and trade doubles current capacities in the schools. This confirms that present offer in vocational education and training does not reflect the needs of society and that there is the lack of flexibility and adjustment to new conditions and the needs of individuals.

Three quarters of entire school network in Serbia are consisted of secondary vocational schools with very heterogenic internal structure. Biggest number of vocational school in its inner structure is of diverse nature, and organises educational process for two or more areas of work. Schools delivering education in only one area of work are in smallest group. They are mainly located in big city centres, while vocational schools in smaller communities and rural regions are of mixed nature.

Further development and improvement of secondary school network and educational institutions is going to be based on diversification and flexibility and directly imply and upgrade network on the basis of **national, regional and local criteria for establishing the network of secondary school and educational institution**. Definition of national, regional and local criteria for establishing the secondary school and educational institutions network will base on recognition of general economical characteristics of state/regional and local community development, as well on geographic, demographic and cultural features. Existence of these three level criteria will imply status and financial positioning to secondary vocational schools and educational institutions:

1. Schools applying **national criteria** are unique and schools of special national interest for the state. National criteria are determining all necessary elements and preconditions which schools has to fulfil in order to enter this category (for ex. dormitories, special forms of pedagogical and practical activities, special artistic schools, etc.).
2. Schools established on the basis of **regional criteria** are big urban schools and schools established by economic regions covering large areas (not in relation to administrative structure of regions). These schools are straight respond to the economy needs in specific area and represent significant economy resource of the region. It is realised through direct networking between regional chambers of commerce and regional employment services, employers and professional institutions. Basic mission in these schools is to prepare students in areas demanded by secondary education, craftsman education, but also knowledge of high technologies. In organisational structure these schools will be able to respond on all demands of the economy, especially concerning resolution of complex production procedures and further specialisation.
3. School established in accordance to local criteria would be flexible with small classes, having fast adaptation ability to change profiles, area of work and easier adjustment of curricula according to new demands coming from labour market. These schools will have solid connections with social partners and local community needs, widespread additional activities and secured conditions for realisation of professional practice.

All the criteria need to be fair, precise, visible, clear, universal and financially justified. Criteria should recognise current state of art and possibilities but also demands for further development of vocational education and training. Monitoring of achieved quality and success of schools will become the basis for permanent assessment of the schools' status and categorisation to specific criteria.

In accordance with this structure of network, an enrolment policy at national level will be defined. In this regards it is necessary to recognise following demands:

- To enable opening of secondary vocational schools for adult education;
- To enhance craftsman profiles and enable opening of special centres for craftsman education in cooperation with Chamber of Commerce and other social partners;
- To open secondary vocational schools for realisation of different programmes as combination of general and vocational education, in compliance with community needs and possibilities of the schools to deliver special programmes etc.

Introducing criteria as the basis for structuring the secondary school and educational institution network requires changes in current internal organisation. Diversification of types and models will include more organisational structure aspects in order to secure efficient and economical organisation of schools and educational institutions. In order to secure this, it is necessary develop set of required standards for structuring and organisation of secondary vocational schools and educational institutions (number of classes, number of students, number of teachers, required equipment, school workshops etc.).

5.6.2 Teaching equipment and resources

VET reform accelerates the demand for the modernisation of teaching equipment. The current situation varies from school to school. The volume and quantity of specialised equipment for vocational subjects are influence by various factors:–the readiness and capacities of local community, employers, companies, participation the commitment and capabilities of school management. However, with few exceptions, schools are not in a position to follow technological progress which is the key to a higher productivity rate in a modern economy. Therefore it is necessary to develop a complex approach to equipping schools with modern equipment through the involvement of social partners, especially employers and companies in a position to assist the school.. Cooperation of the school with all the agents of social partnership – employers, companies, small and medium enterprises, state institutions, professional associations involves:

- Establishing formal standards and systems of cooperation (contracts on cooperation, special and individual contracts) arranging joint issues of interest, especially professional practice, the usage of modern equipment in companies for educational and practice purposes. This contract would define

responsibility, rights and obligations of all parties / schools, employers, companies, professional organisations and others.;

- The organisation and realisation of joint projects and activities of vocational schools and economic organisations, companies and employers;
- Establishing several, well equipped training centres, delivering services and providing resources to a bigger number of schools and students from all parts of Serbia. These centres could act as regional training centres for the adults providing training services for all groups, already employed and those looking for the employment.
- Improving of school laboratories in VET schools

5.6.3 The role of the vocational school

Vision, mission and reform require a different role for vocational schools. Alongside their traditional and statutory duties the school will gain following roles;

1. Defining the mission VET reform implies the development of a basic school mission statement including quality assurance and especially the modernisation of the educational process, its quality assurance and permanent improvement. This process requires cooperation with the Ministry of Education and the Pedagogical Institute and especially the VET Centre.
2. Considering the demands addressed by the labour market at local and regional level, the school will have a new, more flexible role for its course provision. This means that it could offer a wider programme variety, including short courses, accredited and approved by the Ministry of Education. These programmes are designed for students and adults and may have variable duration and provide various qualifications. In this way a school can establish more flexible relations with the labour market in responding to demand. Schools will achieve this flexible role in cooperation with the Ministry of Education, Ministry of Labour, social partners and local -government.
3. Schools will have a different organisational role, especially concerning human resources development, the organisation of the work process, governance and school management.

5.7 Human Resource Development

Teacher training

The competitiveness of VET at the national and global market will depend on the quality of professional preparation. The present situation in teacher training in VET provides a poor support to modernisation with a:

- Lack of permanent teacher training and professional improvement system for teachers;
- Lack of legislation for teachers in general, that would include ways for initial and professional preparation, improvement, recruiting criteria and mechanisms for social and professional promotion,
- Lack of defined standards of knowledge and pedagogical skills;
- Lack of adequate university programmes, for the initial psychological and pedagogical preparation of teachers in vocational schools;
- Neglect of information technologies as a possible efficient basis for the professional teacher's development and modernisation of teaching and learning methods and need for acquisition of functional literacy.
- Lack of self and school development capacities.

