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NATIONAL QUALIFICATIONS FRAMEWORK IN SERBIA

National Qualifications System
Levels I to V

Belgrade, October 2013

NATIONAL QUALIFICATIONS FRAMEWORK IN SERBIA
National Qualifications System Levels I–V

This document has been produced by the Working Group for the Development of the National Qualifications Framework in Serbia. The names of the Working Group members are shown in Annex 1.

INSTITUTE FOR IMPROVEMENT OF EDUCATION
Centre for Vocational Education and Training

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ABBREVIATIONS

CCIS	Chamber of Commerce and Industry of Serbia
CVET	Centre for Vocational Education and Training
EQF	European Qualifications Framework
ETF	European Training Foundation
EU	European Union
FEEA	Functional elementary education for adults
IIE	Institute for Improvement of Education
IPA	Instrument for Pre-Accession Assistance
LFES	Law on the Foundations of the Education System
MoESTD	Ministry of Education, Science and Technological Development
MoLESP	Ministry of Labour, Employment and Social Policy
NES	National Employment Service
NQF	National Qualifications Framework
NQFS	National Qualifications Framework in Serbia
RPL	Recognition of Prior Learning
SAE	Serbian Association of Employers
SORS	Statistical Office of the Republic of Serbia
UNO	Unique Nomenclature of Occupations
VET Council	Council for Vocational Education and Training

INTRODUCTION

In the light of overall reforms of education processes and the achievement of goals defined in the development documents of the Republic of Serbia, the necessity of defining the National Qualifications Framework that will enable further improvement of the education system and thereby support onward socio-economic development as well as the development of an individual has been recognised.

The National Qualifications Framework (NQF) is an instrument which regulates the issues of qualifications required in the labour market and represents the basis for the implementation of the concept of lifelong learning. The Republic of Serbia has been developing the NQF, always respecting specificities of the Serbian system of education and tradition as well as the principles of European education practice, especially the European Qualifications Framework.

In the prospects of further development of qualifications framework and system, the Working Group recommends establishing a single-integrated national qualifications framework in Serbia which will include all levels and qualification types, regardless the way of acquisition (through formal or non-formal education, i.e. informal learning – life or work experience) or age (the young or adults). That way the integration and co-ordination of the existing qualifications systems in Serbia (e.g. higher education qualifications system, secondary vocational education qualifications system and other systems) will be enabled. Such approach would give the name of National Qualifications Framework in Serbia (NQFS) its full meaning.

In previous decade, support to the development of the NQFS Levels I–V has been obtained from several EU funded projects[1].

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[1] ETF, CARDS II, IPA 07, IPA 08.

1. QUALIFICATIONS FRAMEWORK

1.1. Institutional and legal background

By passing the Law on the Foundations of the Education System[2], the conditions for development of the National Qualifications Framework in the Republic of Serbia for secondary vocational education and training and other forms of vocational education have been fulfilled and the jurisdiction over this process has been assigned to the Centre for Vocational Education and Training within the Institute for Improvement of Education. The Centre for Vocational Education and Training prepares the NQFS and Qualification Standards, the Council for Vocational Education and Training sends proposals to the Ministry of Education, Science and Technological Development and the Ministry adopts them.

The NQFS for secondary vocational education and training and other forms of vocational education proposal is a result of the activities of the cross-sectoral Working Group[3]. It includes the vocational education qualifications Levels I–V. Amendments to the Law on Higher Education[4] have enabled the National Council for Higher Education to propose the national qualifications framework in higher education to the Ministry.

The quality assurance of all the processes that make the development and implementation of the NQFS implies the regulation, management and guidance of these processes through establishment of a new institution (or delegation of these tasks to the existing ones) as well as the establishment of appropriate legislation. Also, within this process, it is necessary to establish a national co-ordination body that will work on referencing the qualification levels within the National Qualifications Framework in Serbia to the levels of the European Qualifications Framework.

1.2. Definition of the National Qualifications Framework in Serbia

The National Qualifications Framework in Serbia represents an instrument for identification, creation and classification of qualifications in accordance with the learning requirements, in order to improve transparency, accessibility, mobility and quality of qualifications in relation to the labour market and civil society demands. Additionally, the NQFS determines processes and institutions (bodies, organisations) responsible for setting qualifications and Qualification Standards, ways and conditions for acquisition, comparison and recognition of qualifications as well as the other mechanisms for quality assurance. Qualifications, i.e. Qualification Standards are an integral part of the National Qualifications Catalogue.

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[2] Official Gazette of the Republic of Serbia No 72/2009, 3 September 2009.
[3] The list of members of the Working Group for the Development of the National Qualifications Framework in Serbia is attached to this document (see Annex 1).
[4] Official Gazette of the Republic of Serbia No 93/2012, 28 September 2012.

1.3. Purpose and goals of the National Qualifications Framework in Serbia

The purpose of developing the NQFS is to regulate the system of qualifications obtained through education and training in accordance with the requirements of social-economic development, to support the implementation of the concept of lifelong learning and to enable greater mobility of labour.

Consequently, the goals of establishing the NQFS are:
- ensuring comprehensibility, clarity and transparency of qualifications and their interconnectedness;
- development of Qualification Standards which are based on the economy and society requirements;
- enabling the orientation towards learning outcomes;
- improving the access, the flexibility of paths and the mobility within the systems of formal and non-formal education;
- enabling the identification and the recognition of non-formal and informal learning;
- improving the co-operation among relevant stakeholders, i.e. social partners;
- securing the quality system in the processes of developing and acquiring qualifications;
- securing the international comparability and recognition of Serbian qualifications.

1.4. European Qualifications Framework

After the European Qualifications Framework was established 23 April 2008[5], this document has become the main guideline for the process of development of NQFs in all member states and in future candidate countries.

The European Qualifications Framework (EQF) is a common European reference framework which links the national systems of qualifications and acts as a translation tool, i.e. a tool for understanding and interpretation of qualifications between different countries and European education systems. The EQF represents meta-framework that should enable the establishment of links between national and sector-specific qualifications frameworks in order to facilitate the transfer and the recognition of qualifications of an individual, thereby increasing transparency and mutual confidence in recognising qualifications as well as the mobility in the European labour market. The EQF has established eight (8) different and unique levels of qualifications.

The possibility of comparison, provided by the European Qualifications Framework, should be a substitute for bilateral agreements between countries, which would greatly facilitate international functioning when it comes to mobility in education and labour markets.

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[5] The European Parliament and the Council of Europe adopted the 'Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning' (Official Journal of the European Union, 2008/C 111/01).

Table 1: Comparison of qualification levels in Scotland and Denmark with the European Qualifications Framework[6] (the original table is attached to this document as Annex 3)

Scotland	EQF Levels	Denmark
Level 12	Level 8	Level 8
Level 11	Level 7	Level 7
Level 10	Level 6	Level 6
Level 9		
Level 8	Level 5	Level 5
Level 7		
Level 6	Level 4	Level 4
Level 5	Level 3	Level 3
Level 4	Level 2	Level 2
		Level 1
Level 3	Level 1	
Level 2	–	–
Level 1		

1.5. Relation between the National Qualifications Framework in Serbia and the European Qualifications Framework

In order to be able to use the EQF as a tool for comparison in Serbia, it is necessary to fulfil certain preconditions relating to:

- preparation of a national qualifications framework;
- establishing clear and understandable link between the European and national frameworks;
- clearly defined procedure for inclusion of qualifications into national systems;
- defined quality assurance system in compliance with the principles of the Bologna and the Copenhagen Declarations;
- compatibility with European principles of recognition of non-formal and informal learning;
- use of the system of transfer and accumulation of learning outcomes (credits/points);
- clear definition of roles and responsibilities of all interested parties in the country;
- establishing mechanisms of co-operation with the EU institutions and between countries.

The fact that the number of classification levels under which qualifications are arranged is the same in the NQFS and the EQF (eight), will make the referencing and comparing of national qualifications in Serbia with the qualifications in other countries through the EQF easier.

The 'Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning' has invited all member states to relate their national qualifications systems to the EQF by referencing their qualifications levels to relevant EQF levels by developing national qualifications frameworks in accordance with national legislation and practice. As a country that aspires to the EU membership, by accepting these recommendations, Serbia makes a step

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[6] http://ec.europa.eu/eqf/compare_en.htm (December 2012).

forward on this path. Criteria and procedures for referencing the NQFS to the EQF have been established in the document by the European Centre for Development of Vocational Training[7] (CEDEFOP) and are attached as Annex 4 to this document.

The success of the implementation of the EQF will depend on the transparency of international interconnection as well as the trust between interested parties that result from these processes. Therefore, it is essential that the process of establishing relationships is based on the same principles and, simultaneously, to understand the reasons for the existence of different methodologies and possible interpretations of the common criteria.

1.6. Participants in the development and implementation of the National Qualifications Framework in Serbia

Different stakeholders are involved in the process of development of the NQFS – business entities and their associations, education and employment institutions, trade unions, state institutions, local government, directors of institutions/organisations, teachers/trainers as well as students/trainees. In the process of identifying needs for qualifications, interested participants carry out direct activities in sector councils.

Sector councils are established by the Council for Vocational Education and Training as its permanent commissions formed within work sectors (areas) according to the Unique Nomenclature of Occupations.

Members of a sector council represent: the economy, i.e. the area covered by the council in question, the Chamber of Commerce, occupational chambers, associations of employers, experts in vocational education and training, organisations in charge of the employment issues, the ministries responsible for education, economy, employment, labour and social and youth policy, the association of vocational schools, branch trade unions and higher education institutions.

In the process of the NQFS development and implementation, the main tasks of sector councils are:
- analysing the existing and determining the necessary qualifications within the sector;
- identifying the qualifications that need to be updated;
- identifying the qualifications that no longer meet needs of the sector;
- determining draft Qualification Standards within the sector;
- reflecting on the implications of the National Qualifications Framework on sector qualifications;
- proposing the list of qualifications according to levels and types that can be obtained through the recognition of prior learning process.

Expert and technical support to sector councils is provided by the Institute for Improvement of Education – Centre for Vocational Education and Training.

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[7] Referencing national qualifications levels to the EQF, European Qualifications Framework Series: Note 3, 21.03.2011. http://ec.europa.eu/eqf/documentation_en.htm (December 2012).

1.7. Functions and beneficiaries of the National Qualifications Framework in Serbia

The National Qualifications Framework in Serbia is used by all interested parties in labour and education areas because, once established, framework contributes to the quality assurance of results of both the work processes and vocational education and training. Therefore, users or beneficiaries directly result from the functions of the NQFS.

