Republic of Serbia
MINISTRY OF EDUCATION,
SCIENCE AND TECHNOLOGICAL
DEVELOPMENT
Development and Higher Education Sector

NATIONAL QUALIFICATIONS FRAMEWORK IN SERBIA

НОКС

НАЦИОНАЛНИ ОКВИР КВАЛИФИКАЦИЈА У СРБИЈИ

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Belgrade, November 2017

This document has been prepared by the Development and Higher Education Sector– Group for Qualifications and the Expert Team formed by the Ministry of Education, Science and Technological Development, tasked with drafting the Integrated National Qualifications Framework in Serbia, using the previously developed proposals for the levels of vocational education and training (levels 1 to 5) and higher education (levels 6 to 8).

The competent Ministry and the Expert Team received additional professional support by numerous social partners and other experts who contributed to the improvement of this document as a whole, by their expertise.

CONTENTS

ABBREVIATIONS

VNIFL – Validation of Non-formal and Informal Learning

ECTS – European Credit Transfer and Accumulation System (in higher education)

EHEA – European Higher Education Area

EU – European Union

IIE – Institute for Improvement of Education

IPA – Instrument for Pre-Accession Assistance

UNO – Unique Nomenclature of Occupations

PRAO – Publically Recognized Activity Organizer

ATS – Accreditation Body of Serbia

CAQA – Commission for Accreditation and Quality Assurance

MESTD – Ministry of Education, Science and Technological Development

MLEVSA – Ministry of Labour, Employment, Veteran and Social Affairs

NCHE – National Council for Higher Education

NQFS – National Qualifications Framework of Serbia

NES – National Employment Service

NCO – National Classification of Occupations

NCP - National Coordination Points

CCIS – Chamber of Commerce and Industry of Serbia

SORS – Statistical Office of the Republic of Serbia

CVEEA – Council for Vocational Education and Education of Adults

SSS – Education level

SAE – Serbian Association of Employers

CVEEA – Centre for Vocational Education and Education of Adults

ISCED 13-F – International Standard Classification of Education, version 2013

ISCO 08 – International Standard Classification of Occupations, version 2008

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НОКС

НАЦИОНАЛНИ ОКВИР КВАЛИФИКАЦИЈА У СРБИЈИ

INTRODUCTION

The present circumstances, particularly those in the EU clearly indicate that the Republic of Serbia requires a continuous improvement of its qualifications system, as one of the key conditions for the development of a knowledge-based society and achieving an increased employment rate of the population.

In the light of overall reform processes of education and achieving objectives set up in the development documents of the Republic of Serbia, the necessity to define the national qualifications framework emerged, aimed at enabling the improvement of the entire education system and thereby supporting further social and economic development, including the development of individuals.

The National Qualifications Framework (hereinafter: NQF) represents an instrument regulating the matters related to the qualifications required by the labour market and constitutes the basis for the implementation of the concept of lifelong learning. The Republic of Serbia has developed NQF observing the specificities of the education system and Serbian education, as well as the principles of European practice in education, in particular the European Qualifications Framework.

The National Qualifications Framework represents the space in which the qualifications have been established, with the description of levels, bodies and processes related to their establishment.

The Republic of Serbia will have a unique – integrated National Qualifications Framework that will encompass all the levels and qualification types, regardless of the method of their acquisition (through a formal or non-formal education and/or informal learning – life or working experience) or age in which they have been acquired (at one's young age or as adults). This will enable the integration and coordination of the qualification systems in place (such as the higher education qualifications system, vocational secondary school qualifications system or other).

The development process of the National Qualifications Framework relies on the platform of a continuous involvement of the representatives of national institutions and experts in the field of qualifications at the national and international level. In the initial development phase, together with the partners, the consensus was reached about the purpose, functions and principles that the framework should rely upon. In the course of the framework development, the representatives of institutions provided their proposals and standpoints of the education, economy and employment sectors in order to create a comprehensive perception of the qualifications system and ensure an effective implementation of the National Qualifications Framework. The continuity of participation of these representatives in the further development of the framework will be ensured by their active engagement within the bodies prescribed by the institutional framework for the implementation of the National Qualifications Framework in Serbia.

The education system that the National Qualifications Framework incorporates both formal education (primary, secondary and higher education) and non-formal education of adults.

This document and technical terms defined in it constitute the basis for drafting the Law on National Qualifications Framework.

KEY DEFINITIONS

EUROPEAN QUALIFICATIONS FRAMEWORK

European Qualifications Framework (EQF) is a common European reference framework overarching national qualifications systems and acting as the tool for comparison, and/or easier understanding and interpretation of qualifications throughout different states and education systems in Europe.

OCCUPATIONAL STANDARD

Occupational Standard is a document containing the description of duties and tasks, as well as competences required by individuals in order to efficiently perform the assignments of the specific job.

OCCUPATION

Occupation is a set of assignments whose major duties and tasks are interrelated. The International Standard Classification of Occupations ISCO–08 defines jobs as the set of tasks or duties carried out, or assigned to be carried out by one person, whether working for an employer or being self-employed.

The learning outcomes are the statements about the knowledge expected to be acquired, understood or demonstrated by an individual, or in particular, to be performed after the finalization of the learning process. They ensure the confidentiality of the levels of competencies and/or achieved level of knowledge, skills, approaches and aptitudes.

QUALIFICATION

Qualification represents the formal recognition of acquired competencies. A person will acquire a qualification when the competent body establishes that he/she reached the learning outcomes within the specific level and according to the set qualification standards, as certified by a public document (a diploma or a certificate). The qualification enables one to perform activities designated under one or more occupations.

The term 'qualification' will be interchangeable with the terms: professional qualification, occupation, professional title, educational background.

KEY COMPETENCIES FOR LIFELONG LEARNING

The key competencies will be the capacity to use the acquired knowledge, skills and standpoints required for the personal, social and professional development, including one's further learning. These competencies have been built into the objectives at all education levels as new fields, relevant for personal, professional and social development and functioning of individuals, in which the competencies are acquired by a flexible and dynamic integration and implementation of relevant knowledge. They have been aligned with eight key competencies defined by the European Framework of Key Competencies for Lifelong Learning. The pre-university education covers the general cross-curricular competences, such as: competences for lifelong learning; communication; working with data and information; digital competences; problem solving; cooperation; responsible participation in a democratic society; responsible attitude towards health; responsible relationship towards environment; aesthetic competences; Proactiveness and entrepreneurial orientation.

COMPETENCES

Competences are the integrated set of knowledge, skills, abilities and standpoints, enabling an individuals to perform their activities efficiently, in accordance with expected standards.

NATIONAL QUALIFICATIONS FRAMEWORK (NQF)

National Qualifications Framework is the instrument encompassing a number of and descriptions of qualification levels, relationship between the qualifications and roadmaps for the progression and improvement. The National Qualifications Framework covers the processes, bodies – organizations responsible for introducing the qualifications, method of their acquisition, comparison, recognition and ensuring the quality and observance of standards are implemented.

NATIONAL QUALIFICATIONS' CLASSIFICATION SYSTEM (CLASS NQFS)

National qualifications' classification system (CLASS NQFS) is the system for classifying the qualifications under NQFS, in line with the International Standard Classification of Education (ISCED 13-F). The introduction of CLASS NQFS will bring along the unique system of classification, independently from the existing classification of education profiles of pre-university education in 15 sectors of work and study programmes at four educational and scientific fields and one educational and art field, specifically, in 46 scientific, vocational and art fields within these 5 areas.