The existing schools and their human resources reflect traditional school concepts from the centralised system. They are technical and materially ill equipped. Teaching and training resources (practice teachers) lack

of selection and professional development. There is a long standing lack of teacher training programmes with the result that the majority of the teachers are not even informed of contemporary pedagogical methods.

A large number of teachers have no initial preparation for the jobs they are working in (vocational subjects teacher and practice teachers), nor managerial skills (principles, associates, administration).

Therefore, the initial strategy should be directed towards:

- Renewal and modernisation of the teaching and training system for teacher trainees;
- Support to the actual reform of VET;
- Functional literacy and
- Establishing the foundations for continuing VET.

Teacher training modernisation should be initiated by improving pedagogical capacities and the skills of teachers and associates in order to prepare them adequately for implementation of new programmes, and simultaneously creating the system which will network initial and permanent education. The development process established in this way will lead towards *completely professionalized human resources* enabling a *permanent adjustment to global and technological modernisation*. In this way the new permanent concept of teacher training will be an integral part of overall policy and strategy.

The goal of the new concept is to “equip” teachers with functional knowledge and skills which will enable them not only to implement successful, new reformed programmes but also to actively and creatively participate in further individual professional development and the improvement of VET.

As opposed to the traditional model, the *new concept is promoting a culture of permanent change and a systematic approach in determining the needs and possibilities for professional development*. As a basic principle, it implies the introduction of planning and defining the programmes and types of training in accordance with the recognised needs and capacities on the level of schools, local communities, regions, professional associations (teacher associations) or groups of professionally networked schools.

5.8 The character of the new concept

The professional *system* of training for teachers, associates and administrators in VET should be open and dynamic, networked with all relevant institutions (universities, scientific institutions, educational administration) professional organisations, social partners and expert groups. Cooperation with local partners (local community and local/regional economy) in the organisation of teacher training is reflected through programme supply and demand for certain profiles and vocational levels.

Systematic analysis in the design of long and short term teacher training policy in VET, should contribute not only to **practicality** and **rationality** but also add **sustainability** to the system, achieving and establishing functional links between initial education, induction (trainee’s training) permanent professional training and improvement, as well as the social and professional promotion of teachers. Accomplishing this level requires certain legislative means and a thorough reform of higher education which is delivering the human resource to the schools.

Reform needs to consider the existing differences among the teachers of vocational schools, in regard to previous/initial education, as well regarding professional engagement (theory teaching, practice teaching, pedagogical and psychological support, administrative-librarian support, management and administration).

It is necessary to bear in mind that *programmes and ways of training need to respect adult education principles* and at the same time are adequate to the actual and future needs of teachers in their career progress, enabling the possibility for active participation in the process of self upgrading.

With reference to the variety of vocations and profiles, a small number of schools should be *diversified and very flexible*. This implies a high level of access to programmes and the possibility for innovating and improving professional competences, by use of various means, asuch as locations and training channels: direct communication (seminars, lectures, workshops, debates etc.); e-learning; multimedia; online programmes, methodological guidebooks etc.

A System defined by this concept would rely on the following pillars:

- **Development and training at school level;**
- **Modern teaching and learning methods;**
- **New information technologies;**
- **Development of professional cooperation and partnerships**

Information technologies (multimedia and internet) are very important pillars for permanent teacher training and upgrading. This assumes that teachers are simultaneously acquiring computer literacy and the skills to apply information technologies in teaching, self-development, cooperation, planning and the exchange of ideas

School level training (professional development at school level and school programmes for development) has numerous advantages – from rationalisation of spending to development based on everyday pedagogic practice (identification and resolution of pedagogic problems) and the articulation of the response to the needs of students and the economy. For successful implementation of this model it is necessary to organise the transformation of school libraries into school resource centres, as the special way of supporting professional teacher training with the application of modern teaching and learning methods.

The introduction of new pedagogic methods is impossible without the networking of development programmes for pedagogic and psychological improvement at the school level. Therefore, the adoption of these methods is the responsibility of all teachers, where motivating creative approaches in teaching and practice planning and realisation is the goal. As a special characteristic of the training system, set up in this way, is the obligation that modern teaching and learning methods are simultaneously the content and method for pedagogic-psychological teacher training. Innovation in working method should lead to that important innovation: *emphasising learning instead of teaching*. It is actually the application of the ‘construction principle’ in the teaching and learning process: instead of delivery of knowledge, students should be trained to construct the knowledge, which implies he same requirements for teacher training. In teacher training emphasis should be set on networking vocational experience and new pedagogical solutions and ideas.

The exchange of ideas and *partnership* in resolving pedagogic problems and the design of school development and student training programmes is another pillar on this system should be founded. Therefore, a permanent system for training teachers, associates and management should lead toward the acquisition of specific skills and knowledge that are not narrow and too specific. These are knowledge and skills related to management, identification of needs, planning development, communications, use of IT technologies, implementation of new programme solutions, efficiency analysis etc.