Once established, the NQFS will enable a unique statistical monitoring of education, records matching in the education and employment areas as well as the comparability to other systems in Europe. Therefore, the NQFS users are public institutions, public services, funds, etc.

Enterprises, the implementers of education programmes and state entities that affect the education and employment systems benefit directly from the established NQFS when it comes to planning human resources development, education and employment – introduction of technological innovations in the working process implies that the employees have new knowledge that has to be incorporated into plans for personnel and education development. Therefore, the planning of personnel development cannot be only quantitative but also qualitative and that includes the educational structure, capabilities, skills and experience.

Experts for career guidance and counselling, employment advisors and persons who opt for either employment or further learning benefit directly from the establishment of the NQFS; this is due to the fact that provided or received information about the occupations has to be based on real information and projections of future development of occupations and in accordance with the predictions of future employment or learning possibilities. Consequently, the qualifications standards developed in accordance with current and future demands of the labour market are the only real source of career guidance and counselling.

Employment mediation and/or employment suggest established connections between work requirements and a professional possibility of the person who performs a certain job, i.e. meets the work demands. Thereby, employment agencies and services, business organisations and employed individuals are interested in gathering the reliable information on work requirements (knowledge, skills, abilities, etc) on one hand, and on characteristics of persons seeking employment, on the other.

Participants in the development and evaluation of vocational education and training programmes are interested in determining all the aspects, components and concrete programme content of vocational education. Accordingly, it is necessary to determine the specific duties (groups of activities) and tasks based on which the experts can relatively precisely define the required scope and level of concrete programme content of every qualification. Qualifications approved by the NQFS specify objectives and learning outcomes (based on duties and tasks), but the specific content of the programme, which is necessary to achieve the outcome, is not specified within the qualification or the Qualification Standard – it is the result of the work of an expert in education and training programme development and evaluation.

The realisation of programmes – which are carried out by accredited programme implementers (schools and private organisations) and whose direct participants are teachers/trainers and learners – is conducted based on conceived and programmed content of vocational education and training.

Individual learners benefit directly from the process of certification (through examination upon completion of a vocational education or training programme or through the process of recognition of prior learning – based on work or life experience). Accordingly, the examination bodies and the examiners are directly involved in the examination process prior to the acquisition of a qualification and the candidates are considered to be users.

Based on the stated above, we could say that benefits from the NQFS are:
- providing qualifications recognised by the real sector;
- reliable and fair granting of certificates to individuals when they reach a certain level of professional competence;
- quality assurance in the process of acquiring diplomas or certificates;
- planning and implementation of education and training programmes leading students or trainees to prescribed outcomes;
- keeping accurate records of persons who have acquired different levels of professional competence;
- enabling the acquisition of qualifications to a larger number of persons through non-formal education and recognition of prior learning;
- recognition of accredited and reliable training providers for adults;
- planning of human resources development at macro and micro levels;
- career guidance and counselling.

1.8. Qualification levels and descriptors

The integral National Qualifications Framework in Serbia has eight levels. In the NQFS, for each qualification level (I–V), descriptions of knowledge, skills, abilities and attitudes (hereinafter: the descriptors), necessary for performing a job or for further learning, have been established (see Table 2).

Knowledge descriptors are statements of complexity of vocational knowledge that is necessary for performing tasks, a job or an occupation[8]. In this context, knowledge is seen as a set of acquired and related facts, principles, theories and practices (experience) in relation to the particular field of work or study.

Skills descriptors refer to cognitive (logical, intuitive and creative opinion), psychomotor (physical abilities, the use of methods, instruments, tools and material) and/or social skills (communication and presentation, team work), whose differentiation in levels is determined by:
- complexity and diversity of jobs[9];
- predictability of situations/conditions;

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[8] A task, a job and an occupation represent work categories depending on its volume.
[9] A job, in the context of skills and competences descriptions, presents a work baseline and not a work unit, as was the case with the description of levels of knowledge.

- determination or standardisation of jobs;
- application of methods and techniques;
- finding new solutions;
- use of information (skills for collecting, selecting, processing, applying and creating information);
- handling utensils, tools, machines, equipment and plant;
- usage of material.

Attitude and ability descriptors refer to independency, responsibility and managing and they are seen as:
- different levels of independency in work;
- assuming responsibility for own work and/or the work of others along with specifying in relation to means, actions, procedures and decisions;
- planning, organising and evaluation of one's own work and/or the work of others.

Table 2: Qualification levels descriptors

Level	Knowledge	Skills	Abilities and attitudes
	A person who has acquired the qualification level		
I	Possesses general practical knowledge necessary for performing tasks and/or for further learning.	Applies basic skills needed for performing simple and completely predictable tasks. Handles universal utensils and tools and uses basic material.	Performs tasks according to the simple oral and written instructions, with constant or occasional supervision, depending on the nature of the job. Performs personal preparation for a job realisation. Assumes responsibility for personal activities and entrusted means.
II	Possesses practical vocational knowledge necessary for performing a group of related tasks – job and/or for further learning.	Applies basic skills needed for performing less complicated and predetermined operative jobs. Handles tools and machines, following detailed instructions and uses basic material.	Performs jobs according to determined technical and technological procedures with occasional supervision. Performs personal preparation and the preparation of the means for carrying out the work. Assumes responsibility for applying determined procedures, means and for organising their own work.
III	Possesses practical vocational knowledge with the elements of theory necessary for performing a group of related jobs – an occupation and/or for further learning.	Applies skills needed for performing medium complex, diverse, occasionally non-standard operative jobs. Collects and selects information. Handles specialised equipment, machines and plant and uses different material.	Performs jobs according to determined technical and technological procedures with increased independence. Organises their own work and/or the work of others. Assumes responsibility for applying procedures, means and for organisation of their own work.

Level	Knowledge	Skills	Abilities and attitudes
IV	Possesses vocational knowledge that includes theoretical concepts along with abstract elements necessary for performing a group of related occupations and/or for further learning.	Applies skills needed for performing complex, diverse, frequently non-standard jobs, using different methods and techniques. Applies and processes information. Handles different equipment, machines and plants and uses different material.	Performs jobs mainly independently with occasional consultations. Organises and controls own work and/or the work of others and trains them. Assumes responsibility for selecting procedures, means and for organising their own work or the work of a group.
V	Possesses extended theoretical and practical vocational knowledge necessary for problem solving within complex or specialised occupations and/or for further learning.	Applies skills needed for performing complex, specific and mostly non-standard jobs that demand participating in creating information and new solutions. Handles specialised equipment, machines and plant and uses special material.	Performs jobs with a lot of independence when it comes to making decisions. Organises, controls and evaluates own work and/or the work of others and trains them. Assumes responsibility for determining work methods and mode as well as for the operative work of others.

For easier understanding of each level, examples of specification of qualification levels have been given in Section 2.1.6.: in addition to knowledge, skills, abilities and attitudes, some additional information is listed for each particular qualification level.

2. QUALIFICATIONS SYSTEM

Integration and co-ordination of existing qualifications and qualifications systems in Serbia (the higher education qualifications system, the vocational education qualifications system, the adult education qualifications system, the system of qualifications within the private sector, etc) results in the creation of the comprehensive national qualifications system. Only the qualifications that are covered and regulated by the National Qualifications Framework in Serbia represent qualifications recognised at national level and are registered in the National Qualifications Catalogue.

Further in this document, the term qualification implies a national qualification, unless specified otherwise.

2.1. Characteristics of qualifications in Serbia

2.1.1. Qualification and a Qualification Standard

A *qualification* is a formal recognition of acquired competences. An individual obtains the qualification when the authorised body determines that they have achieved the learning outcomes prescribed by the Qualification Standard, the fact acknowledged by issuing a public document (diploma or certificate).

A *Qualification Standard* is the basis for acquiring a qualification in vocational education at a certain level of requirements and specifies professional competences and competence units necessary for performing a certain job or several similar jobs, i.e. it represents a set of professional competencies important for employment and which can be acquired through formal education, non-formal adult education and informal learning i.e. work experience.

Each Qualification Standard includes some mandatory elements:
1. a name and a code;
2. the level;
3. duration of education/training programme for acquiring a qualification;
4. the way of acquisition;
5. prerequisites for acquisition;
6. the type of public document
7. further mobility in the qualifications system;
8. work description;
9. learning goals and outcomes;
10. the way of testing the achievement of learning outcomes.

Qualifications, i.e. Qualification Standards are listed in the National Qualifications Catalogue which forms a part of the NQFS.

2.1.2. Qualification name and qualification code

Qualification name and code are the elements established by the Qualification Standard and represent an elementary statement in the list of qualifications within the National Qualifications Catalogue. These elements provide the recognition and uniqueness of a specific qualification.

Recognition means that a qualification with a concrete name is nationally recognised and acknowledged in the labour market. *Uniqueness* means that that concrete qualification is the 'one and only', which emphasizes its particularity in all the aspects and in relation to all other qualifications in the National Qualifications Catalogue.

A *qualification name* represents a lexical expression that provides concise information on the qualification, sufficient for its basic recognition. The qualification name is based on the qualification content (most often describing a characteristic activity, subject or means of work), it is in the spirit of the Serbian language and translatable (comparable). A part of the qualification name can indicate the occupation only if it is determined by international conventions, e.g. in sailing or aviation. A qualification name, as a rule, does not include description of the position in the work division, i.e. work organisation, e.g. junior/senior, first/second, higher/lower, head/assistant, etc.

Given that the NQFS encompasses numerous national qualifications, in order to arrange and exploit such system of information on qualifications, corresponding numerical coding of each qualification is conducted.

A *qualification code* is a numerical code which classifies it:
- according to Level (1 to 5);
- according to the groups of occupations and work areas from the Unique Nomenclature of Occupations (UNO)[10];
- according to the type of public document (diploma or certificate).

A qualification code consists of four fields (see Figure 1 below) with the following meaning:
- the first (two-digit) field indicates the qualification level: number 10 indicates Level I, the value of 20 indicates Level II, and so on up to the value of 50, which indicates Level V;
- the second (two-digit) field contains a serial number of the group of occupations from the UNO (a two-digit number whose values range from 01 to 99) that the qualification in question belongs to;
- the third (double-digit) field indicates the qualification serial number (a two-digit number, with the initial value of 01);
- the fourth field indicates the type of public document, either 1 (a diploma) or 5 (a certificate).