EDUCATION/TRAINING PROGRAMME

The education/training programme is a structural framework for the organization of a learning process, whose elements have been regulated in advance. It is adopted in accordance with the established principles, objectives and standards. The term used in this document is equated with the terms curriculum and study programme.

RECOGNITION OF PREVIOUS LEARING

Adult education activities accomplished by the assessment of knowledge, skills and abilities acquired through education, life or work experience that allows for further learning and improvement of competitiveness on the labour market, have been included under the process of recognizing previous learning. The term in this document has been equated with the European term: "Validation of non-formal and informal learning" that is being implemented at the level of European educational policies within NQF, in line with the European recommendations for the validation of non-formal and informal learning.

NQFS Register

NQFS Register contains the sub register of national qualifications, sub register of qualification standards and sub register of PRAO including the employers with whom PRAO carries out the practical work.

QUALIFICATION STANDARD

Qualification standard is a document set up at the national level comprising the set of qualification data containing a detailed description of learning objectives and outcomes. It represents the basis for the development of education/training programmes and the information about the qualification used as the base for determining the levels, its classification and evaluation.

QUALIFICATIONS NETWORK IN EUROPEAN HIGHER EDUCATION AREA (EHEA)

The framework of qualifications in the European Higher Education Area i.e. within the Bologna Process has been defined by four main cycles (Short Cycle, First Cycle, Second Cycle and Third Cycle) described in Dublin descriptors;

LIFELONG LEARNING

Lifelong learning includes all forms of learning and involves the participation in various forms of educational activities throughout life, with the aim of a continuing improvement of the required personal, civic, social and other competencies necessary for performing a work;

FORMAL EDUCATION

Formal education is the organized learning processes conducted on the basis of plans and curricula and learning of primary and secondary education and study programs of higher education;

NON-FORMAL EDUCATION

Non-formal education is the organized learning process of adults that is delivered based on special programs, with the purpose of acquiring knowledge, skills, abilities and attitudes focused on the performance and personal and social development;

INFORMAL LEARNING

Informal learning is a process of independent acquisition of knowledge, skills, values, attitudes and abilities of adults in everyday life, work and social environment.

1. EDUCATIONAL SYSTEM IN REPUBLIC SERBIA

Educational system in the Republic Serbia is a given framework within which the qualifications are acquired through formal and non-formal education system.

Display of the educational system by type and level is given in Picture 1.

1.1. Formal education

Formal education is a learning process carried out based on prescribed teaching plans and programmes within the verified institutions of pre-university educational levels, i.e. licensed study programmes in higher education. *Formal education* consists of **elementary** education, **secondary** education and **higher** education.

Ministry of education, science and technology development governs the educational system in Republic Serbia determines the entire legal framework.

Pre-university education is regulated by the following laws:

- Law on foundations of the educational system[1]
- Law on elementary education[2]
- Law on secondary education[3]
- Law on education of adults[4]

Institutions governing this part of educational system are the following: Institute for upgrading education, Institute for education quality assessment, Pedagogy Institute of Vojvodina, National Educational Council and Council for vocational education and education of adults.

Institutes are in charge of the standards and curricula and syllabi development, as well as monitoring and upgrading the quality of education, whereas the councils, each within their own scope of work and

competence, provide opinions in the field of educational policies, standards, and curricula.

Higher education is regulated by the Law on higher education , in which the Bologna declaration and Lisbon convention principles are incorporated.

National Council for Higher Education is a key institution, the competence of which is the determination of the higher education policy and various standards in higher education. Providing National Licensing Body (NLB), the part of which is an expert organ, Committee for licensing in the area of licensing higher education institutions and study programmes, is also in charge of providing quality in higher education.

1.1.1. Elementary education

Elementary education in Republic Serbia is mandatory and cost-free[6].

Duration of **elementary education** is 8 years, implemented in two 4 years cycles. Students aged 6 to 15 attend elementary education. Before the enrolment to this educational level, children attend mandatory preparatory preschool programme within preschool education, carried out during at least 9 months interval. Purpose of elementary education is, among others, the development of: the integrated system of knowledge about nature and society, based on science; efficient communication in Serbian, i.e. Serbian and minority language and at least one foreign language; functional mathematic and financial literacy; artistic expression; critical thinking and problem solving; sense of family, national and cultural identity[7]. After the completion of elementary education, the conditions are acquired for passing the Final exam in elementary education. Final exam is organised at the national level, it encompasses the entire

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[1] Law on educational system foundations ("Official Gazette of RS " no. 88/2017)
[2] Law on elementary education ("Official Gazette of RS" no. 55/2013and 101/2017)
[3] Ibid.
[4] Ibid.
[5] Law on Higher Education"Official Gazette of RS" no. 88/2017
[6] Constitution of Republic Serbia ("Official Gazette of RS" no. 98/2006)
[7] Law on foundations of educational system ("Official Gazette of RS" no. 88/2017)

students' population and is based upon general standards of achievement for elementary education. All the students who participate in passing the Final exam in elementary education acquire the ISCED 2 qualifications level, which is confirmed by the Certificate of the completion of elementary education and the Certificate on implementation of final exam in elementary education.

Elementary education of adults, in accordance with the functional education of adults model, lasts for three years and is implemented in three cycles, with the duration of one year per cycle. In the first cycle, elementary functional literacy is acquired, and in the second and third cycle the foundations of general education and vocational competences are acquired. Vocational competences are acquired through training as one of the forms of training based on work standards and labour market needs[8]. After the completion of elementary education, the attendee takes the Final exam in elementary education, based on general standards of achievement for elementary education of adults[9]. Final exam is organised at the national level and encompasses the entire population of adult students. All adults taking the Final exam in elementary education acquire qualification at the ISCED 2 level, which is verified by the Certificate on completion of elementary education, and Certificate on passing the final exam in elementary education. For the mastered adult education programme, implemented within the secondary vocational school (within the third cycle of functional basic education of adults), a certificate on the achieved standard of qualification is issued to the student – a certificate on the training programme mastered.

Elementary music education lasts for six years, four years or two years and it is implemented in two educational cycles. Duration of education depends on the instrument which is the subject of education. It is carried out in elementary music school. Students attending elementary music education, attend regular elementary or secondary education in parallel. After the completion of each grade, the student takes the annual exam. After the completion of elementary music education, the student acquires the Certificate on completion of elementary music education.

Elementary ballet education lasts for four years, and it is implemented in two educational cycles. It is carried out in ballet school. After the completion of each grade, the student takes the annual exam. After the completion of elementary ballet education, the student acquires the Certificate on the completion of elementary ballet education.

Student with developmental disabilities or disabilities acquires elementary education in school, together with other students by the rule, unless it is in the best interest of the child to attend a school for children with developmental disabilities, in accordance with the law. For a child and student who, due to social deprivation, developmental disabilities, disabilities and other reasons, needs additional support in education, the institution provides the removal of physical and communication obstacles and devises individual educational plan (IEP). IEP1 relates to tailoring methods of work as well as conditions in which teaching is carried out. IEP2 relates to tailoring and altering the content of educational work, outcomes and standards of achievement. IEP3 relates to enrichment and expansion of the content of educational work for child and student with exceptional abilities[10]... For students completing elementary education in accordance with IEP1 or IEP2 programme, Final exam in elementary education shall be adapted to the student at the school level, in accordance with the individual curriculum, i.e. in accordance with the need for additional support.