Regarding the current approach and projected development of vocational education, expected teacher training outcomes should be:

- Good vocational and pedagogic knowledge and skills applicable for modern teaching and learning tools and methods;
- Interpretation of curricula as the framework for an active learning approach in teaching
- Openness for the changes and understanding of the reform;
- Communication and guidance skills to lead the students through the learning process;

- Professional curiosity and the identification of the need for training;
- Functional literacy – professional, social, computes, media;
- Knowledge for application of various sources and locations in curricular implementation;
- Knowledge of planning and developing innovative approaches and curricula;
- Cooperation skills, team work capacities, and identification of the economy and students needs;
- Ability to take over the responsibility and initiative for own professional development and development of VET;
- Knowledge for planning, evaluation and self-evaluation

5.9 Preconditions for implementation of the concept

In order that this concept for training of teachers and other resources is transformed into programmes and concrete activities it is necessary to:

- Adopt special legislation (or regulations) reforming the entire area of vocational education and professional development of teachers and associates in vocational schools;
- Define the standards for knowledge and skills required from teachers, related to the importance of the work they need to perform in the schools
- Establish the criteria for the professional and social promotion of teachers, that would later become part of the legislation or regulations;
- Define trainers' profiles and the role of the institutions such as faculties, Pedagogical Institute, the Ministry of Education and Sports, schools etc. It is very important that in an initial setup of the system, the obligations and responsibilities of the actors are clearly defined as well as standards established;
- Establish the character and the form of training programme offers and the ways of supporting self-development of the teachers;
- Prepare the principals, school inspectors, advisors and local partners for support to the implementation of the planned training activities;
- Define the monitoring mechanisms and internal and external evaluations for the efficiency of the applied training programme.

6. Quality Assurance

6.1 Overview

A system of quality assurance has the major role in the functioning and development of education. There are four key terms essential for the proper understanding of this system. They are quality assurance, quality improvement, evaluation of quality and quality governance. The basic role is to improve and upgrade the quality of vocational education, both at general and specific levels. The system for quality assurance in VET contains multiply functions and goals. Primarily it:

- Provides responses on significant questions to the stakeholders, social partners and those in charge of the VET system;
- Reveals good practice examples;
- Secures feedback information;
- Improves planning, development, monitoring and assessment;
- Restricts the differences and enables comparison at all stages;
- Secures decision making function for all interest groups;

- Provides the overall picture and coherent overview on all segments of VET;
- Secures feedback information for further planning of development and achievements;
- Takes into consideration local and regional needs.

Quality assurance requires two activity levels:

- **National level** – agreed guidelines on national level are the foundations for harmonization of all activities oriented on educational quality for everybody. To ensure quality in education, the Ministry of Education and Sports may use a combination of four types of indicators, namely: internal/school performance indicators; operating indicators; external performance indicators; and staff productivity indicators.
- **School level** – recognition of achievement levels in all school activity areas is a prerequisite for the improvement of educational work and therefore, the immediate need of a modern school. The term “quality school” is equivalent with “effective” and “efficient” school.¹⁷

The quality assurance system in VET in Serbia consists of the following components:

- **Evaluation, monitoring and evaluation of education and the creation of an adequate database.** This might be implemented at two levels: Through (self) evaluation of secondary vocational schools; and through quality assurance at central level.
- **Implementation of a quality assurance system at national and local level.**

Expected achievements in relation to quality assurance system in Serbia until 2006 might be divided among three basic segments:

- Schools in cooperation with the Ministry of Education and Sports and other institutions are developing quality systems applying adjusted quality indicators through self-evaluation;
- Schools are establishing networks in accordance with their needs, supporting each other and exchanging examples of good practice with the aim of improving working quality;
- Information on actions and phases underway has the continuity and objectivity and is transparent.

Quality assurance systems in VET need to be established on a realistic basis accepted by all internal and external stakeholders. The system has to be efficient, effective and transparent, public and accessible to all interested parties, stakeholders in education, social partners and the broad community.

A quality assurance system is founded on evaluation, monitoring and evaluation of conditions, processes and outcomes in VET, and the method for system groundwork is self-evaluation. Application of these tools and techniques enables assessment of the current situation, provides evaluation scales for established indicators and defining key areas in vocational education. Relying on indicators, schools could assess the quality of the work and develop special documents (development plans) with all evaluated components and an action plan which defines stakeholders, deadlines and the quality improvement implementation process. A quality assurance system development in 2006 should include the following activity areas:

- Provision of objective and transparent foundations for establishing a quality system, agreed at all levels.
- Provision of support to all stakeholders in the educational process within and outside schools, agreed at all levels.

¹⁷ Effectiveness means the extent to which the determined/set goals and objectives of a school programme are accomplished. Such effectiveness can be seen in relation to quality, quantity, equity or equality of educational instruction given in a school.

Efficiency means the extent to which the inputs produce the expected outputs in a school setting. Increasing efficiency means achieving the same or better outputs with fewer or the same inputs.

6.2 Assessment and exams

Vocational education strategy based on outcomes and expected changes in students' behaviour (expected changes are actually the outcomes)¹⁸ requires assessment as the basis for the continuous learning of the individual and society. All assessment methods and strategies should be directed towards this goal. The application of various methods and approaches in assessment significantly determines the image students' have in regard to their role in the education and teaching process. Assessment applied by teachers in the classroom is an integral part of the general teaching and learning process (and curricula itself). Through the teaching process, teachers are receiving information on students' progress, but also on possible additional inputs. Reform should motivate teachers to think about assessment in a broader context than examining, testing and using test scores for determining students' level and ranking.

Two **framework assessment principles** are critical:

- **The content assessment principle:** assessment should reflect the most important content acquired by students;
- **The principle of assessment of the learning process;** assessment should motivate the learning of subjects and improve teaching practice;

These principles lead directly to the application of alternative forms of assessment for collecting more precise information on what students have learned and what are they capable to do with their knowledge, as well in the creation of detailed and timely relations with students in order to get an insight on learning quality.

The primary goal in students' assessment is the improvement of the learning process and enabling:

- students to get information on their success in achieving and fulfilling the defined outcomes and difficulties in the learning process;
- teachers to receive instructions on the types and volume of students completion of planned activities as well on how the modular content had been applied;
- teachers to receive diagnostic information on difficulties students experience in dealing with content and suggesting additional activities for the improvement of teaching quality;
- teachers to receive information and feedback on the students point of view;
- teachers harmonising teaching and proposed outcomes as a permanent process.

Examination

Final examination is verifying acquired vocational competences of the candidates after accomplished education for specific profile.