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[10] Unique Nomenclature of Occupations, Savremena administracija, Belgrade, 1990. A horizontal classification of occupations – the UNO is attached to this document as Annex 2.
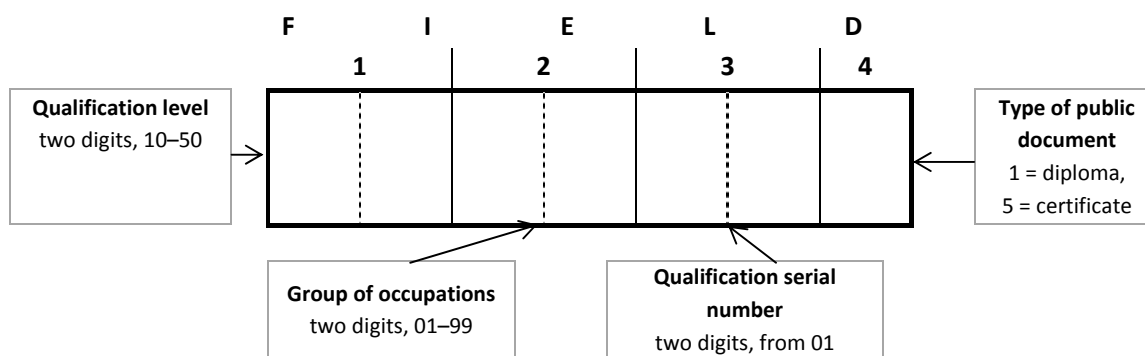
Figure 1: Structure of a qualification code

Example:
- The qualification Baker at Level III, with the diploma following three years of schooling, will have the code 30.05.01.1.
- At the same time, the qualification Baker at Level III, gained through non-formal education or validation of prior learning, will have the code 30.05.01.5.

In the example above, the numerical marks have the following meaning:
- in both cases, number 30 indicates a qualification at Level III;
- 05 is the serial number of the Food and Beverages Processing group of occupations from the UNO (which, by its work content, bakery belongs to);
- the number 01 signifies the qualification serial number within the Food and Beverages Processing;
- the number 1 signifies the diploma and number 5 indicates the certificate.

So, in this example, both qualifications have the same value in the labour market; their differences are reflected only in ways of gaining the qualification as well as in the possibilities for further education of persons who have acquired one of these qualifications. Therefore, in the National Qualifications Catalogue these will be listed as two different qualifications (30.05.01.1 Baker and 30.05.01.5 Baker*)* that are equally valued in the labour market because the holders of these qualifications possess the same competences for performing the job.

2.1.3. Ways of acquiring qualifications

Taking into account the concept of lifelong learning, the NQFS allows different ways and paths for acquiring qualifications of all levels at any age, so accordingly we differ:
- qualifications obtained through formal education (schooling), after which a diploma or a certificate are issued as a public document;
- qualifications gained through non-formal education (mostly through training), after which a certificate is issued as a public document;

- qualifications obtained through informal learning (by recognising the prior learning based on work or life experience) after which a certificate is issued as a public document.

The outcomes of the vocational segment of the formal and non-formal education and informal learning (recognition of prior learning) are very similar, but it is necessary to make a distinction in order to identify differences in the area of learning that refers to general knowledge.

Formal education

Formal education presents an organised learning process which is conducted based on teaching plans and programmes for primary and secondary education as well as the programmes for other forms of vocational education adjusted to the labour market demands. Formal education provides a wider preparation for inclusion into the world of labour, with continuous general education and with the basis for further mobility within the education system.

Primary education is compulsory according to the Law and lasts for eight years. Special emphasis is on functional elementary education for adults.

Elementary education for adults (according to the functional elementary education for adults model) is divided into three cycles. The first cycle includes the first four grades of primary education, and the second one covers the fifth and sixth grades. The third cycle, which includes seventh and eighth grades of primary education, also includes vocational training for acquiring knowledge and skills needed for performing simple occupations and qualifications at Levels I and II.

Secondary education can be general (gymnasia), vocational and artistic. Because the NQFS is legally focused on secondary vocational education, any further reference to formal education will be directed to the secondary vocational education except in case of FEEA.

Secondary vocational education can last for four or three years. However, it also includes various forms of education which allow the acquisition of qualifications at different levels through professional development and training, education for work, master and specialist education.[11]

Through formal education it is possible to gain qualifications primarily at Levels III, IV and V. Exceptions are qualifications at Levels I and II because they can be obtained through formal education only if the qualification is structured in a way that allows exit points after the first and second years of schooling.

Non-formal education

Considering that the adults primarily have the need for knowledge and skills that are necessary for performing a certain job, they often acquire qualifications through the process of non-formal education or informal learning, i.e. the recognition of prior learning.

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[11] Section 2.1.6. shows the relation between the levels of qualifications and ways for their acquisition.

Non-formal adult education is organised learning process for adults on the basis of special programmes whose aim is to provide knowledge, skills, abilities, attitudes and values, focusing on personal development of adults, work, employment and social activities.

It is possible to acquire qualifications at all levels through non-formal education, except Level IV.

Informal learning

Informal learning of adults presents the process of self-acquisition of knowledge, skills, abilities and attitudes in everyday life, work and social environment which can be assessed through the process of recognition in relation to the Qualification Standard.

Recognition of prior learning

Recognition of prior learning (RPL)[12] is a process that requires time and a specific preparation of an individual and is therefore a matter of individual choice. From the perspective of an individual, the RPL goals are to evaluate relevant values of prior learning based on experience as well as to increase self-esteem and self-confidence of an individual who has work experience and no certificate.

It is possible to acquire qualifications at Levels I–V through the RPL process, but not as a general rule and will only apply to those qualifications that will be approved beforehand.

At Level IV, it is possible to access the RPL process in case of retraining (e.g. a person who has graduated from a gymnasium and has a two-year experience as a business administrator can obtain the Level IV qualification Business Administrator through the RPL process).

At Level V, it is possible to access the RPL process in case of additional training (e.g. a person who has graduated from a gymnasium and has a two-year experience as a tourist guide can obtain the Level V qualification Tourist Guide).

Recognition of corporate qualifications

In the conditions of globalisation and increased mobility of a modern man and in terms of qualifications obtained, the attitude towards the qualifications that have been created under the auspices and for the needs of multinational companies (e.g. Coca-Cola or McDonald's) or propulsive sectors such as the information and communication technologies sector (e.g. Microsoft or Oracle) and refer to specific competencies is considered to be interesting. As these qualifications are supranational, the holder of these qualifications in Serbia can validate their acquired competences through the RPL process. In addition,

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[12] In this document, RPL is a terminological equivalent to validation of non-formal and informal learning as stated in 'Council recommendation of 20 December 2012 on the validation of non-formal and informal learning' (Official Journal of the European Union, 2012/C 398/01). http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:398:0001:0005:EN:PDF

independently of the NQFS, the employer has the autonomous right to hire a person with these qualifications.

2.1.4. Preconditions for acquiring within the qualifications system

Preconditions in the terms of the NQFS are minimal requirements that a person has to meet in order to start the process of acquiring a qualification at a certain level. They are an integral part of every Qualification Standard in which they are specifically defined in relation to the way of obtaining a qualification (formal education, non-formal education or the recognition of prior learning) and person's age (the young and adults).

Level I Access to the acquisition of qualifications is enabled for persons who previously have completed primary education or the second cycle of functional elementary education for adults. In the case of RPL, in addition to completing the primary education, requirements include one year of relevant work experience.

Level II Access to the acquisition of qualifications is enabled for persons who previously have completed primary education or the second cycle of functional elementary education for adults. In the case of RPL, in addition to completing the primary education, requirements include two years of relevant work experience.

Level III Access to the acquisition of qualifications is enabled for persons who previously have completed primary education or have obtained the qualification at Level I or II. In the case of RPL, in addition to completing the primary education, requirements include five years of relevant work experience.

Level IV Access to the acquisition of qualifications is enabled for persons who previously have completed primary education or have obtained the qualification at Level III for additional training.

Level V Access to the acquisition of qualifications is enabled for persons who have completed three-year of four-year secondary education and have two or five years of appropriate working experience, depending on the way of acquiring qualification. Qualification obtained at Level V is primarily intended for the labour market and does not affect the continuation of schooling within higher education.

2.1.5. Duration of education for acquiring qualifications

The minimal duration of formal or non-formal education/training programmes for acquiring qualifications is established by Qualification Standards.

Duration of the formal education programmes is regulated by the Law.

The secondary vocational education programmes for the young last either three (Level III qualifications) or four years (Level IV qualifications).

In case of the formal secondary vocational education of adults, programmes have to be adjusted to the needs and abilities of adults as well as the labour market demands. In this case, the education lasts either two years when it comes to Level III qualifications or three years providing qualifications at Level IV.

The formal education for acquiring qualifications at Level V (master, i.e. specialist education) lasts for either one or two years and it can be accessed by any person who has at least two years of working experience in a particular occupation.

The non-formal education programmes for acquisition of qualifications have the following duration depending on the level:

- Level I: not less than 120 hours;
- Level II: not less than 240 hours;
- Level III: not less than 1,000 hours (at least six months and at most two years);
- Level V: not less than six months and no more than two years.

The defined duration of non-formal education/training, as described above, provides the basic credibility of the vocational education process for the young and adults, i.e. it contributes to the quality assurance of the process of acquiring qualifications at a certain level.

Accordingly, the duration of education/training is the basis for introducing the credit system (points) to vocational education, i.e. adult education.