1.1.2. Secondary education

Formal secondary education may be implemented as:
• General secondary education – gymnasium education,
• Vocational secondary education,
• Secondary formal education of adults,
• Secondary music and ballet education

The purpose of secondary education is harmonized with goals and general outcomes defined by the

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[8] Rule book on curriculum and syllabus of elementary education of adults ("Official Gazette of RS" no. – "Educational herald", no. 13/13
[9] Rule book on general standards of achievement for elementary education of adults ("Official Gazette of RS" no. 50/2013, 115/2013)
[10] Rule book on more specific guidelines for determining the right to individual educational plan, its implementation and assessment ("Official Gazette of RS" no. 76/10)

law regulating foundations of educational system, and it particularly refers to the area of development of key and professional competences necessary for further education or employment, motivation for learning and independence in terms of initiative, management of their own learning process, evaluation of that process and decision making on the choice of occupation and further education[11].

General secondary education lasts for four years and is implemented in gymnasium and mixed school[12]. In gymnasiums, educational process is implemented in social-linguistic and natural-mathematical strands and in general type gymnasiums. There are also specialised gymnasiums for gifted students (philology, mathematical, IT, i.e. gymnasium for students talented for physics). After the completion of the fourth grade, student takes the Matura exam and after passing the exam, he/she obtains a Diploma on the acquired secondary education at the ISCED 3 level. The law provides for the introduction of general Matura exam, passing of which provides the student the right to immediate enrolment in higher education institutions, except for the particular study programmes which require testing for special skills and abilities.

Secondary vocational education may last for tree and four years. Other forms of vocational education are: education for work, with two years duration, vocational training and training lasting no longer than one year. Basic purpose of vocational education is acquisition of professional competences and this purpose is achieved in secondary vocational school or mixed school. After the completion of secondary vocational school, specialist or craftsmanship education in the duration of one to two years, as well as additional qualification acquired within the process of additional qualification or requalification. Secondary vocational education is organised in 15 fields of work[13] and in accordance with educational profiles (qualifications).

After the completion of three years secondary vocational education, student takes a final exam and acquires a Certificate of secondary education completed (ISCED3). Exceptionally, for educational profiles based on standards of qualifications, apart from the certificate, a student obtains a diploma supplement: Certificate on examines taken within the completed programme for educational profile.

After the completion of four years secondary vocational education, student takes a Matura exam and acquires the Diploma on acquired secondary vocational education, (ISCED3). Exceptionally, for educational profiles based on standards of qualifications, apart from the certificate, a student obtains a supplement to diploma: Certificate on examines taken within the completed programme for educational profile. The law sets forth the introduction of vocational Matura, the taking of which entitles the students to immediate enrolment in vocational or academic studies in the professional or artistic field in which secondary education has been obtained.

Specialized education lasts for one or two years and can be acquired by any individual with two years of work experience in a certain profession. After the completion of specialized education, a specialization exam is taken, and the Certificate on passing specialization exam is obtained (ISCED 4).

Laws anticipate the possibility of acquiring the craftsmanship education, however, until the law regulating the craftsmanship area is passed, this form of education cannot be implemented.

After the completion of the second grade of secondary vocational education or completing two-year education for work, the student or the adult takes the final exam and acquires the Diploma on acquired education for work for two-year duration.

Students and adults after the completion of vocational training or completion of the first grade of secondary education take the exam of vocational competence, and acquire the Certificate on exam for vocational competence acquired.

The student and adult take the exam after the completion of training programme and acquire the Certificate on the training programme completed.

Secondary formal education of adults is implemented in school for education of adults in which special programmes for education of adults are implemented in the duration of two or three years, programmes of vocational training, specialist, i.e. craftsmanship education, training programmes and other programmes for adult education.

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[11] Law on secondary vocational education ("Official Gazette of RS" no. 55/2013 and 101/2017)
[12] Mixed schools are secondary schools in which both gymnasium and vocational or artistic education are implemented
[13] Law on secondary education ("Official Gazette of RS" no. 55/2013 and 101/2017)

Regarding formal secondary vocational education of adults, programmes have to be adapted to the needs and potentials of the adults, as well as to the requirements of labour market. Than education lasts for two years instead of three, i.e. it lasts for three years instead of four[14]. Public documents acquired by an adult are identical to documents acquired in formal vocational education (ISCED3).

Secondary music education lasts for four years and it is implemented in secondary music school and it is positioned in the work area Culture, art and public information. After the completion of each grade, the student takes annual exams. After the completion of four years of musical education, in the appropriate educational profile, the student takes a Matura exam and acquires a Diploma on acquired secondary education (ISCED3).

Secondary ballet education lasts for four years, it is implemented in secondary ballet school and it is positioned in the work area Culture, Arts and Public information. After the completion of each grade, the student takes annual exams. After the completion of four years of ballet education in the appropriate educational profile, the student takes the Matura exam and obtains a Diploma on acquired secondary education (ISCED3).

Student with developmental disabilities or disabilities acquires secondary education, by the rule in school, together with other students, and when it is in the best interest of the student, in school for students with developmental disabilities, in accordance with the law. For each individual student the school passes an individual educational plan (IEP1 or IEP2).

1.1.3. Higher education

Higher education institutions implementing the operations of higher education are the following:
1. university;
2. faculty, i.e. arts academy within the university;
3. vocational studies academy;
4. college;
5. Vocational college.
Higher education comprises of two types of studies: academic and vocational studies. Academic studies implement academic study programme training students for development and application of scientific, expert and artistic achievements. Vocational studies implement vocational study programme, training students for application of knowledge and skills necessary for involvement in the process of work.

The scope of the studies is expressed through ECTS points, and measured by student workload: a sum of 60 ECTS points corresponds to the average total student engagement within the 40-hour working week during a school year.

Studies are divided into three degrees.
The first degree studies are:
1. undergraduate academic studies (180-240 ECTS);
2. undergraduate vocational studies (180 ECTS).
3. specialized vocational studies (minimum 60 ECTS credits).

The second degree studies are:
1. master academic studies (minimum 60 ECTS credits, if the previous volume of 240 ECTS credits undergraduate academic studies has been achieved, i.e. minimum 120 ECTS credits if the previous volume of 180 ECTS credits undergraduate academic studies has been achieved);
2. master vocational studies (minimum 120 ECTS credits if the previous volume of 180 ECTS credits first degree studies has been achieved);
3. specialist academic studies (minimum 60 ECTS credits after the completed master studies);

The third degree studies are:
1. doctoral academic studies (minimum 180 ECTS credits, with previously achieved volume of studies of at least 300 ECTS credits on academic studies).
Certain academic programmes may be implemented in an integrative manner, encompassing undergraduate and master studies with no more than 360 ECTS credits, regarding the medicine studies.

Public documents obtained after the completion of studies are a Diploma on the higher education acquired and supplement to diploma (ISCED6-8). Issuing appendix to diploma with the diploma is mandatory.

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[14] Ibid

1.2. Non-formal education of adults and informal learning

Non formal education of adults and informal learning are a part of unique system of education of Republic Serbia, and are regulated by the Law on education of adults[15]. Non formal learning of adults is an organised process of adult learning, based on specialized programmes, aiming at acquiring knowledge, skills, capabilities, attitudes and values directed towards personal development, work and employment and social activities.

Adult trainees acquire competences and qualifications through activities, aiming at training, improving or changing profession or work. An adult improves knowledge, skills and abilities within personal and professional development through non formal and informal learning, aiming at improving the quality of life, general education and culture.

Qualifications may be acquired via non formal education within publicly recognised organizer of adult education activities (further: PROA AE).

Elementary and high schools may obtain the status of PROA AE, as well as other organizations meeting the requirements set by the appropriate by laws[16].