Educational profile is not always the equivalent to specific occupation but to occupation group. Therefore, by adoption of curricula in specific educational profile an individual acquires competences for one or more related occupations. The list of competences, as well of knowledge and skills enabling it, are integral part of pilot curricula plan and programme for all educational profiles. Within the scope of final examination students perform a number of work tasks, through which are *verified defined competences* equal to the number of identified competences in specific educational profile.

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Final examination is organized in production units and workshops (school based or craft stores) where appropriate work posts and environment are in place. Maximum duration of this examination is three days. *Examination committee* verifies and assess acquired competences. Committee should have at least three members and three deputies, it is partly external and is consisted of:

- Two teachers of vocational subjects for specific profile, where one is the head of the committee and
- Representative of employers – craftsman in specific area.

Employers' representatives are proposed by Chamber of Commerce of Serbia in collaboration with Union of Employers, adequate business associations and Pedagogical Institute and VET Centre. This committee may not include representative of employers where the candidate performed practice classes. VET Centre runs adequate database on examination committee membership.

A school allocates the **mentor** to the student, from the list of vocational subject teachers. He/she provides assistance to students in preparation of theory and practical examination. The Mentor may be also present during final examination but can not participate in assessment. For each of the defined competences there is the list of work tasks. Final examination has to be performed through **two** or **three** work tasks, depending on the profile. Final examination success depends upon general number of points students' achieved by performing defined work tasks.

The list of the work tasks for verification of competences is prepared by VET Centre in cooperation with curriculum working groups' coordinators for pilot programmes and with the teachers from pilot schools. Every work task is standardised.

By passing final examination student acquires the right to get diploma on passed examination. With the diploma, students also receive final scores and the list of acquired competences for specific educational profile with the titles of work tasks by which these competences had been assessed. Diploma with the list of acquired competences is signed by school principle and the head of the examination committee.

Vocational Matura assesses the level of acquired knowledge and skills, as well vocational competences after accomplishing four year studies. Its form is structured in the way to verify theoretical and practical knowledge and skills. Part of vocational matura is set as the project in order to assess general and vocational competences. Vocational matura could be partly or completely external. VET Centre runs adequate database on examination tasks. All the tasks are standardised. Student who passed vocational matura acquired the right to work but also to continue with education in appropriate higher schools and faculties in accordance with defined enrolment conditions.

Competence verification exam are passing the students or the adults after completion of training programme or first and second year of studies of secondary education. Practical part of examination for verification of acquired competence for job performances (working competences) and is organized within the schools or in institutions accredited for examination which are delivering accredited programmes. All the exams are organized in accordance to special procedure defined by Centre for vocational and artistic education within the Pedagogical institute.

6.3 Monitoring the implementation of new programmes

The quality of pilot curricula can be created only during implementation in school practice. In order to have successful implementation it is necessary to monitor the process permanently in order to make timely improvements in all elements – curricula, teaching schedule, teaching content, teaching methods, training of teachers. In order to create the experts for specific profiles several prerequisites are necessary:

- The existence of appropriate curricula;
- The readiness of the schools for implementation of the curricula in regard to facilities and equipment standards;
- trained human resources;

- the appropriate preparation of teachers and teaching assistants for implementation of new curricula;
- A defined system of monitoring and assessment of curricula at school and republic level

All prerequisites need to be fulfilled.

The monitoring of curricular implementation is one of the most important links in this chain. If this process is well designed, the implementation process will provide feedback on the planned curricula, contents and methods. Only in the final year after completion of a specific profile can the extent be seen to which new curricula are securing the necessary skills and competences. Shortcomings in the teaching process or implementation method can thus be “repaired”. Schools are establishing the appropriate committees for monitoring all pilot programmes.

6.4 Accreditation and Certification

A certification system in education is one of the ways to link non-formal education and valid public papers or certificates of vocational qualifications irrespective of the process of learning. Qualifications gained through a certificate system are based on endorsed occupational and educational standards, in this way ensuring their recognition in various working environments and in the national labour market.

A well structured and transparent accreditation and certification system provides:

- Quality of education and recognition of qualifications and certificates;
- Valid information about the institutions/organisations and programmes/modules of education and training that lead to vocational qualifications and competencies;
- Mobility of the labour force, faster employment and continuous education.

The basic «contextual» preconditions for the development and establishment of an adequate accreditation and certification system are:

- The system of social partnership in education;
- A relevant national qualification framework;
- Vocation and competency standards;
- Educational standards;
- Modular programmes;
- A System of quality insurance.

6.4.1 Accreditation

Accreditation in the VET and adult education has a triple meaning. It is:

- The process of external verification and evaluation of quality of the institutions and educational programmes/modules consistent with the defined standards or criteria;
- The act of formal authorisation of the institution and/or programme from the government office, institution, and organisation;
- The guarantee of the quality of the product and service, or the activities

The accreditation policy in secondary vocational education and adult education is directed to the establishment of the institutional frames, processes, procedures and standards of accreditation. The accreditation of the institution/organisation is the quality evaluation of the institution as a whole, or the evaluation of its achievements and prospects in the fulfilment of the proper mission, goals, and satisfaction of the social (national and local) needs and the evaluation of the material-technical and human resources and work conditions that guarantee the quality of the educational process and evaluation of its effectiveness and efficiency in implementation and fulfilment of the mission and implementation of the programme.

An accredited institution (institution signed in the register) does not gain the right to issue the certificate and diploma in the specific work area, but only public acknowledgement that it possesses the assurance system which guarantees the adequacy of the programme implementation in the given work area.

The accreditation of the programme is the evaluation of the socio-economical validity of the programme, its adequate structure and prospects to fulfil the defined goals, or outcomes.

6.4.2 Certification

The significance of certification is connected with understanding the nature of the qualification. Qualification is a formal admission that a person has the appropriate knowledge, skills and competencies that enable him/her to conduct certain working (professional) roles and functions or has achieved the learning outcomes defined by the accredited programmes/modules.