2.1.6. Specification of qualification levels

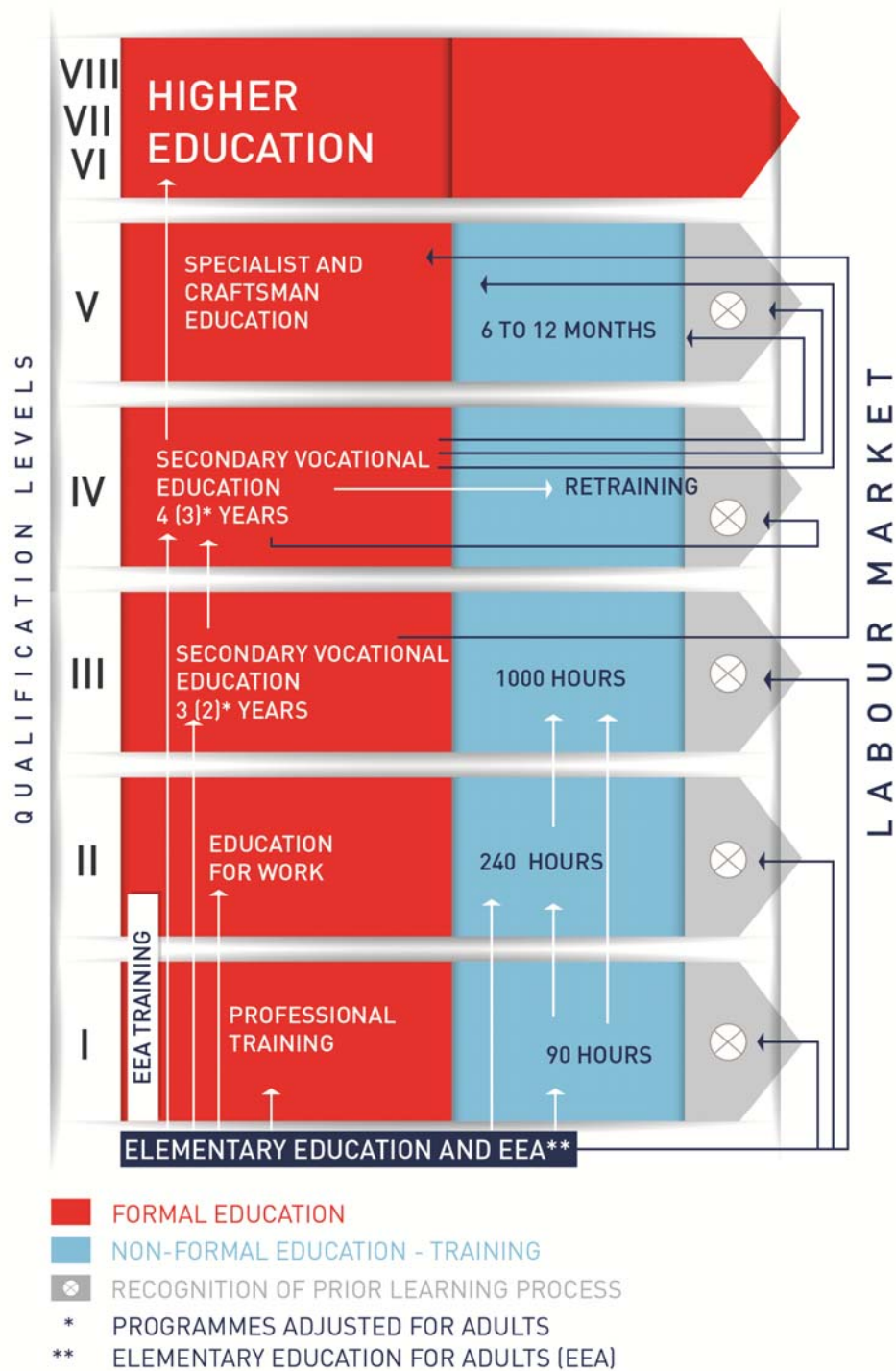Qualification Levels I–V are shown schematically in Figure 2.

Figure 2: Qualification Levels I–V

All the contents that define a qualification level – descriptors, the way of acquisition, preconditions, the minimum duration of the programme, public document, and vertical mobility – are shown in the tables below (separately for each level).

LEVEL I QUALIFICATIONS

<table>
<tr><td rowspan="3">QUALIFICATIONS FRAMEWORK</td><td rowspan="3">Level descriptors</td><td>Knowledge</td><td>Possesses basic practical vocational knowledge to perform tasks and/or for further learning.</td></tr>
<tr><td>Skills</td><td>Applies basic skills needed for performing simple and completely predictable tasks.

Handles basic utensils and tools and uses basic material.</td></tr>
<tr><td>Abilities and attitudes</td><td>Performs tasks according to the simple oral and written instructions, with constant or temporary supervision, depending on a nature of job.

Performs personal preparation for a job realisation.

Assumes responsibility for personal activities and entrusted means.</td></tr>
</table>

<table>
<tr><td rowspan="6">QUALIFICATIONS SYSTEM</td><td>Way of acquisition</td><td>Formal education (professional training)</td><td>Functional elementary education for adults (FEEA)</td><td>Non-formal education</td><td>Recognition of prior learning (RPL)</td></tr>
<tr><td>Preconditions</td><td>Primary education completed</td><td>The second cycle completed</td><td>Primary education completed</td><td>Primary education completed and a year of relevant work experience</td></tr>
<tr><td>Minimum duration of programme</td><td>Up to one year</td><td>90 hours of training</td><td>90 hours of training</td><td>–</td></tr>
<tr><td>Public document</td><td>Certificate of passing the exam of professional competence</td><td>Certificate of training completion</td><td>Certificate</td><td>Certificate</td></tr>
<tr><td>Vertical mobility</td><td colspan="4">Acquiring a qualification at Level II or III (through non-formal education or RPL)</td></tr>
<tr><td>Example[13]</td><td>Training for installers of floor coverings</td><td>Training for installers of floor coverings</td><td>Training for pasta making</td><td>Basket Weaver</td></tr>
</table>

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[13] Examples are taken from the Rulebook on the programme of the pilot functional elementary education for adult Roma (Official Gazette of the Republic of Serbia No 7/2006), the Rulebook on the programme of the pilot training for adults (Official Gazette of the Republic of Serbia No 2/2009), the Rulebook on the programme of the pilot functional elementary education for adults (Official Gazette of the Republic of Serbia No 6/2011).

LEVEL II QUALIFICATIONS

QUALIFICATIONS FRAMEWORK	Level descriptors	Knowledge	Possesses practical vocational knowledge necessary for performing a group of related tasks – a job and/or for further learning.
		Skills	Applies basic skills needed for performing less complicated and predetermined operative jobs. Handles tools and machines, following detailed technical instructions and uses basic material.
		Abilities and attitudes	Performs jobs according to determined technical and technological procedures with occasional supervision. Performs personal preparation and the preparation of the means for carrying out a job. Assumes responsibility for applying certain procedures, means and for organising own work.

	Way of acquisition	Formal education (education for work)	Functional elementary education for adults (FEEA)	Non-formal education	Recognition of prior learning (RPL)
QUALIFICATIONS SYSTEM	Preconditions	Primary education completed	The second cycle completed	Primary education completed	Primary education completed and two years of relevant work experience
	Minimum duration of programme	2 years	240 hours of training	240 hours of training	–
	Public document	Diploma on two-year education for work completion	Certificate	Certificate	Certificate
	Vertical mobility	Acquiring a qualification at Level III (through non-formal education or RPL)			
	Example[14]	–	Training for gas welding	Training in chimney sweeping	Gerontology Nurse

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[14] Ibid.

LEVEL III QUALIFICATIONS

<table>
<tr><td rowspan="3">QUALIFICATIONS FRAMEWORK</td><td rowspan="3">Level descriptors</td><td>Knowledge</td><td>Possesses practical vocational knowledge with the elements of theory necessary for performing a group of related jobs – an occupation and/or for further learning.</td></tr>
<tr><td>Skills</td><td>Applies skills needed for performing medium complex, diverse, occasionally non-standard operative jobs.

Collects and selects information.

Handles specialised equipment, machines and plant and uses different material.</td></tr>
<tr><td>Abilities and attitudes</td><td>Performs jobs according to determined technical and technological procedures with increased independence.

Organises own work and/or the work of others.

Assumes responsibility for applying procedures, means and for organisation of their own work.</td></tr>
</table>

<table>
<tr><td rowspan="6">QUALIFICATIONS SYSTEM</td><td>Way of acquisition</td><td>Formal education (secondary vocational education)</td><td>Non-formal education</td><td>Recognition of prior learning (RPL)</td></tr>
<tr><td>Preconditions</td><td>Primary education completed</td><td>Acquired qualification at Level I or II</td><td>Primary education completed and five years of relevant work experience</td></tr>
<tr><td>Minimum duration of programme</td><td>3 years, 2 years for adults</td><td>1,000 hours of training</td><td>–</td></tr>
<tr><td>Public document</td><td>Diploma on secondary education completion and Certificate of having passed the exams within the educational profile[15] programme</td><td>Certificate</td><td>Certificate</td></tr>
<tr><td>Vertical mobility</td><td>Acquisition of a Level IV qualification (additional qualification) or a Level V qualification (for craftsmanship/specialisation)</td><td>–</td><td>–</td></tr>
<tr><td>Example</td><td>Baker – diploma</td><td>Baker – certificate</td><td>Baker – certificate</td></tr>
</table>

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[15] The certificate of having passed the exams within the educational profile programme is intended only for the educational profiles whose programmes are based on the Qualification Standard.

LEVEL IV QUALIFICATIONS

<table>
<tr><td rowspan="4">QUALIFICATIONS FRAMEWORK</td><td rowspan="4">Level descriptors</td><td>Knowledge</td><td>Possesses vocational knowledge that includes theoretical concepts along with abstract elements necessary for performing a group of related occupations and/or for further learning.</td></tr>
<tr><td>Skills</td><td>Applies skills needed for performing complex, diverse, frequently non-standard jobs, using different methods and techniques.

Applies and processes information.

Handles different equipment, machines and plant and uses different material.</td></tr>
<tr><td>Abilities and attitudes</td><td>Performs jobs mainly independently with occasional consultations.

Organises and controls own work and/or the work of others and trains them.

Assumes responsibility for selecting procedures, means and for organising own work or the work of a group.</td></tr>
</table>

<table>
<tr><td rowspan="6">QUALIFICATIONS SYSTEM</td><td>Way of acquisition</td><td>Formal education (secondary vocational education)</td><td>Non-formal education</td><td>Recognition of prior learning (RPL)</td></tr>
<tr><td>Preconditions</td><td>Primary education completed or three-year secondary education for additional training</td><td>Four-year general secondary education completed for retraining</td><td>Four-year general secondary education completed and two years of appropriate work experience (for retraining)</td></tr>
<tr><td>Minimum duration of programme</td><td>Four years, three years for adults</td><td>–</td><td>–</td></tr>
<tr><td>Public document</td><td>Diploma on secondary education completion and certificate of having passed the exams within the educational profile programme</td><td>Certificate</td><td>Certificate</td></tr>
<tr><td>Vertical mobility</td><td>Acquiring a Level V qualification (for specialist education) or higher education</td><td>Acquiring a Level V qualification (through non-formal education or RPL)</td><td>Acquiring a Level V qualification(through non-formal education or RPL)</td></tr>
<tr><td>Example</td><td>Food Technician – diploma</td><td>Business Administrator – certificate</td><td>Business Administrator – certificate</td></tr>
</table>

LEVEL V QUALIFICATIONS

QUALIFICATIONS FRAMEWORK	Level descriptors	**Knowledge**	Possesses extended theoretical and practical vocational knowledge necessary for problem solving in complex or specialised occupations and/or for further learning.
		Skills	Applies skills needed for performing complex, specific and mostly non-standard jobs that demand participating in creating information and new solutions. Handles specialised equipment, machines and plant and uses special material.
		Abilities and attitudes	Performs jobs with a lot of independence when it comes to making decisions. Organises, controls and evaluates their own work and/or the work of others and trains them. Assumes responsibility for their own decisions and for the operative work of others.