PROA AE issues the appropriate public document to the trainee – a certificate[17].

1.3. Recognition of foreign qualifications

Recognition of foreign qualifications is a procedure by which an individual who acquired the qualification abroad is provided the right to further education and/or employment with the qualification acquired.

Academic recognition of qualifications is related to recognition for the purpose of further education (nostrification), and is carried out by universities in Republic Serbia.

Qualifications in pre-university formal education are recognised in accordance with law regulations in the field of education.

Professional recognition is related to recognition for the purpose of employment in Republic Serbia, and is carried out by ENIC/NARICSerbia[18].

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[15] ("Official Gazette of RS" no. 55/13)

[16] Rulebook on closer conditions in terms of programmers, personnel, venues, equipment and teaching aids for acquiring the status of publicly recognized organizer of adult education activities ("Official Gazette of RS" number 89/15)

[17] Rulebook on the type, title and content of forms and method of keeping records and the title, content and design of forms of public documents and certificates in adult education ("Official Gazette of RS" number. 89/15, 102/15)

[18] Centre for information on recognition of foreign higher education and secondary education documents and recognition for the purpose of employment is a unit within the MESTD and is a part of international network of centers for information on recognition and recognition of foreign higher education documents (more details on: www.enic-naric.net).

Figure 1

Structure of Education System in Republic Serbia
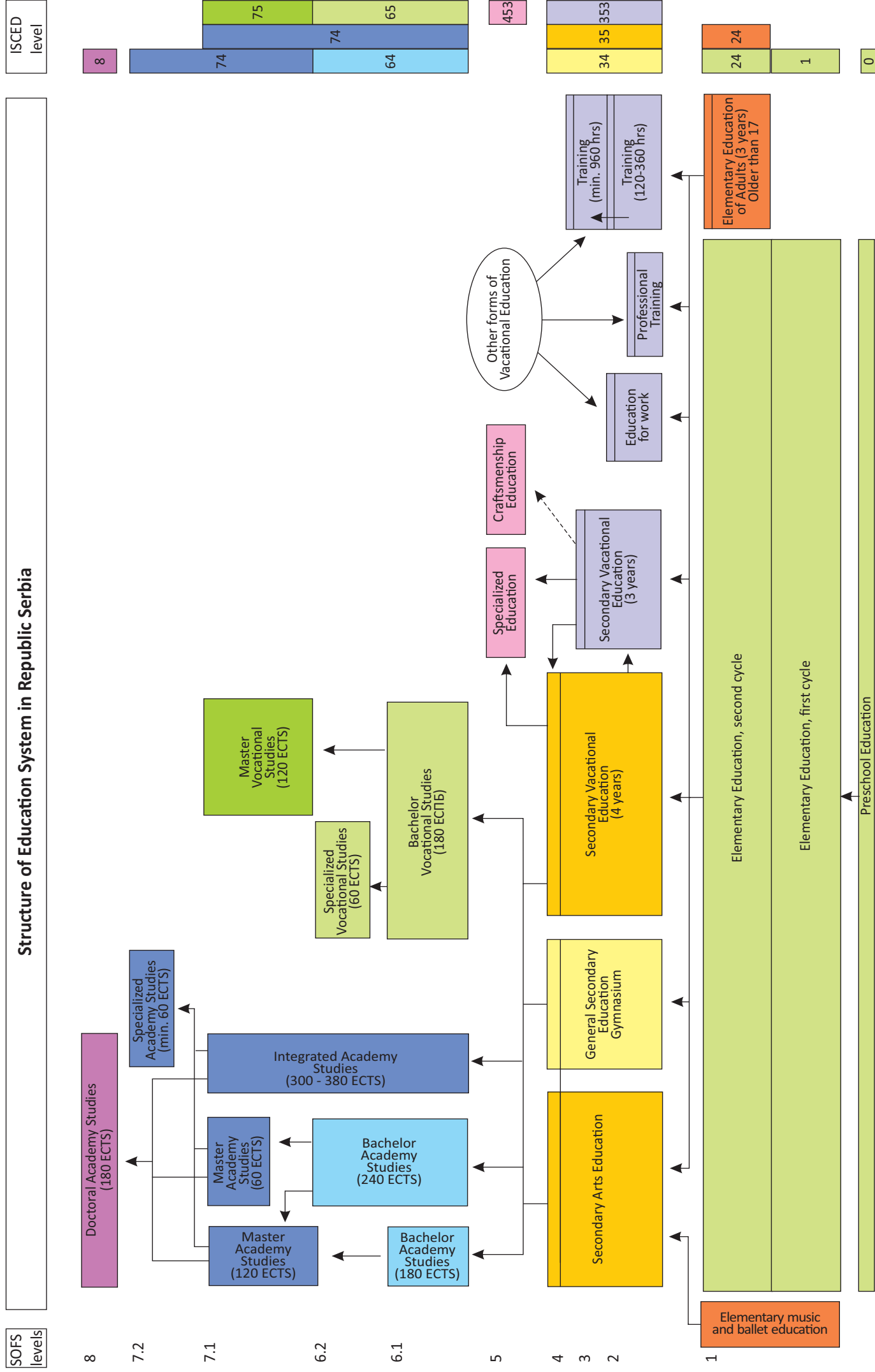
2. QUALIFICATION FRAMEWORK

2.1. National Qualification Framework in Serbia

National qualifications framework in Serbia (further: NQFS) is an instrument for identifying, creating and classifying qualifications, in accordance with the demands of labour market, continual learning, science and society in general. Also, NQFSencompasses defined processes and institutions (bodies, organisatins) responsible for defining qualifications and qualification standards, methods and conditions for acquiring, comparing and recognition of qualifications, along with other mechanisms for quality assurance. Qualifications which are regulated by NQFS are recognized in the entire country and are recorded in NQFS Registry.

A qualification is a formal recognition of competencies acquired. A person acquires a qualification when the authorised body determines that the person has reached the learning outcomes within a certain level and in accordance with the determined qualification standards, which is confimed by a public document (a diploma or a certificate).

2.2. The purpose and goals of National Qualifications Framework in Serbia

The purpose of NQFS is the regulation and improvement of the qualifications system in accordance with the requirements of social and economy development, and providing support to applying the concept of life-long learning and enabling easier mobility of workforce.

Goals of establishing NQFS are as follows:
● providing intelligibility, clear overview and transparency of qualifications, as well as their interconnections;
● development of qualifications standards based on the requirements of labour market and society on the whole;
● providing the orientation towards learning outcomes;
● improving the approach, flexibility of paths and mobility in the formal and non-formal education;
● providing the recognition of non-formal and informal learning;
● affirmation of the importance of key, general and interdisciplinary competences for lifelong learning;
● improving collaboration between relevant stakeholders;
● providing quality system within the process of development and acquiring qualifications;
● providing comparability and recognition of qualifications acquired in Republic Serbia with qualifications acquired in other states.

The significance of establishing the NQFS is manifold, at the individual level as well as at the state level and at the level of society. The application of NQFS will significantly contribute to improvement of diverse types of activities in diverse sectors (education, employment, work, social policy, state governance...).

The effects of establishing NQFS at the subject level and key activities are displayed in Table 1.