The qualification is legitimated by the certificate which makes access to the labour market possible and access to certain programmes after vocational education and training (continuous education and training, university education).

In the operative sense, certification is the formal and official admission of vocational competencies (qualifications), or the successful achievement of the defined learning outcomes. The student finishes the prescribed programme and goes through the final evaluation of achievement with the minimal acceptable score.

The starting point concerning the establishment of a national certification system is the conceptualisation of the structure of education and practice and the development of the appropriate programmes/modules in the secondary VET, as well as the accreditation processes and procedures.

The establishment of the certification system provides;

- The framework of certificates and diplomas, compatible with national qualifications frame and the projected structure of the vocational education and training system;
- The general framework for the certification of competences (principles, procedures, criteria);
- National standards(demands) for certificates in some professions, areas of work and competencies;
- Procedures and standards for internal assessment;
- Procedure and standards of the external (final) assessment;
- Procedure and documents for issuing and registering certificates and diploma.

7. Career guidance and counselling

There is no national strategy for career guidance in Serbia. Recognition of this role by the interested ministries represents a basic precondition for the development of a national strategy for vocational and career guidance.

There are several crucial reasons for positioning career guidance and counselling in all segments and at all levels of the educational system:

- 1. The first** is the reconstruction of the national economy towards the service area and entrepreneurship, with a decrease of volume within industry. This implies changes in working techniques and technologies of production, privatisation and rationalisation of work; flexible and adaptable work programmes and services
- 2. Within the labour market** there is large number of unemployed (around 50% with secondary vocational education) and simultaneously, a high percentage of vacant work posts due to skill shortages.

3. There are demographic changes: – age segmentation of the population is nowadays un balanced and is getting older as a consequence of low birth and high mortality rates;

4. There is the implementation of a broadly accepted **lifelong learning concept**;

Consequently, Career guidance is required throughout VET to enable:

A. In-depth information on:

- Possibilities for the application of knowledge, skills and competences, acquired within an educational profile and within the world of labour;
- Trends in the labour market and employment;
- Possibilities and conditions for further education and training.

B. Individual work with students and adults:

- Technical assistance in developing realistic self knowledge– our own competences, personality features, and educational and working preferences;
- Recognition of the activity in which, according to labour demands, one could achieve the best results;
- Development of individual career plans based on individual characteristics;
- The creation of formal and flexible attitudes toward possible changes of career plan and for the acceptance of challenges and risks;
- Information on the content and processes necessary for making decisions related to career and education progression;
- Development of skills and communication capacities;
- Developing skills for the identification and resolution of problems;
- Developing positive attitudes towards lifelong learning;
- Developing of awareness on importance of action for personal and social self-actualisation.

Career guidance and counselling is about forming mature and responsible student personalities, capable of making good and responsible decisions on ones own professional future and to implement them. This goal is complementary and compatible with general educational goals. One of the preconditions for the realisation of this approach is the preparation of a plan and programme of activities for career guidance and counselling of students in secondary schools – with methodically-didactical manuals – designed for all participants in its implementation: teacher of all subjects and technical associates (pedagogies and psychologists), students and parents.

With regards to the role and the function of career guidance and counselling, the two ministries in charge (Ministry of Education and Sports and Ministry of Labour) should agree and identify the procedures for joint work in this area, with a special strategic document to define the major development principles of career guidance and counselling. This document would define the participation of social partners, professional associations, students and parents associations, alumni organizations, municipal associations and other relevant bodies.

7. Governance

Social partnership

Social changes brought about in transition require the broader deregulation of VET and establishing social partnership relations among all stakeholders. In this process social partners need to take much bigger responsibilities in regards to VET. Establishing new relationships among employers, trade unions, chambers and government implies the taking over of joint responsibility by all stakeholders for the development and improvement of VET in Serbia. This means:

- Networking with the local community (governance, investment policy, additional types of activities, finance, planning);
- Networking with the local and regional labour market;
- Networking with enterprises and companies;
- Networking with the professional associations;
- Networking with the entrepreneurs and their associations;
- Networking with the institutions for informal education.

Social partnership requires defining the procedures, ways for decision making and types of joint activities among the Ministry of Education, Ministry of Labour, Chamber of Commerce, Union of Employers, trade unions, vocational schools and educational institutions). In the following areas this joint activity is essential:

- Establishing a national qualification framework and defining key competences;
- Identification of the needs of the labour market;
- Defining new and revising old profiles;
- Development of curricula;
- Validating student success via external and external final exams and vocational matura;
- The creation of occupational standards;
- The development and strengthening of the training system overall;
- The professional training and upgrading of teacher and trainers.

A precondition is the establishment of the legislative and financial basis in to secure the interests of the social partners for participation in VET development.. This includes the creation of various formal types of networking and cooperation between social partners in the delivery of vocational education. The fulfilment of the tasks of social partnership at any level – from national to local, is focused on the need for further institutional development. Institutional development of VET imposes the necessity for establishing several institutional levels and strengthening the existing ones, in order to fulfil the mission and vision of VET.

In accordance with the vision and mission of VET and in consideration of the complex relations between it and economic and social development, it is necessary to establish the National Council for Vocational Education. The role of the National Council is to design, monitor and harmonise the development and improvement of VET at national level, and at the same time, to monitor and regulate the interests, needs and capacities of all social partners in the development of the formal and informal systems.. The National Council for Vocational Education indirectly cooperates and harmonizes its work with National Educational Council.

The concrete tasks of the National Council for Vocational Education are to:

- Decide and monitor VET strategy and policy development;
- Adopt a national qualification framework;
- Determine standards – occupational standards, qualification standards, vocational education standards;
- Approve vocational education curricula in both the formal and informal sectors and the programmes of vocational education and training;
- Monitor and secure quality in VET;
- Propose an accreditation and certification system;

- Approve the content and the form of the final exams, craftsman exam and vocational matura;
- Analyze and propose the vocational school network;
- Propose and determine directions for establishing the various models of social partnership at national, regional and local level.