	Way of acquisition	**Formal education (specialisation or craftsmanship)**	**Non-formal education**	**Recognition of prior learning (RPL)**
QUALIFICATIONS SYSTEM	**Preconditions**	Three or four-year secondary education completed and two years of relevant work experience	Four-year secondary education completed and two years of relevant work experience	Four-year secondary education completed and five years of relevant work experience
	Minimum duration of programme	1 to 2 years	6 months to 1 year	–
	Public document	Certificate of having passed the specialist exam or the Craftsmanship certificate	Certificate	Certificate
	Vertical mobility	–	–	–
	Example	Baker – specialist Baker – craftsman	System Administrator	Tourist Guide

2.2. Quality assurance within the process of acquiring qualifications

One of the important elements of the NQFS is assuring the quality in the processes of developing and acquiring qualifications.
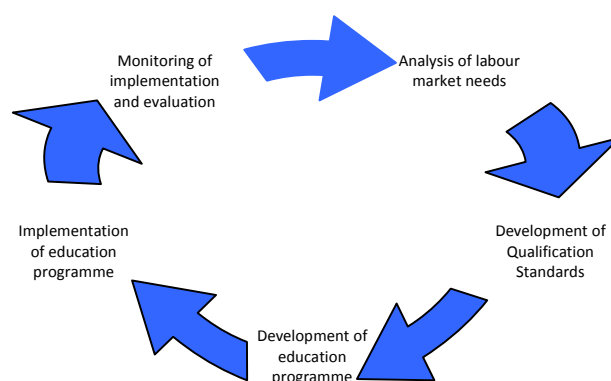

Figure 3: Mechanisms of quality assurance in the process of developing and acquiring qualifications

Quality assurance of the qualifications development process includes defining the relevant institutions, i.e. the implementers of the development process and their activities. At the same time, ensuring quality in the process of acquiring qualifications involves, on the one hand, the accreditation of providers of formal and non-formal education and training and recognition of prior learning, and, on the other, the establishment of an objective review and assessment of the achievements of individuals leading to the issuing of public documents which have been recognised and acknowledged at the labour market.

Additionally, in order to prove the NQFS trustworthy to the national stakeholders and international community, there should be the appropriate procedure to ensure that:
- qualifications are well thought out and fit for purpose;
- qualifications are approved by the competent institution;
- the programmes leading to acquiring qualifications are implemented by the accredited providers of education;
- the review and evaluation systems in the process of acquiring qualifications are relevant and reliable (regardless of the method of acquisition, which is particularly applicable to the recognition of prior learning).

In a long-term perspective, the timeliness of national qualification implies their continuous monitoring and updating in accordance with the technical, technological and social developments. Therefore, it is necessary for the competent institution to regularly update qualifications, i.e. the National Qualifications Catalogue in the period of at least five years.

Generally speaking, an effective quality assurance system has elements of centralised control, i.e. it is harmonised with the rules and regulations at national level. Centralised regulation is essential to such an extent as it is necessary to ensure fulfilment of standards and adequate protection of individuals, employers and education providers. However, the centralised regulation does not imply excessive bureaucratisation, which directly depends on the decisions of policy makers that aim to encourage institutions and organisations to take responsibility for the quality of the acquisition of qualifications process.

2.2.1. Process of the development of national qualifications

The implementers of the qualifications development process are the interested parties (employers, schools, organisations involved in adult education, etc), the Institute for Improvement of Education, the National Employment Service, sector councils, the Council for Vocational Education and Training, the ministry responsible for education.

The qualifications development process has three phases:
1. identification of qualifications needed at the labour market;
2. development of the Qualification Standard proposal;
3. adoption of the Qualification Standard.

Figure 4 serves as a general model of the national qualifications development process.

Qualifications development process

Interested parties	IIE	Sector Council	VET Council	Ministry responsible for education affaires

Start

1-The need for qualification identified

2-Development of the Initial Qualification Proposal

The Initial Qualification Proposal

NO

3-Auditing the submitted documentation

YES

4-Deciding on the Initial Qualification Proposal

YES

NO

6-Submission of a negative response to the proponent

5-Rationale

End

7-Development of the Draft Qualification Standard

The Draft Qualification Standard

8-Deciding on the Draft Qualification Standard

NO

YES

1

Qualifications development process

Interested parties	IIE	Sector Council	VET Council	Ministry responsible for education affaires

1

9-Developing the Qualification Standard Proposal

The Qualification Standard Proposal

10-Deciding on the Qualification Standard Proposal — NO

YES

The Qualification Standard Proposal confirmed

11- Adoption of the qualification standard — NO

YES

Qualification standard

12-Updating the National Qualifications Catalogue
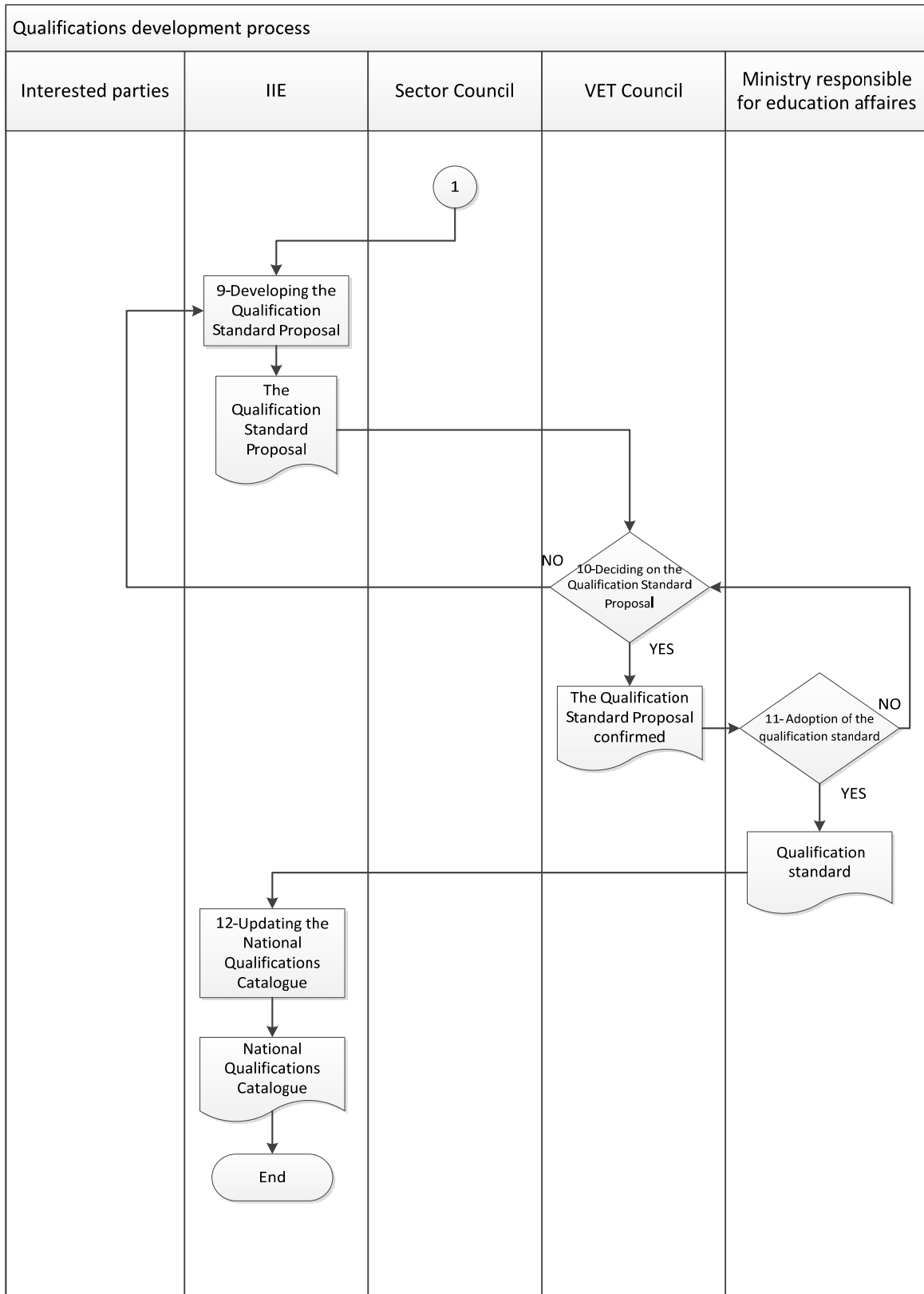
National Qualifications Catalogue

End

Figure 4: Flowchart of the qualifications development process

Figure 4 can be additionally described by specifying the process implementers, their activities and legal basis for those activities.

Step 1 Interested party identifies the need for qualification through regular activity – working process. Interested party can be an employer, a sector council, a school, the NES, the IIE, the ministry responsible for education, etc.

Step 2 For the identified qualification, the interested party creates the document Initial Qualification Proposal using prescribed forms downloaded from the IIE website. Along with the initial proposal, the interested party delivers a justification with necessary supplements to the IIE.

Step 3 The IIE considers the submitted documents for the initial qualification proposal. If the documentation is incomplete or inadequate, the initial proposal is returned to the interested party for refinements.

Step 4 The relevant sector council considers the initial qualification proposal and decides on the relevance of the proposed qualification.

Step 5 If the decision is a negative one, the sector council forms an explanation (rationale) and forwards it to the IIE.

Step 6 The IIE notifies the proponent of the rejection of the proposal and submits the rationale.

Step 7 Based on a positive decision on the initial proposal, the IIE, after consulting with the proponent, creates the document Draft Qualification Standard. The IIE submits the prepared draft Qualification Standard to the relevant sector council.

Step 8 The relevant sector council examines the Draft Qualification Standard according to the established methodology of the sector council. If during the audit imperfections are identified, the Draft Qualification Standard is sent back to the IIE for refinements.