Table 1: Subjects and key activities in NQFS implementation

SUBJECTS	KEY ACTIVITIES
Enterprises, state institutions, syndicate, facilitators of education/training programmes	Planning the development of human resources, education and employment
Participants in devising and evaluation of education/training programmes	Programming education and training
Schools, faculties, organizations, enterprises and persons who learn	Licensing programme facilitators
Teachers, professors, trainers and persons who learn	Implementation of education and training programmes
Examination bodies, examination personnel and candidates	Certification
Councillors, persons who learn or choose profession	Career guidance and counselling
Employment services/agencies, enterprises and persons seeking employment	Mediation in employment
State institutions, public services etc.	Determination of policies and strategies in sector given, keeping records in education, employment, statistics, social insurance etc.

2.3. Principles of National Qualifications Framework in Republic Serbia

National framework of qualifications in Serbia is based on the following principles:

1. *Lifelong learning* – recognising the needs of individuals for learning and development during the entire life;

2. *Personalization* – acquiring qualifications in accordance with experiences, needs, interests, social and life roles and developmental characteristics of an individual;

3. *Equal possibilities* – acquiring qualifications, regardless of age, gender, developmental disabilities, disabilities, racial, national, social, cultural, ethnic and confessional identity, language, sexual orientation, place of living, material of health status and other personal traits;

4. *Availability* – equal rights and terms of involvement in all levels and types of qualifications;

5. *Transparency* – openness to public of the development and acquiring qualifications process;

6. *Relevancy* – foundation of qualifications in accordance with the needs of labour market, scientific research and artistic engagement, i.e. society on the whole;

7. *Foundation on qualifications standards and learning outcomes*;

8. *Diversity of possibilities* – diverse types of qualifications;

9. *Openness* – diverse models of acquiring qualifications and possibilities for horizontal and vertical pathways in qualifications system, including academic mobility;

10. *Partnerships and collaborations* – partnership and collaboration between the facilitators and participants in the qualifications system;

11. *Provision of quality* – quality standards in various segments of qualifications system;

12. *Comparability* – coordinating NQFS with other qualification frameworks, with recognition of European

qualifications framework (EQF) criteria and qualification framework of European higher education area qualifications framework (EHEA)[19].

2.4. Learning outcomes

NQFS provides for evaluation of learning via establishing the principle that each achievement may be measured and assessed equally, regardless of the way in which it was acquired. Achievements have to be defined and connected into a coherent system, which is enabled by the introduction of learning outcomes concept.

The learning outcomes concept and orientation of education towards competences were initiated in accordance with systemic changes, in both the field of vocational education and adult education, and in introduction of Bologna process in higher education. Implementation of this approach, as main initiator of reform process, was at first reflected in the process of developing programmes of education/training and striving to establish a qualifications system responding to the needs of labour market.

Within the methodology of programme development, based on outcomes in vocational education and training, a concept of outcomes has been developed, in which the change of paradigm of education and approach to teaching was clearly established, with learner in the centre of educational process. Directions of reform development in other types and levels of education (elementary, general pre-university and higher education) also anticipate this model of perceiving educational process.

Learning outcomes are the explicit statements on what is expected of the person involved in educational proces in terms of knowledge, understanding and/or ability to demostrate, i.e. perform after the completion of a particular level of education; these are expressed in knowledge, skills, abilities and attitudes categories.

Learning outcomes are the instrument coordinating education, needs of labour market and development of the society on the whole. In accordance with that, they are a central part of the standardization in education process, both in terms of programmes development and in the field of achievement evaluation.

Key standards established at the level of education system, which involve learning outcomes are as follows:
- Education standards[20] – standards of achievement and standards of general cross curricular competences describing the goals and outcomes of general pre-university education, as well as competences based on the European framework of key competences for lifelong learning[21];
- Qualifications standards – descriptions of duties (vocational competences) and tasks (units of competences) for a particular profession or group of professions, as well as the appropriate outcomes of knowledge, skills, abilities and attitudes at the level of the qualification on the whole[22];
- Standards for certification in vocational education – description of assessment criteria, based on learning outcomes and directed towards assessment of achieving the competences prescribed by the qualification standards[23];
- Standards in higher education: standards for accreditation of higher education institutions (standard 4) and standard for accreditation of study programme (standards 1 and 4). The first presents the description of the qualification for the given study level, with recognition of Dublin descriptors of learning outcomes for the given level of studies. The others, related to study programmes, describe the learning process outcomes as mandatory element of the programme, as well as genera and subject-specific competences of graduated students of a particular study programme.

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[19] EHEA - European High Education Area

[20] Rulebook on general standards of achievement – educational standards for the end of mandatory education ("Official Gazette of RS" - "Educational Herald", no. 5/2010);
Rulebook on general standards of achievement for the end of general secondary education and secondary vocational education in the field of general education subjects ("Official Gazette of RS", no. 117/2013)
Rulebook on general standards of achievement for elementary education of adults ("Official Gazette of RS", no. 50/2013)

[21] Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning. Official Journal of the European Union L394

[22] Chapter 2.12. of this document

[23] http://www.zuov.gov.rs/wp-content/uploads/2014/02/Ocenivanje-zasnovano-na-kompetencijama.pdf

[24] Rulebook on standards and procedures for accreditation of higher education institutions and study programmers ("Official Gazette of RS", no. 106/2006, 112/2008)

In the process of defining and formulating the learning outcomes, development trends reflected in the national and international education area are respected, primarily the global orientation towards competences and different taxonomic tools for organizing learning outcomes – Bloom (1956) and Anderson – Krathwhol (2001). The dominant principle in hierarchical organization of outcomes of knowledge and skills has recognized: the level of application and functionality aiming at overcoming traditional models of memorizing and reproduction in teaching; a learning process in which competences are acquired through flexible and dynamic integration and application of subject knowledge; the context of learning is reflected in a more dynamic and engaging combination of knowledge, skills and attitudes, relevant for diverse real situations, in which their functional application may be required. Also, the concept of competences and the operationalisation of this concept involved skills outcomes, thus developing the ability to manage problem situations and new contexts, especially regarding higher levels of qualifications.

Integrating the concept of learning outcomes into the education programme has led to a change in the assessment framework within learning process and at the very end of this process, thus emphasizing the importance of formative monitoring of outcomes as measurable indicators of progress, and promoting a unified approach to learning and assessment processes in teaching.

Correlation of the knowledge, skills, abilities and attitudes descriptions by the levels of national framework and the applied hierarchical organization of learning outcomes in accordance with the same categories within qualifications based on the qualification standards shall enable clear classification and comparison of qualifications, i.e. establishing a coherent and transparent qualification system.

2.5. Qualifications levels and descriptors

Qualifications are classified regarding their complexity by levels and sub levels within NQFS.

Integral NQFS consists of (8) levels with sub-levels. Descriptions of knowledge, skills, abilities and attidudes, (further: descriptors), necessary for performing jobs or furhter learning (Table 2).

Knowledge descriptors are the statements on complexity of general and vocational knowledge, necessary for performing work or further learning. Knowledge in this context relates to a set of acquired and connected facts, principles, theories and practices (experiences) that are related to a particular field of work or learning.

Skills descriptors refer to cognitive (logical, intuitive and creative thinking), psycho-motor (physical dexterity, applying methods, instruments, tools and materials) and/or social skills (communication and presentation skills, team work), the differentiation of which by levels are determined by the following:
- complexity and diversity of operations;
- predictability of situations/conditions;
- determination or standardization of operations;
- application of methods and techniques;
- complexity of problems and creating new skills;
- complexity and type of communication;
- using information (skills of collecting, selecting, processing, application and creating information);
- handling utensils, tools, machines, equipment, facilities;
- usage of materials.