In accordance with this strategy, the existing Centre for Vocational and Artistic Education within the Pedagogical Institute should be strengthened and provided with the support necessary to fulfil the executive tasks and activities necessary to achieve the above. The VET Centre's most important tasks should be:

- The technical tasks necessary for the development of the concept for vocational education in compliance with the need of economic and technological development;
- The management and coordination of the social dialogue and partnership at different levels of planning, development and implementation of vocational education;
- The networking of vocational schools with companies and enterprises;
- The coordination of the national qualification framework;
- The development of occupational and educational standards;
- The monitoring and evaluation of vocational education programmes;
- The development and realization of final exams and the vocational matura;
- The cooperation and monitoring of craftsman exams jointly with the Chamber of Commerce;
- The professional training of teachers, associates and trainers in vocational education;
- Providing support to and coordination of regional adult training centres etc.

With regard to the role and importance of accreditation and certification it is necessary to establish a specific **independent national institution** dedicated to work exclusively with accreditation and certification in VET. The existence of this institution could directly secure the implementation of social partnership principles and consolidate the networking between vocational education and the labour market. The basic activities of this institution would be:

- The development of a general framework for quality assurance in VET;
- The development of accreditation procedures for programmes and modules;
- The development of standards for programme/module accreditation;
- The development of procedures and indicators for programme and module evaluation;
- Monitoring and re evaluation of the programmes;
- The development of standards and procedures for verification (accreditation) of prior learning.

Institutional development in the area of vocational education embraces the establishment of social partnership at local level. Cooperation among and networking with vocational schools, local employers, enterprises, employment services and professional associations imposes the need for a different structuring at local level. In this regard, it is necessary to establish local social partnership teams/bodies with special responsibilities and tasks. Vocational school would acquire different roles and certain levels of autonomy. Vocational education development would thus make for flexibility and efficiency, especially in area of finance and co-finance where various possibilities and options would appear. This requires that the Ministry of Education and Sports, redefines coordination and cooperation with its regional offices and the vocational schools at local and regional level.

9. National Plan

Education plays a central role in the realisation of fast national economic growth especially in the context of effective knowledge dissemination. However, it is also important for sustainability of economic progress in both, industrial and third world countries

VET goals have been defined in compliance with the section on vision and mission – i.e. to provide every individual with the possibility for full social participation, improvement in quality of life, personal choice, employment, the possibility for continuing professional development. However, there are certain limiting factors in the completion of this goal notably *the lack of a national development strategy*.

Policy development in VET requires its integration into the overall national development policy as a key element of a national development plan. It should play its part in defining national employment strategy in line with inter ministerial strategies and integrated within the overall national strategy for the attraction of foreign investments and support for the development of the Serbian economy.

10. Financing of Vocational Education and Training: considerations and recommendations for modernising the present system

Currently, Serbia has an input-based funding approach. Part of the estimated budget is directly channelled to VET schools by the Ministry of Education and Sport; the Ministry of Finance channels the other part via the municipalities. The Ministry of Education and Sport is responsible for teachers' salaries. The other element, allocated by the municipalities, is for financing recurrent costs.

Salaries are paid by the Treasury according an approved information plan from the VET-school by the Ministry of Education and Sport. The budget for salaries is estimated on: numbers of teachers, qualifications and seniority.

Recurrent costs, investments and infrastructure as well as teacher training are (expected to be) paid by the municipality according to a budget estimate by the VET School. The budget estimate is not tied to specific VET regulations, except for general budgeting rules. Approval by the municipality and budget transfers are different from municipality to municipality. Some pay according to the school plan, others pay just a part, and some municipalities do not pay it all. There is no clear regulation forcing municipalities to prioritise education. Some VET programmes and VET schools are specialist institutions for the country, as a whole, so municipalities find themselves responsible for financing nation wide educational services. Every new activity (for income generation) requires permission from the Ministry of Education and Sport. The procedure has two steps: (1) a request has to be submitted to start a new field of activity; (2) each separate activity requires direct permission from the Ministry of Education.

It is possible to supplement a teacher's salary up to a maximum of 30% and part of the income generated by the commercial production of the school is used to supplement the salaries of the involved teachers. It is possible for a school to hire an external expert on a service contract. This also has to be paid from the commercial budget of the school.

The development and improvement of the financing system for VET should complement the vision and mission for vocational education and the basic principles for its further development as outlined in the preceding sections of the report.

Consequently a financing system should:

- Enable vocational schools to deliver vocational education and training in an effective and efficient way;
- Support vocational schools in cooperating with the labour market;
- Secure access for each individual and provide each region equitably from the state budget.

In present situation, it is necessary to adjust regulation (or draft new) which is defining amount of funds allocated by local community for school material expenses with the Law on local self-government and introduce obligation for controlling allocated and spent funds. It is also necessary to design clear criteria on which basis the budget of local self-government is designed (including it into the Law on local self-government) and introduce control mechanism from the Republic side in implantation of the rules. On the other side to secure the right and set the obligation to local self-government in controlling spent funds. In cases where local self-government has no sufficient funding, in accordance with the new regulation and criteria, it is necessary to secure fund transfers from the budget of the Republic. Defining the national, regional and local criteria on which basis will be structured secondary school network represents one of major elements in further improvements of financial system in vocational education and training.