Step 9 Based on the sector council's acceptance of the Draft Qualification Standard, the IIE creates the document Qualification Standard Proposal and delivers it to the VET Council for analysing.

Step 10 The VET Council analyses and makes a decision on the submitted Qualification Standard proposal. If the decision is a negative one, the Qualification Standard proposal is returned to the IIE for refinements.

Step 11 After the adoption, the document mentioned above is renamed as the Qualification Standard which is then sent to the ministry responsible for education for adoption.

Step 12 The Qualification Standard document becomes an integral part of the National Qualifications Catalogue which is updated by the IIE.

2.2.2. Accreditation of service providers within the process of acquiring qualifications

The primary purpose of accreditation is to ensure and to improve quality in the process of acquiring qualifications. In the NQFS, accreditation has triple meaning since it represents:

- the process of external evaluation of organisations providing formal education, non-formal education and/or recognition of prior learning in accordance with predefined standards and procedures;
- the act of formal approval by the competent authority, institution or organisation;
- quality assurance of the process of acquiring qualifications.

Accreditation of institutions providing formal education is conducted by the ministry responsible for education through so called school verification process, by checking the material and technical equipment as well as the staff's competence to realise programmes for obtaining qualifications.

Accordingly, the accreditation of service providers in the process of acquiring qualifications here refers to the organisations that implement programmes of non-formal education, i.e. the recognition of prior learning process.

The accreditation system should provide:

- improvement of the quality of education in terms of fulfilling clients' (individuals, companies, economy, local communities) needs;

- creation of the unique and quality education market in which education organisations operate under the same conditions and rules of general validity;
- improvement of the ability of organisations for education and training to monitor, evaluate and improve the services they offer;
- improvement of user's capabilities for the timely and proper selection of organisations, i.e. education and learning programmes;
- improvement of co-operation between different institutions and organisations for education and training and their connection with the economy and the labour market;
- improvement of mobility in education and the establishment of compatibility and comparability between organisations and educational programmes.

The accreditation process applies to:
- the evaluation of the quality of an organisation in general (the evaluation of its achievements and capabilities in fulfilling its own mission, goals and satisfying social needs);
- the evaluation of material, technical and human resources and working conditions that guarantee the quality of the process of acquiring concrete qualifications.

2.2.3. Exams in the process of acquiring qualifications

In the context of NQFS, exams represent an organised process defined in advance whose purpose is for an individual to acquire qualifications based on examination of their competence, i.e. the assessment of achievement of learning outcomes.

Exams have different structures and contents depending on the level of qualification e.g. final exam, VET matura, specialist exam, etc. Having in mind that the exam is based on a national Qualification Standard, its structure and content are identical regardless of whether the qualification is acquired through formal or non-formal education or through the RPL.

The exam after completing the process of formal or non-formal education as well as the recognition of prior learning process is based on a process of summative assessment.

The most important function of assessment is awarding formal qualifications in relation to national standards. Assessment means to generate and collect proof of the knowledge, skills and competencies that have been achieved by learners as well as to evaluate the evidence in relation to defined standards.

Assessment, as a measure for quality assurance, has to be valid, reliable, feasible in practice, equal and fair.

Validity is a measure of accuracy of assessment; in other words, assessment is valid provided that it measures what we want to be measured.

Reliability is a measure of consistency in assessment; it is reliable if we can completely rely on its results.

Feasibility in practice means that the method of assessment is practical and cost-effective; in other words, the assessors have appropriate resources available to conduct assessment (taking into account the equipment, time and human resources).

Equality and *fairness* imply that the assessment is available to all candidates who have the potential for being successful and it offers equal opportunities for achievement of results.

Quality assurance of the process of acquiring qualifications means that exams are based on the concept of competence-based assessment. That way development of objective assessment criteria and corresponding methods and instruments is enabled. Competence-based assessment is based on operationalisation of working tasks which derive from real work requirements, i.e. work processes defined in the Qualification Standard.

The purpose of designing exams and assessment in this way is quality assurance of the process of assessment by establishing and implementing principles and procedures on the one hand and assurance of competency of assessors on the other. Having this in mind, regardless of whether they are teachers, trainers/instructors or experts from the world of labour, assessors need to be trained in implementation of methodology of competence-based assessment and in implementation of the exam procedures.

In accordance with that, there has to be a responsible institution or body which performs the training of assessors for all forms of education and keeps the data base of assessors for non-formal education and recognition of prior learning.

By arranging exam areas, harmonisation of quality of acquiring qualifications at national level is established and this is enabled by implementation of exams in accordance with uniform requests, under equal conditions and respecting defined procedures and instructions for realisation.

2.2.4. Public documents on qualifications

A public document is an evidence of acquired competences in accordance with the Qualification Standard. Also, it represents a guarantee of the quality of the acquisition process for an individual as well as for an employer and a provider of educational services.

A *diploma* (and a *diploma supplement*[16]) is issued to an individual if they:
- have passed the final exam after three-year secondary vocational education;
- have passed the vocational or artistic *matura*, following four-year secondary education;
- have graduated from two-year education for work.

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[16] A diploma supplement is a document which is issued in addition to a valid diploma and is primarily intended for employers. It gives a specification of professional competences defined by the Qualification Standard as well as the exam results. Diploma supplement has been introduced into the system of public documents under the name Certificate of having passed the exams within the educational profile programme.

A *certificate*[17] is issued to an individual if they:

- have completed a part of educational plan and programme by passing the exam in one or more subjects;
- have completed the educational plan and programme of specialist education and have passed a specialist exam;
- have completed the educational plan and programme of specialist education and have passed the master craftsman exam;
- have completed a professional training programme and have passed the professional competence exam.

A *certificate*[18] is issued to an individual:

- if they have passed the corresponding exam upon the training completion, i.e. the non-formal education process;
- who has been recognised the prior learning based on work or life experience.

Public documents on the acquired qualifications have to be in accordance with the norms prescribed by the ministry responsible for education. Records on the issued public documents are kept in accordance with the law.

2.2.5. Qualification credit system

Credit based qualifications systems are developed in accordance with the European Credit System for Vocational Education and Training (ECVET) established on the basis of the Copenhagen Declaration[19]. A qualification credit system implies the creation of a technical framework which classifies qualifications based on learning outcomes and ways of validating the achievement of outcomes. This system allows the transfer, accumulation and recognition of parts of qualifications, which contributes to the flexibility especially in the field of adult education.

A credit is usually a numerical value of time spent in learning – this is the time needed for a typical student, without prior relevant achievements, to complete the qualification. In a credit system, each qualification is awarded the appropriate number of credit points.

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[17] In Serbian 'uverenje'.

[18] In Serbian 'sertifikat'.

[19] The Copenhagen Declaration for Vocational Education and Training, 2002.

3. RECOMMENDATIONS FOR FURTHER DEVELOPMENT OF NATIONAL QUALIFICATIONS FRAMEWORK IN SERBIA

In the course of development of this document, the Working Group for the Development of the National Qualifications Framework has determined that it is necessary to further develop certain segments of the NQFS as well as to make strategic plans for their implementation. Accordingly, some recommendations whose aim is to support the policymakers in this area, i.e. decision-makers, have been made, including:

1) Adoption of the appropriate legal framework

In order to ensure systematic development of the NQFS, it is necessary to adopt a new and harmonise existing legal and other regulations in order to determine the jurisdiction of institutions, procedures financial and human resources, etc.

2) Institutionalisation of the National Qualifications Framework in Serbia

To guarantee the quality of all the processes that make up the development and implementation of the NQFS (the qualifications development process, the accreditation of service providers for acquiring qualifications, recognition of prior learning, the development of a credit system, keeping the National Qualifications Catalogue up-to-date, etc) it is necessary to establish a new institution or delegate these tasks to existing ones.

3) Establishing a national co-ordination body for referencing the National Qualifications Framework in Serbia to the European Qualifications Framework

Such national co-ordination body, in accordance with the aforementioned document of the European Centre for the Development of Vocational Training, should:
- ensure the use of transparent methodology when referencing national qualification levels to those of the EQF in order to encourage comparisons between them and assure publishing and respecting of decisions deriving from such comparisons;
- ensure that all the participants in the process of developing qualifications have access to information and guidelines on what is the relationship between national qualifications and the EQF;
- work on referencing the NQFS qualification levels to those of the EQF;
- encourage the participation of social actors (ministries, higher education institutions, secondary general and vocational education institutions, social partners, etc) in the analysis of qualifications at European levels in accordance with the roles given to different conceptual and legal solutions.

4) Merging NQFS Levels I–V with NQFS Levels VI–VIII

In order to create an integral NQFS, it is necessary to establish the co-ordination of activities of the team that are working on the NQFS Levels I–V and the team who are developing the NQFS Levels VI–VIII (for higher education). Since the responsibility for the development of the NQFS belongs to the Council for

Vocational Education and Training and the National Council for Higher Education, it is necessary to establish their co-operation under the auspices of the ministry responsible for education.

The integral NQFS would also cover so-called 'regulated professions' which are obtained through formal education and are regulated by the 'Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications' (Official Journal of the European Union, 2005L0036 – EN – 24.03.2011 – 006.001)[20]. It has been recommended that there should not be more than 100 professions regulated at national level.

5) Establishing a classification of qualifications within the National Qualifications Framework in Serbia

During the preparation of this document, the Working Group has decided to use the horizontal classification of occupations, which forms an integral part of the Unique Nomenclature of Occupations from 1990 when coding the qualifications (Section 2.1.2.). However, due to the significant global socio-economic changes involving our country as well as increasing mobility of labour, it is necessary to create an authentic system of classification of qualifications within the NQFS. The system should reflect the essence of the qualifications obtained, their diversity and how they are distributed at levels.

Accordingly, it is not adequate to base the classification of qualifications system on systems that derive from classification of occupations or classification of economic activities, although in both cases Serbia has accepted the corresponding international classifications.

Classification of qualifications should naturally follow the logic of learning, and, in accordance with the relation education-qualification, the classification system should be based primarily on the classification of education. In this respect, the Working Group have considered the solutions offered in the newest International Standard Classification of Education (ISCED-11), the structure and types of sector councils in Great Britain, Holland, Slovenia, Croatia and Montenegro as well as the structure of sciences and fields applied by the National Council for Higher Education in the current List of professional, academic and scientific titles. Because of the jurisdiction in the education field, the competent ministry is responsible for the changes in classifying education up to the levels of post-secondary education as well as for changing the classification of educational profiles based on the classification offered in the UNO. For this purpose, the Working Group have prepared a possible solution of an authentic system of classification of qualifications within the NQFS which is given in Annex 5.