Abilities and attitudes descriptors refer, mostly, to independence and responsibility, i.e. in defining these, the following criteria have been used:
- level of independence in work;
- taking responsibilities for one's work and/or work of others with specification related to means, procedures and decisions;
- entrepreneurship in problem solving;
- ability to plan, organize, analyse and evaluate one's own work and/or work of others.

Table 2 – Levels and descriptors of qualifications in NQFS

LEVEL	KNOWLEDGE	SKILLS	ABILITIES AND ATTITUDES
	Person with the acquired qualification level:		
1.	Has basic general knowledge enabling future learning	Applies skills necessary for carrying out simple foreseeable tasks.	Performs tasks or learns according to simple oral and written instructions, with immediate supervision.
2.	Has general and vocational knowledge about facts and basic principles necessary for work and/or learning	Applies skills necessary for performing less complex, previously determined operational actions. He/she handles tools and machines with detailed technical instructions and uses prescribed work materials.	Performs jobs in accordance with established technical technological procedures, with occasional supervision. He/she is responsible for applying established procedures, means and organisation of his/her own work.
3.	Has general and vocational knowledge on facts, basic principles and processes necessary for work and/or learning	Applies skills necessary for performing medium complex, diverse, occasionally non-standardised operational actions. He/she gathers and selects relevant information. He/she handles tools and machines with detailed technical instructions and uses diverse materials	Performs jobs independently, in accordance with technical technological procedures. He/she organises his/her work or work of others. He/she is responsible for following procedures and means of his/her work. He/she is entrepreneurial in his/her work.
4.	Has systematic and comprehensive knowledge necessary for work and/or learning	Applies skills necessary for performing complex, diverse, often non-standardised jobs, using a variety of methods and techniques. He/she critically selects relevant information gathered from diverse sources, for the purpose of applying them in work or learning. He/she handles diverse equipment, machines and facilities, using diverse materials.	Independently performs activities with occasional consultancies. He/she organises and controls his/her own work and/or work of small groups. Perceives problems and participates in resolving of problems. He/she is responsible for the selection of procedures and means for his/her work and/or work of others.
5.	Has specialised vocational knowledge necessary for work	Applies skills necessary for performing complex, diverse, mostly non-standardised jobs, which require participation in creating new solutions. He/she handles specialised equipment, machines and facilities, using diverse materials.	He/she is entrepreneurial in solving problems in standard conditions. He/she manages complex projects independently and with full responsibility. He/she applies ethical standards of the profession. He/she organises, controls and trains other for work. He/she analyses and evaluates various concepts, models and principles of theory and practice. He/she demonstrates positive attitudes to life
6.1	Has advanced and/or vocational knowledge related to theories, principles and processes, with the ability to evaluate, critically understand and apply in the field of learning and/or work.	Resolves complex issues in the field of learning and/or work under standard conditions. He/she applies successful communication skills in the interaction and collaboration with others from various social groups. He/she uses equipment, instruments and appliances, relevant for the field of learning and/or work.	He/she is entrepreneurial in solving problems in standard conditions. He/she manages complex projects independently and with full responsibility. He/she applies ethical standards of the profession. He/she organises, controls and trains other for work. He/she analyses and evaluates various concepts, models and principles of theory and practice. He/she demonstrates positive attitudes to life

LEVEL	KNOWLEDGE	SKILLS	ABILITIES AND ATTITUDES
Person with the acquired qualification level:			
6.2	Has advanced academic and/or vocational knowledge related to theories, principles and processes, with the ability to evaluate, critically understand and apply in the field of learning and/or work.	Resolves complex issues in the field of learning and/or work under non-standard conditions. He/she applies successful communication skills in interaction and collaboration with others from various social groups. He/she uses equipment, instruments and appliances, relevant for the field of learning and/or work.	Is entrepreneurial in solving problems under non-standard conditions. He/she manages complex projects independently and with full responsibility. He/she applies ethical standards of the profession. He/she organises, controls and trains other for work. He/she analyses and evaluates various concepts, models and principles of theory and practice and improves the existing practice. He/she demonstrates positive attitude towards the significance of life-long learning in personal and professional development
7.1	Has highly specialised academic and/or vocational knowledge related to theories, principles and processes, with the ability to evaluate, critically understand and apply in the field of learning and/or work.	Resolves complex problems in an innovative way, which contributes to the development of the field of work. He/she manages and leads complex communication, interaction and collaboration with others from diverse social groups. He/she applies complex methods, instruments and appliances relevant for the area of learning and/or work.	Acts entrepreneurially and takes on managerial jobs. He/she manages the most complex projects independently and with full responsibility. He/she controls work and evaluates results of others for the purpose of improving the existing practices.
7.2	Has narrowly specialised academic and/or vocational knowledge related to theories, principles and processes, with the ability to evaluate, critically understand and apply in the field of learning and/or work.	Resolves complex problems in an innovative way, which contributes to the development of the field of work. He/she manages and leads complex communication, interaction and collaboration with others from diverse social groups. He/she applies complex methods, instruments and appliances relevant for the area of learning and/or work.	Acts entrepreneurially and takes on managerial jobs. He/she manages the most complex projects independently and with full responsibility. He/she controls work and evaluates results of others for the purpose of improving the existing practices.
8	Has exceptional theoretical and practical knowledge, necessary for critical analyses and original research in fundamental and applied scientific fields with the purpose of expanding and redefining the existing knowledge, science and fields of work.	Applies advanced and specialised skills and techniques necessary for resolving key problems in research and for broadening and redefining the existing knowledge or field of work. He/she applies communication skills for explaining and critique of theories, methodologies and conclusions, as well as presenting the research results related to international standards and scientific community. He/she develops new tools, instruments and appliances relevant for the field of science and work.	Independently evaluates contemporary results and achievements aiming at improving the existing and creating new models, concepts, ideas and theories. He/she demonstrates innovativeness, scientific and professional integrity and commitment to developing new ideas and/or processes which are at the centre of the work or science context, through principles of self-assessment of his/her own work and accomplishments. He/she designs, analyses and implements research which serve as significant and original contribution to general knowledge and/or professional practice. He/she manages interdisciplinary and multidisciplinary projects. He/she is capable of independently initiating national and international collaboration in science and development.

2.6. Types of qualifications

Within NQFS, qualifications are classified as:
- general,
- vocational,
- academic and
- professional.

General classifications refer to elementary education and gymnasium education, which encompasses all types and strands of gymnasium, as well as specialised gymnasiums.

Vocational qualifications refer to secondary vocational education and training. Secondary arts qualifications are also included in this group.

Academic qualifications refer to qualifications acquired within accredited academic study programmes (undergraduate, master, specialised and doctoral studies). Academic artistic qualifications also belong to this group.

Professional qualifications refer to qualifications acquired within accredited vocational study programmes (elementary, specialised and master).

Qualifications belonging to the group of regulated professions, and are regulated by a special law, in accordance with the EU directive 2013/55/ЕУ, are a component of NQFS.

2.7. Methods of acquiring qualifications

Qualifications in NQFS may be acquired through formal and non-formal pathways, as well as via validation of non-formal and informal learning[25]:

• formal pathway – qualifications are acquired in formal elementary, secondary or higher education, after which a diploma or a certificate is issued as a public document;

• non formal pathway – qualifications are acquired within the adult education system, in various forms, most often via training, after which a certificate is issued as a public document;

• validation of non-formal or informal learning – qualifications are acquired based on the work or life experience, through a special procedure, followed by issuing a certificate as a public document.

In the qualifications system in Republic Serbia, qualifications are traditionally acquired through the formal education system. New legal solutions in the area of adult education regulate the recognition of qualifications in non-formal system, as a result of introduction of more flexible pathways for obtaining qualifications. Implementation of NQFS-a opens the possibilities for establishing a system of validation of non-formal and informal learning.