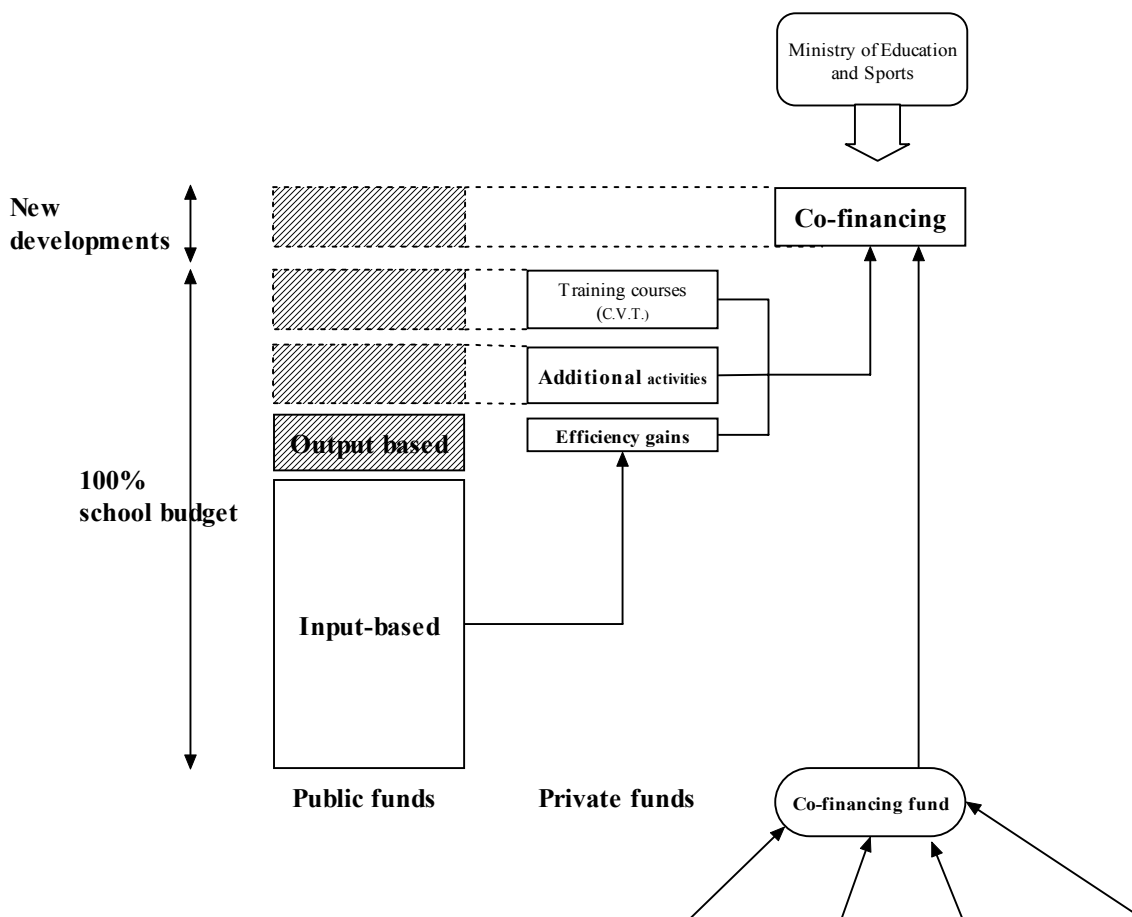
In relation with commercial activities, after paying all related taxes it is required to design clear criteria for allocation of funds within the schools and in this way to secure higher additional incomes for the teachers, which currently can not go above 30%.

The financing of VET is a critical issue in many countries. Most countries are moving from an input-based funding model to an output-based one. Dynamic funding is a mixed system of input and output funding, supplemented with a co-financing scheme. The proposed approach includes two elements to motivate VET schools to offer market driven training programmes and additional commercial activities. The two elements are:

- *Output-based funding*: the output-based funding is based on the number and kinds of diplomas issued by the school. Demand-driven diplomas will be better financed by the state budget.
- *Additional activities and short flexible courses*: to be promoted by the co-financing

The functioning of this model has four prerequisites in the policy/strategy context:

- A VET school would be free to operate in the commercial market.
- To improve the efficient use of their budgets, VET schools should have the opportunity to make savings on the input-based element of the budget.
- VET-schools would be required keep records and make 3-months financial statements
- The model should provide enhanced steering capacity from the Ministry of Education and Sport.



With the *Dynamic model*, the school budget is composed of three elements: (1) an input-based part, (2) an output based part, and (3) commercial production. The VET school may also opt for co-financing to fund new developments and investments within the school. The model is dynamic for the following two reasons. First, the size of each component is flexible and depends on the performance of the school. Second, over the years the relatively weight of each component can be adjusted by the decision makers within the Ministry of Education and Sports.

Alongside the combined input, output and commercial elements a co financing scheme is integrated into the system which is project orientated.

In principle, the co-financing scheme can be used for financing investments and the retraining of teachers. The aims of the co-financing scheme are:

- As an instrument for the government to promote certain targeted activities of schools;
- To activate schools towards having additional activities;
- To attract private money into the public system;
- to improve the financial efficiency of VET schools

The overall advantages of an integrated ‘dynamic model’ are:

- The co-financing scheme (and co-fund) opens opportunities for those VET schools willing to upgrade their programmes. If a school complies with the condition of co-financing they can opt for a one-off budget for purchasing equipment, upgrading the related infrastructure and teacher training etc.

- The output-based part of the funding model rewards schools which are offering diplomas demanded by the labour market (employees and unemployed). Year-by-year a school will get extra payments to finance recurrent costs related to the investments.
- The co-financing scheme is an important element of the dynamic funding model. It is also an innovative aspect of any new funding mechanism. The proposed co-financing scheme is very much related to the Serbian situation. Therefore, piloting is needed, in order to obtain: (1) an understanding of the income generating and efficiency capabilities of VET schools, and (2) the level of attractiveness of the co-financing scheme for VET schools.
- It provides strong incentives for VET schools to move to the labour market and to introduce demand-driven vocational programmers;
- It is a fair system because the input-based part of the budget guarantees VET schools a basic and stable funding and schools would have different possibilities to generate extra income. For example in regions where the labour market is not functioning, VET schools can opt for additional activities to qualify for co-funding. In other regions where the labour market is functioning quite well schools can opt for output-based funding.
- The system would motivate schools towards more financial efficiency. Initially, savings from the input-based funding can be used for opting for co-funding. Neighbouring schools can cooperate to achieve greater savings.