6) Establishment of sector councils

The establishment of sector councils is based on the current economic developments and the plans for the development of society in general. Priorities and dynamics of their establishment should be contained in the work programme of the Council for Vocational Education and Training and harmonised with the available financial and human resources.

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[20] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2005L0036:20110324:en:PDF

7) Development of a system for recognition of prior learning

In December 2012 the European Commission adopted the Council of Europe's recommendation for member states to 'ensure that a national system of validation of non-formal and informal learning is established by 2018'.[21]

Regardless of the fact that the Recommendation applies to the EU countries in terms of international connectivity, our country should also respect the principles defined in the Recommendation when developing and implementing an RPL system. Moreover, development of an RPL system is one of the goals listed in the adopted Education Development Strategy in the Republic of Serbia by 2020. Accordingly, in the absence of national experience, it is suggested that the development and establishment of the RPL begin with professional considerations of international experience, such as Portuguese, French and experience of the Baltic countries.

After that, it is necessary to define a model, i.e. a methodological framework for conducting the RPL process and test it in our conditions. Based on these results, it is necessary to define a legal framework, financing methods, the jurisdiction of institutions, accreditation of organisations interested in conducting the RPL activities, RPL procedures, etc.

8) Development of a system of accreditation of service providers in the process of acquiring qualifications

In order to ensure quality, it is necessary to establish a legal framework for a system of accreditation of service providers in the process of acquiring qualifications which will regulate the structures of authorities and bodies included in the accreditation process, their basic activities and mutual relationships as well as the procedures of accreditation of organisations.

As was the case with the recognition of prior learning, the basic settings of accreditation should be regulated by the Law on Adult Education.

9) Qualifications credit system development

By developing a qualifications credit system in vocational education in the Republic of Serbia, a compatibility with the qualifications framework in higher education can be achieved, since the European Credit Transfer and Accumulation System (ECTS), established on the basis of the Bologna declaration[22], has already been applied in higher education. In addition to opening opportunities for the creation of a unified and consistent National Qualifications Framework in Serbia at all Levels (I–VIII), the introduction of a credit system of qualifications would strongly stimulate adult education through the efficiency and the flexibility that a credit system provides. However, the development and establishment of the NQFS does not depend on the development and introduction of a credit system, and vice versa.

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[21] The European Commission's 'Proposal for a Council recommendation on the validation of non-formal and informal learning', COM(2012) 485 final, 2012/0234 (NLE), Brussels, 2012.

[22] Bologna Declaration – Qualifications Framework for European Higher Education Area and Degrees Descriptors, 1999.

GLOSSARY

ADDITIONAL TRAINING (several authors and sources)

- Additional training is a process of acquiring a qualification at next, higher level. In formal education, additional training includes exams (in subjects or parts of subjects) which are determined to be missing or different based on the comparison of educational plans and programmes. For example, a person who is qualified Baker (Level III) and wants to do additional training and acquire the qualification Food Technician (Level IV) has to sit the exams in general education subjects, general vocational subjects and vocational subjects (or parts of subjects) within the Food Technician educational programme that cannot be found (and successfully completed) in the Baker educational programme.
- Additional training is additional vocational education for the acquisition of a specific qualification.

ATTITUDE

Attitudes are permanent or relatively permanent systems of positive or negative evaluation, emotions and a tendency to take action for or against in relation to different objects. They include cognitive, affective (emotional) and conative (voluntary) functions.

COMPETENCE (several authors and sources)

- Competence is a proven ability to use knowledge and skills as well as a personal, social and/or methodological ability, in work or study situations, i.e. in professional and personal development.
- Competence is an integrated set of knowledge, skills and attitudes that enable effective performance of individual activities in a given occupation or function in accordance with the expected standard.
- Competences are multifunctional assemblies of knowledge, skills and attitudes which are necessary for achievement, development and further learning of individuals and which are essential for practicing all occupations or groups of occupations (critical opinion, problem solving, communication skills, social skills, etc).
- Vocational competences can be defined as the abilities to perform in accordance with defined standards or expectations, complex work roles, functions and tasks that basically include specific vocational knowledge, skills, attitudes and values. In this sense, being competent means to meet work requirement (standards) consistently.
- Competences represent a complex combination of knowledge, skills, abilities and attitudes necessary to complete a certain activity that leads to results.

DUTY

Duty is a wider field of work within an occupation; each duty includes a group of related tasks; the fulfilment of all tasks within the duty provides competency.

JOB

Job is a set of duties and tasks performed by one person during the working process.

KEY COMPETENCES

Key competences are those competences which provide each individual with personal development, social inclusion, active civil role and employment. European framework for key competences for lifelong learning defines eight key competences:

1. *Communication in mother tongue* is the ability to express and translate thoughts, feelings and facts in oral and written form in the overall social and cultural context, in education, work and at home.
2. *Communication in a foreign language* is widely connected to communication in mother tongue, with the ability to vary between the four dimensions of communication in a foreign language – listening, speaking, reading and writing.
3. *Basic competences in mathematics, science and technology* is the ability to add, subtract, multiply, divide at the level of mental and at the level of written computation in order to solve various problems in everyday situations.
4. *Competence in digital technologies* is a safe and critical use of electronic media in work, leisure and communication.
5. *Learning competence* is a student's tendency and ability to organise and regulate their own learning process, which means the effective use of time, acquiring, processing, application and evaluation of key knowledge – at home, at work, in education and training process.
6. *Interpersonal, intercultural, social and civic competences* are necessary for effective participation in civil and social life, including the ability to resolve conflicts and effective co-operation with others in different situations and contexts.
7. *Entrepreneurial and innovative spirit* is the willingness to accept changes, to support and adopt changes according to external conditions, to take responsibility for your own actions, developing strategic visions, setting and achieving objectives.
8. *Cultural awareness and expression* means to understand the importance of creative expression of ideas, experiences and emotions through various forms of media, including music, dance, literature and fine arts.

KNOWLEDGE

Knowledge represents a set of acquired and connected facts, principles, theories and practices (experiences) related to the particular field of work or studies.

LEARNING OUTCOMES

- Learning outcomes are explicit statements on a learning result; they describe the learner after the defined learning period in terms of what they 'know', what they are able to do under certain circumstances and how they behave in relation to what they do (what attitudes do they express); in vocational education outcome is a minimal and binding learning result. Learning outcomes enable verifiability of achievement and are harmonised with development characteristics of the learner (Despotović, M, 2010). Learning outcomes are classified as cognitive, psychomotor, and affective and are formulated at the level of knowledge, skills and attitudes (Bloom, BS, 1956).

- Outcomes are precisely and unambiguously defined statements of what students and the adults know, can and are able to do upon completion of the process of education or training i.e. certain programme. Outcomes assessment enables external recognition and better evaluation of acquired abilities of a student. (Strategy for the Development of Vocational Education in the Republic of Serbia, 2006).

NATIONAL QUALIFICATIONS CATALOGUE

The National Qualifications Catalogue covers all the individual Qualification Standards categorised by level according to the classification of qualifications and it is part of the National Qualifications Framework.

NATIONAL QUALIFICATIONS FRAMEWORK

National qualifications framework represents an instrument which includes number and description of qualification levels, relationships between qualifications and progression and mobility paths. A national qualifications framework covers processes, bodies – organisations responsible for establishing qualifications, ways of acquiring, comparing, recognition, quality assurance and standards they are being implemented by.

OCCUPATION

Occupation is a set of related and interconnected tasks and duties, regardless of the economic sector.

REGULATED PROFESSION

Regulated profession is a professional activity or a set of professional activities within which the approach and practicing (i.e. the method of performing based on laws, bylaws and other regulations – regulatory legislations) are directly or indirectly caused by the possession of specific vocational qualifications as well as a professional effort or a set of professional efforts of the members of vocational organisations with professional titles.

RETRAINING (several authors and sources)

- Retraining is a process of acquiring a qualification at the same or lower level. In formal education, it implies sitting exams (in subject or parts of subjects) which are determined to be missing or different based on the comparison of educational plans and programmes.
- Retraining is a change of occupation (partial retraining) or profession (complete retraining) within the same or lower qualification level. (Šefika Alibabić 'Comparative dimensions of the professional training of teachers' Andragogy Studies, 1998, Vol 5, No 1, p 8).
- Retraining – the transformation of fundamental human competence in a particular professional activity, i.e. the substitution of occupations. (Borivoj Samolovčev, in: B Samolovčev, H Muradbegović, 'General andragogy' IDE 'Veselin Masleša', Sarajevo, 1979, p 109).
- Retraining is a change of calling or any other significant change in a structure of a calling that implies overcoming circuits of qualitatively new knowledge, skills and attitudes. (Sylvie Pongrac 'Innovating Adult Education', Adult Education Centre Zagreb, Zagreb, 1990, p 118).
- Retraining indicates the ability to work in a new occupation (ibid, p 131).

SKILL

Skill presents an efficient performance of activities based on knowledge and experience. Skills can be cognitive (logical, intuitive and creative thinking), psychomotor (physical agility, the use of methods, instruments, tools and materials) and/or social.

TASK

Task is a specific unit of work that can be observed; it is an entity by itself (it has a certain point of beginning and a certain point of completion) and can therefore be performed in a limited period of time. When completed, the task results in a product, service or decision.