The process of validation of non-formal or informal learning enables adults with life and work experience, who do not have a previously obtained public document, to acquire nationally recognized qualification (diploma or a certificate). Validation system encompasses the application of quality standards as determined, and is based on the principle of validating learning outcomes as prescribed by the standards referring to the formal education as well. Validation process enables acquiring only the qualifications to which such a possibility is assigned.

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During several past decades, significant changes in education took place, and therefore in the qualifications acquiring process as well. Qualifications acquired before the establishing NQFs have to be official compared, i.e. classified in accordance with NQFS. That would provide equality regarding the right to work, right to generate the appropriate income, right to further education, statistic expression, and similar important aspects, for both individual and society on the whole. This is particularly significant from the standpoint of the labour-active citizens contingency, which were acquiring their qualifications in a range of educational systems and social circumstances. The display of actual qualifications and qualifications acquired in previous systems was given in Annex 1.

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[25] Валидација неформалног и информалног учења је процес дефинисан Законом о образовању одраслих, појмом „признавање претходног учења"

2.8. Mobility in the qualifications system

NQFS anticipates the implementation of the principles of lifelong learning through determined mobility between the levels of qualifications. Levels of qualifications acquired within the educational system in Serbia, as well as mobility towards higher levels have their specificities depending on the level and type of qualification, as well as on the level of education, and are displayed in Picture 1. Display of mobility, i.e. prerequisite for progressing by levels, as well as the duration of programmes is possible to monitor within a detailed specification by qualification levels, as given in Annex 2.

Horizontal mobility in the pre-university formal education system is encompassed by additional qualification and re-qualification processes. Re-qualification is a process of obtaining a second qualification of the same or lower level. Additional qualification is a process of acquiring qualification on the next, higher level.

2.9. Linking NQFS with EQF and qualifications framework in EHEA

European qualifications framework[26] (further: EQF) is a mutual European frame of referencing the national qualifications systems and acts as a mechanism for comparison, i.e. easier understanding and interpreting qualifications between different states and educational systems in Europe. EQF serves as meta-framework enabling establishing the links between national and sectoral qualifications frameworks in order to make transfer and recognition of qualifications of individuals' easier, thus increasing transparency and mutual trust in recognizing qualifications, and therefore increasing the mobility in European work force market. EQF establishes eight (8) different and unique levels of qualification.

Qualifications framework in European higher education area (EHEA) was created within Bologna process. It is defined with three main cycles (first, second and third cycle), which are described by Dublin descriptors[27].

These two frameworks are compatible and their implementation is coordinated at both national and European levels.

Possibility of comparison of qualification levels acquired in different systems, by using EQF enables immediate recognizing national qualification, which makes international functioning easier when it comes to mobility on the educational market and labour market.

Table 2. provides an example of using EQF for comparison of qualifications acquired in Slovenia and Scotland.

Table 3. An example of comparison of qualification levels in Slovenia and Scotland, with the EQF mediation

SLOVENIA	EQF	SCOTLAND
10	EQF level 8	12
9		
8	EQF level 7	11
7	EQF level 6	10
		9
6	EQF level 5	8
		7
5	EQF level 4	6
4		
3	EQF level 3	5
2	EQF level 2	4
1	EQF level 1	3
		2
		1

[26] European Qualification Framework (EQF) - Recommendation of the European Parliament and of the Councilon the establishment of the European Qualifications Framework for lifelong learning, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32008H0506(01)

[27] Framework for Qualifications of the European Higher Education Area (QF-EHEA); http://www.nfqnetwork.ie/_fileupload/Image/Bologna_web.pdf

In order to enable using EQF as an instrument for comparison of qualifications acquired in Serbia, it is necessary to carry out linking (referencing) NQFS with EQF. After the Recommendation of the Council of Europe and European parliament regarding the establishing of EQF, the member countries and candidate countries have been invited to harmonize national systems of qualification by establishing the corresponding relation of their qualification levels with relevant EQF levels and to develop national qualifications network in accordance with the national legislation and practice.

Linking the NQFS with EQF involves the development of the Report on linking with EQF which is to prove that ten criteria for linking the EQF Advisory group with EQF have been met[28]. Special part of this report is the Report on self-assessment of NQFS in the part related to higher education as related to qualifications framework in European higher education area. Report on self-assessment serves as proof of meeting seven criteria and six procedures as described by Bologna Follow-Up Group for monitoring the implementation of Bologna declaration (BFUG). All the criteria and procedures are provided in Annex 3 of this document.

In accordance with the process of linking, each country establishes a National coordination point, i.e. institution in charge of:

• ensuring the application of transparent methodology when linking the levels of national qualifications with those from EQF, publishing and following the decisions arising from such comparison;

• ensuring the approach to information and providing guidelines for the relation of national qualifications and EQF to all participants in the qualifications development process;

• work on linking levels of qualifications within NQFS with EQF levels;

• encouraging participation of social agents (ministry, higher education institutions, general and vocational secondary education institution, non-formal education institutions, social partners and others), in accordance with the roles given to various conceptual and legal solutions in qualifications analyses.

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[28] EQF Note 5 Referencing National Qualifications Levels to the EQF - Update 2013. https://ec.europa.eu/ploteus/sites/eac-eqf/files/EQF%20131119-web_0.pdf

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3. QUALIFICATIONS STANDARD

Qualifications standard is the document set up at the national level, containing the set of data providing the detailed description of qualifications. These data do not constitute the basis for the classification of qualifications in the NQFS.

The qualification standard has been defined according to the following elements:
1. Qualification title
2. Code from the NQ Register
3. Code of occupations related to the qualification, as per the National Classification of Occupations (NCO)
4. Qualification level under NQFS and EQF
5. Type of qualification
6. Method of acquiring the qualification
7. Position of qualification according to CLASS NQFS
8. Description of work[29]
9. Preconditions for acquiring the qualification
10. Progression within the qualification system
11. Duration of education programme for acquiring the qualification
12. Learning outcomes
13. Method of verifying the achievement of learning outcome
14. ID documents and body responsible for issuing the ID documents
15. Source of verification of reference data on qualification: number of the document, competent body that issued the document, date, code of the qualification version, date of qualification audit, date of entry into the Register.

The qualification standard structured as described above will enable matching of data from the education system with the data from the labour market, including the utilization of data from the education system and labour market data, as well as using various relevant sources of data for their creation. Such type of data have been gathered at the sectoral level, thus enabling the mapping of qualifications in the particular sector, i.e. the establishment of required qualified actions – qualification standards. The professional bodies setting up the standards based on such data at the sectoral level, are the Sectoral Councils.

Publishing the reference data about the qualification within the prescribed format by the competent institution, ensures their transparency, legal certainty and dependability.

3.1. NQFS Register

The Register is comprised of national qualifications sub registers, sub registers of qualification standards and sub register of PRAO, including the employers with whom PRAO conducts the practical work.

Sub register of national qualifications is set up for the needs of managing the data on qualifications, classified according to their levels and types, in line with the CLASS NQFS.

Sub register of qualification standards is set up for the needs of managing the data on qualification standards.

PRAO sub register is set up for the needs of managing the data on PRAO that have been granted or revoked the approvals, the approved education activities for adults and employers with whom PRAP conducts the practical work.

The Register will be managed by the Agency, in an electronic form, based on the Law on National Qualifications Framework.

The Register data are open and available on the official website of the Agency.