The disadvantages might be:

- Economy of scale may give larger schools an unfair advantage in either purchasing equipment or offering different types of vocational programme.
- The strong emphasis on additional activities of VET schools may put too much emphasis into 'production' and less to the pedagogical aspects of creating a business-like environment for students.
- The strong emphasis on additional activities of VET schools could be seen as unfair competition for local entrepreneurs.

Different resources can contribute to the co-financing fund:

- Ministries (education, labour, industry, economic foreign affairs, agriculture, SIEPA, SMS agencies) which want to promote certain targeted activities of the VET schools. For example to meet economic priorities for certain regions, to facilitate (foreign) investments in targeted regions;
- Donor funding;
- A regular inflow of money from the Ministry of Education;
- A regular inflow from local community;
- Commercial activities.

The co-financing fund as such is an important incentive for VET schools. The establishment of the fund needs political agreement, and political willingness to use the public school system as an instrument of economic policy. If not, ministries will not be willing to finance the fund.

For implementation, the proposed system has some completely new elements. Therefore, it will need time for schools to incorporate the new elements in the daily practice of running a school. Technical support from experts of the Ministries of Education and Sports would be indispensable.

Implementation of the model, then, requires a careful step by step approach aligned with the other elements of the modernisation of VET.

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Annex II - Quality Assurance: Concept and Main Elements

The Concept of Quality Assurance

As with any system, the education has three major elements:

- Inputs (e.g. curriculum documents, human resources, equipment, finance, (conditions of schools etc.))
- Process (e.g. teaching and learning)
- Outputs and or Outcomes¹⁹ (e.g. students' performance, attitudes etc.)

One way to refer to Quality Assurance (QA) is to talk about the QA at all these three levels. Of course, the most important one is the third level, since education should be student-centred. That is why, ensuring the quality of students' performance is described in greater details in the next paragraph.

The main elements of the QA assurance are (besides policy, strategy and planning): evaluation, monitoring, feedback, assessment, examination, certification, and accreditation. There are also two dimensions of the QA. One is the evaluation of quality of education done over longer periods of time (summative evaluation), in order to obtain data about the performance of education. The first evaluation constitutes the baseline data against which the future evaluation data will be compared. The second dimension deals with the monitoring / maintenance ("insurance") of the quality of education (formative evaluation). Since the education system is characterized by continue processes, in the same way the QA (especially its monitoring dimension) must be also.

In order to design a QA system for VET, capable of ensuring quality at all levels of the education system (inputs, process, outputs) the following major steps should be followed:

- Establish the key education indicators against which the quality will be evaluated;
- Design the data collection instruments for these indicators (e.g. questionnaires, statistical forms, tests, classroom observation evaluation forms, guidelines for interviews, reports format, school records, focus group protocols, self- and peer – evaluation instruments etc.);
- Collect of data according to a careful designed strategy / plan
- Evaluation of data
- Publish the QA reports and obtain feedback
- Monitor the QA
- Take decisions

We can give a short example on how these steps must function at the school level (in other words, how the QA process should function at the school level). First, we can establish four types of key indicators, namely:

1. internal performance indicators (e.g. distribution of students, graduation rates, students' learning outcomes, teaching performance etc.)
2. external performance indicators (e.g. acceptability of graduates, employer / community feedback, destination / future career of graduates etc.)
3. operating indicators (e.g. class size, teacher / student ratio, student's workload, resource usage, equipment etc.)
4. staff productivity indicators (e.g. qualifications, publications, citations, membership in professional bodies etc.)

¹⁹ Outcomes refer mainly to the effects of an action. They are rather qualitative and assigned to an output. For example, an output can be "x. number of teachers trained in active teaching methods" while the outcome consists of the effect of that training on students' performance.

Secondly, depending on the strategy of evaluation (internal or external), the variety of data collection instruments (some are mentioned above) should be used. Then, data is analyzed, evaluated etc. In all these steps, the head teacher must: involve the other teachers, students and parents; ensure good communication among them and a positive climate; ensure an efficient and an accurate record-keeping; produce good QA reports, including the parental report.

As a general rule, before becoming a fully operational system, the QA system must be piloted on a small number of schools. After the feedback is received and corrections done, the QA system can be generalized to the whole VET.

Short Description of the Quality Assurance Main Elements

Quality Assurance of the Process

The quality of teaching and learning is the most important factor in the education process. This is because teaching and learning determines on the one hand the performance of the students and, on the other hand, the perception of everyone who is interested in the quality of education. What does it mean to talk of a “good” or “effective” learning situation? Students learn effectively when: are motivated; understand the purpose and relevance of their work; are able to use the available resources and know where and when ask for help; show commitment to the work; acquire key information and are able to apply it in new contexts; acquire skills and demonstrate key competences; receive feedback on their progress from teachers; work co-operatively in groups etc.

It goes without saying that qualitative (quality) learning requires a “good” teacher, and, consequently “qualitative” (quality) teaching. A good teacher should have some of the following qualities: good professional knowledge and skills; patience; ability to generate a good learning atmosphere; interest in students; valuing student’s contributions; fairness; etc

Before a teacher can be effective, he or she must plan and organize their teaching well. The following are guidelines for an effective teacher in planning and organizing teaching:

- a) Be clear about the objectives both for each lesson and for the whole programme;
- b) Plan each lesson carefully;
- c) Allow students to reach outcomes in different ways;
- d) Provide appropriate teaching and learning resources to the students;
- e) Match methods and tasks to the abilities of students;
- f) Put the students’ interest first etc.

All learning and teaching requirements above can be translated into measurable indicators of the education process. Then, the steps of the QA described in paragraph 1.2 should be followed.