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ANNEXES

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Annex 2: Horizontal classification of occupations – the Unique Nomenclature of Occupations

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Annex 1: Working Group for the Development of the National Qualifications Framework in Serbia

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21. Radovan Živković, Ministry of Education, Science and Technological Development

Annex 2: Horizontal classification of occupations – the Unique Nomenclature of Occupations

AREA OF WORK	GROUP	NAME
1	2	3
Work area I		**AGRICULTURE, FOOD PRODUCTION AND FOOD PROCESSING**
	01	Plant producers
	02	Cattle and poultry breeders
	03	Fishermen and other animal breeders
	04	Veterinaries
	05	Food and beverages processors
	06	Tobacco producers
Work area II		**FORESTRY AND WOOD PROCESSING**
	09	Foresters
	10	Wood processors
Work area III		**GEOLOGY, MINING AND METALLURGY**
	13	Geologists
	14	Occupations within oil exploitation and natural gas
	15	Miners and ore processing technicians
	16	Metallurgists
Work area IV		**MACHINE ENGINEERING AND METAL PROCESSING**
	18	Metal processors
	19	Fitters and Installers
	20	Machine constructors and designers
	21	Machine technologists
	22	Mechanics and machine operators
Work area V		**ELECTRICAL ENGINEERING**
	24	Electrical power technicians
	25	Electro mechanical technicians
	26	Electro technicians
	27	Occupations within telecommunication
	28	Occupations within IT equipment
Work area VI		**CHEMISTRY, NON-METALS AND GRAPHIC INDUSTRY**
	31	Chemists
	32	Rubber and plastic technicians
	33	Ceramists and manufacturers of building materials
	34	Glaziers
	35	Paper technician
	36	Graphicians
Work area VII		**TEXTILE AND LEATHER**
	39	Textile workers
	40	Footwear producers
	41	Tanners and furriers
	42	Shoemakers and leather accessories producers
Work area VIII		**UTILITY, UPHOLSTERY AND PAINTING SERVICES**
	45	Utility workers
	46	Upholsters
	47	Painters and lacquer workers
Work area IX		**GEODESY AND CONSTRUCTION**
	50	Surveyors
	51	Architects and urban planners
	52	Builders
	53	Occupations within final construction work

AREA OF WORK	GROUP	NAME
1	2	3
Work area X		**TRAFFIC**
	56	Occupations within road traffic
	57	Railway men
	58	Boatmen
	59	Airmen
	60	Occupations within postal traffic
	61	Occupations within transshipment services, internal transport and cableway transport
Work area XI		**TRADE, HOSPITALITY AND TOURISM**
	64	Traders
	65	Occupations within hospitality and tourism
Work area XII		**ECONOMY, LAW AND ADMINISTRATION**
	66	Managers
	67	Economists
	68	Lawyers
	69	IT workers and statisticians
	70	HR occupations
	71	Administrators
	72	Occupations within national defence, security and social self-protection
	73	Occupations within insurance
Work area XIII		**EDUCATION AND UPBRINGING**
	75	Educators and teachers within social sciences and humanistic studies
	76	Educators and teachers within natural sciences and mathematics
	77	Educators and teachers within technical and technological field
	78	Educators and teachers within biotechnical field
	79	Educators and teachers within health care
Work area XIV		**SOCIAL AND HUMANISTIC AREA**
	82	Social and humanistic occupations
Work area XV		**NATURAL SCIENCES AND MATHEMATICS**
	83	Occupations within natural sciences and mathematics
Work area XVI		**CULTURE, ART AND PUBLIC INFORMATION**
	85	Artists and designers
	86	Performing artists, musicians and writers
	87	Occupations within public information
	88	Other occupations within culture, art and information
Work area XVII		**HEALTH CARE, PHARMACY AND SOCIAL PROTECTION**
	90	Medical workers
	91	Dentists
	92	Pharmacists
	93	Occupations within social protection
Work area XVIII		**PHYSICAL EDUCATION AND SPORTS**
	94	Occupations within physical education
	95	Sportsmen
Work area XIX		**OTHER**
	96	Occupations within personal service sector
	98	Religious occupations
	99	Not classified

Annex 3: Comparison of qualification levels in Scotland and Denmark with the European Qualifications Framework

Scotland	EQF LEVELS	Denmark
SCQF Level 12 • Doctoral Degrees • Professional Development Awards	**EQF Level 8**	**Danish NQF Level 8** • PhD degree
SCQF Level 11 • Masters Degrees • Post Graduate Diploma • Post Graduate Certificate • Professional Development Awards SVQ 5	**EQF Level 7**	**Danish NQF Level 7** • Master's degree (Candidatus) • Master degree (within adult higher education)
SCQF Level 10 • Honours Degree • Graduate Certificate / Diploma • Professional Development Awards	**EQF Level 6**	**Danish NQF Level 6** • Professional Bachelor Degree in Nursing (nurse) • Bachelor degree in fine arts • Maritime bachelor: Bachelor in mechanical engineering/operations • Diploma Degree in Management • Bachelor degree
SCQF Level 9 • Bachelors/Ordinary Degree • Graduate Certificate / Diploma • Professional Development Awards • SVQ 4		
SCQF Level 8 • Higher National Diplomas • Diploma of Higher Education • Professional Development Awards • SVQ 4	**EQF Level 5**	**Danish NQF Level 5** • Agricultural economist certificate • Academy Profession Degree in Chemical and Biotechnical Science (AP in Chemical and Biotechnical Science) • Ship's master • Academy Profession Degree in Financial Management – Further Education for Adults (VVU)
SCQF Level 7 • Advanced Higher • Higher National Certificates • Certificate of Higher Education • Professional Development Awards • SVQ 3		
SCQF Level 6 • Higher • National Certificates • National Progression Awards • Professional Development Awards • SVQ 3	**EQF Level 4**	**Danish NQF Level 4** • Certificate for three-year general upper secondary school programmes • Certificate for the two-year upper secondary programme (the Higher Preparatory Examination) • Vocational education and training: Retail (sales assistant) • Vocational education and training: Bricklayer • Maritime: Skipper/Bargeman
SCQF Level 5 • Intermediate 2 • Standard Grade – Credit • National Certificates • National Progression Awards • SVQ 2	**EQF Level 3**	**Danish NQF Level 3** • Fisherman/The Blue Certificate • Social and health care worker, step 1 of the social and health care training programme
SCQF Level 4 • Intermediate 1 • Standard Grade – General • National Certificates • National Progression Awards • SVQ 1	**EQF Level 2**	**Danish NQF Level 2** • Certificate for 10th class of the *Folkeskole* (optional final year of Primary and Lower Secondary School) • Ship's assistant **Danish NQF Level 1** • Certificate for the leaving examination of 9th class of the *Folkeskole* (Leaving Certificate of Primary and Lower Secondary School)
SCQF Level 3 • Access 3 • Standard Grade – Foundation • National Certificates • National Progression Awards	**EQF Level 1**	
SCQF Level 2 • Access 2 **SCQF Level 1** • Access 1	As EQF starts at Level 1, referencing NQF levels below that level is not possible.	**No NQF level**

Annex 4: Criteria and procedures for referencing the National Qualifications Framework in Serbia to the European Qualifications Framework

1. The responsibilities and/or legal competence of all relevant national bodies involved in the referencing process, including the still non-existent national co-ordination body, are clearly determined and published by the competent administrative body.
2. There is a clear and obvious link between qualification levels in the national qualifications framework or system and level descriptors of the European Qualifications Framework.
3. The national qualifications framework or system of qualifications are based on the principle (and objective) of learning outcomes and linked to arrangements for validation of non-formal and informal learning and, where these exist, to credit systems.
4. The procedures for inclusion of qualifications in the national qualifications framework or for describing the place of qualifications in the national qualifications system are transparent.
5. The national quality assurance system(s) for education and training refer(s) to the national qualifications framework or system and is/are consistent with the relevant European principles and guidelines (as indicated in Annex 3 of the Recommendation of the European Parliament and Council of Europe for establishing the European Qualifications Framework).
6. The referencing process shall include the stated agreement of the relevant quality assurance bodies.
7. The referencing process shall involve international experts.
8. The competent national body or bodies shall certify the referencing of the national qualifications framework or system with the EQF. One comprehensive report, that will be used to regulate referencing to demonstrate the evidence in relation to indicators, shall be published by the competent national bodies, including the national co-ordination body, and shall address separately each of the criteria. Such report shall be published by the responsible national bodies and the national co-ordination body.
9. The official EQF platform shall maintain a public listing of member states that have confirmed that they have completed the referencing process, including links to completed referencing reports.
10. Following the referencing process, and in line with the timelines set in the Recommendation, all new certificates, diplomas and Europass documents on qualifications issued by the competent authorities contain a clear reference to the appropriate European Qualifications Framework level, in a way defined by the national qualifications systems.

http://ec.europa.eu/education/lifelong-learning-policy/doc/eqf/criteria_en.pdf (December 2012).

http://ec.europa.eu/eqf/documentation_en.htm (December 2012).

Annex 5: Possible solution for the future classification of qualifications within the National Qualifications Framework in Serbia

Qualifications in NQFS can be classified according to the following fields and subfields:

1. Agriculture
- Plant production
- Animal breeding
- Hunting and fishing
- Veterinary medicine

2. Food and tobacco industry
- Food production
- Beverage production
- Tobacco processing

3. Forestry, wood and water industry
- Growing and maintaining forests
- Wood processing
- Water industry (protection against erosion, regulating water flows, hydro amelioration, flood protection, groundwater management)

4. Geology, Mining and Metallurgy
- Geology
- Mining and flotation (ores, minerals)
- Metallurgy

5. Engineering and metal processing
- Metal processing
- Lining, installation and servicing of mechanical devices and equipment
- Mechanical construction, design and production

6. Electrical Engineering and Computer Science
- Production, transmission and distribution of electricity
- Electronics
- Computer technology and informatics
- Telecommunications and IT

7. Mechatronics (design, maintenance and servicing)
- Processing techniques
- Car mechatronics (all types of vehicles)
- Medical and laboratory equipment

- Office equipment and white ware

8. Chemical technology and pharmacy
- Organic chemical technology (organic synthesis, polymers, petrochemicals)
- Inorganic chemical technology (glass, ceramic, cement, bricks, etc)
- Environmental protection
- Pharmacy

9. Information and audio-visual technologies
- Information (journalism, publishing, public relations and marketing)
- Graphic design
- Media (production and realisation of radio, TV and internet content)

10. Textile and leather
- Production of textile fibres and materials
- Garments
- Leather processing
- Footwear, handbags and leather goods production
- Furriery
- Hand-made

11. Architecture and Construction
- Architecture
- Urban and spatial planning
- Surveying
- Construction (design, building)
- Finishing construction works and maintenance of facilities

12. Transport and Logistics
- Road
- Rail
- Water
- Air
- Internal
- Logistics (transportation services)

13. Business, law and business administration
- Management
- Economy
- Finance and banking
- Insurance
- Trading

- Law
- Administration

14. Social sciences and humanities

- Social Sciences and Humanities
- Theology
- Human resources

15. Natural Sciences and Mathematics

- Natural sciences
- Mathematics and statistics

16. Culture, Arts and Information

- Fine and applied arts
- Performing arts
- Music art (creative and performance-interpretation)
- Organisation and technical support to artistic expression
- Literature, librarianship, archiving

17. Health and social care

- Health
- Dentistry
- Social protection

18. Physical education and sport

- Physical education
- Sport

19. Services

- Personal services
- Utilities
- Tourism (accommodation services, travel agencies)
- Catering (preparation and serving of food and beverages)
- Security

20. Unclassified qualifications