More detailed conditions for the content and management of the Register and Sub registers and other issues relevant for the management of the Register, will be prescribed by the Minister responsible for education.

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[29] This element is not binding in the general qualifications

НОКС

НАЦИОНАЛНИ ОКВИР КВАЛИФИКАЦИЈА У СРБИЈИ

4. QUALITY ASSURANCE OF QUALIFICATIONS

Provision of quality is the central element underlying the accomplishment of all objectives and principles of NQFS. *Transparency* of offer of qualifications and institutions, including of appropriate information about the learning program, are being provided for by the qualification registration system. *Availability* of data on the content of qualification and its purpose to any individual interested in the learning and employment process contributes to the implementation of the concept of lifelong learning and thereby the enhancement of the qualification structure of population. The standardization of qualifications based on the description of work and learning outcomes and establishment of sectoral councils enables the *relevance* with regard to setting up and enhancing the qualifications, as well as the participation of key partners in that process. *Development of education/training programme based on qualification standards* and learning outcomes, improves the quality of learning process, mechanisms of monitoring, assessment/validation of acquired knowledge and skills and/or competencies.

Provision of qualification system quality - NQFS is established through the defined standards, procedures, methodologies, allocated responsibilities and the participation of appropriate institutions and bodies, with the aim to develop a credible system that will be primarily trusted by citizens and consequentially by the entire society. The quality standards are being established at different levels (the level of the system and the level of institution/organization that delivers the education/training or the VNIFL process), relevant to the types of qualifications and the cycle of qualification development.

Ensuring the quality means to establish the quality system in the following processes:
- analysis of labour market needs,
- development of qualification standards,
- development of education/training programme,
- accreditation of education/training programme facilitator,
- implementation of education programme and
- certification.

Figure 2. Cycle of ensuring the quality in the qualifications development
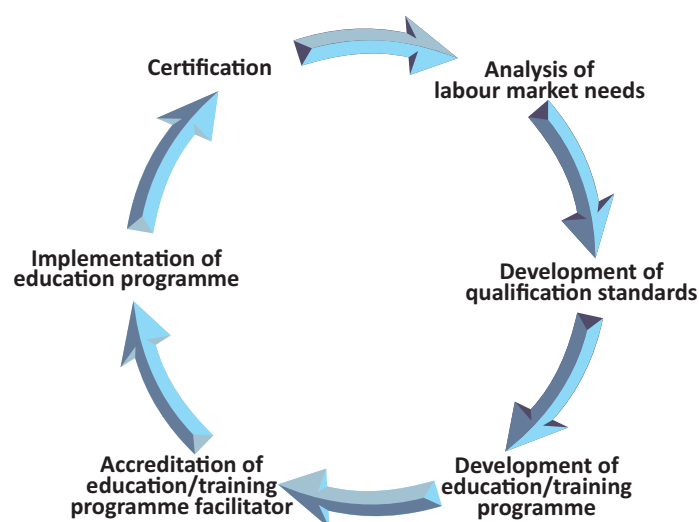
4.1. Analysis of labour market needs

Inclusion of relevant and meaningful qualifications in the system is based on the analysis of the labour market needs and/or the society as a whole.

Quality mechanisms have been developed within the NQFS – aimed at setting up the qualifications relating to:
- The system of data collection on the current and future needs of the labour market and the required qualifications and
- Mapping of qualifications per sectors.

Research of current needs, including the drafting of forecasts and future trends regarding the demands for qualifications, requires the development of a comprehensive analytical framework. The methodological approach developed for these needs is based on the development of the sector profile presenting various objective data (number of employed/unemployed persons, occupations within the sector, qualification structure within the particular sector, selection of programmes for acquiring the qualifications, economic parameters and strategic sector development roadmaps, etc.), by whose analysis and correlation the

conclusions are made at the level of sectoral councils, about the required competences, identifying their interconnections and/or mapping the qualifications.

4.2. Development of qualification standards

The development of qualification standards is conducted in two key phases – *defining of the work description* by implementing appropriate methods for the analysis of the work and based on that, *identifying the learning outcomes* by applying the taxonomy instruments to classify the knowledge, skills, abilities and attitudes with each professional competence.

The job description represents the integrated description of one or more occupations provided in terms of duties and tasks[30], that is, competences and units of competences. The duties are the wider field of work within an occupation; each duty covers the group of related tasks; fulfilling of all tasks within a duty produces competence. Task is a specific unit of work that may be observed; in itself, it is a whole (having its specific starting and ending point) and therefore, it may be conducted within a limited timeframe. When completed, a task results in a product, service or a decision.

Based on the description of work, the learning objectives and outcomes are being defined for the particular qualification.

Education objectives for the particular qualification are dictating the process of education i.e. teaching aimed at developing and adopting competences that are crucial for the performance of particular jobs, and/or for further learning, in the case of general qualifications. Considering that they are related to the major purpose of qualifications, they represent the benchmark for the facilitators of education processes in the field of planning, organization and monitoring of their feasibility. The objectives of education in the qualifications within the pre-university studies have been aligned with the legally prescribed objectives of education and/or the contemporary concept of lifelong learning and career development.

The education outcomes are derived from objectives and they are being determined based on the three categories - knowledge, skills, abilities and attitudes for each of the competences individually, at the

level of the entire qualification. They have been devised in the form of a statement that defines the minimum achievements, and/or results in the learning process from the perspective of a person that learns. Each competence unit provided through the job description is accompanied by the defined set of learning outcomes.

The qualification standard, in addition to the description of work and learning outcome, contains other relevant data on qualification that it refers to and after the adoption it is being registered[31].

4.3. Development of education/training programme

The introduction of a new qualification into the system will involve the development of appropriate learning program based on the qualification standard, including the implementation of a standardized procedure for its adoption.

The programme's reliance on the qualification standard enables the connectivity between the expressed requirements for competences in specific occupations and the respective description of learning outcomes. The learning outcomes from the qualification standard are being practically used in the programme at the level of the courses and/or modules.

Learning outcomes are the mandatory element of the programme, regardless of the type or level of qualification, whereas the structure of education/training, with respect to other elements, has been defined in the appropriate regulatory framework and specific standards.

The Education Development Strategy by 2020 prescribes the introduction of the credit system into the professional education, in line with the European Credit system for Vocational Education and Training (ECVET) that would enable the measureable presentation of the scope of qualifications and/or learning outcomes.

4.4. Accreditation of education/training programme facilitator

The accreditation process assumes that the facilitators of the education/training programmes have

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[30] Ibid.
[31] Elemens of qualification standards and the registration process have been provided in Chapter 3 hereof

capacities and abilities for their implementation. The standards enable the assessment and evaluation of competences of teaching staff and adult education programme implementers, including the material and technical conditions for the implementation of learning processes. The standards and procedures for accreditation of programmes and institutions within the pre-university formal education[32], study programmes and higher education institutions[33], programmes and implementers of adult education[34] have been regulated by appropriate laws and subordinate legislation.

The accreditation of implementers of pre-university formal education is under the responsibility of the Ministry of Education. The accreditation of higher education institutions is under the responsibility of the Accreditation Body of Serbia. In line with the implementation of NQFS, it is necessary that a part of tasks relating to the accreditation of implementers of non-formal education and validation of non-formal and informal education, is take over by the Qualifications Agency[35].

4.5. Implementation of education/training programmes

The quality of implementation of education/training programmes in pre-university and university education, is being monitored through the process of self-assessment and external evaluation. The quality framework, including the set of standards and indicators for self-assessment and external evaluation based on data and evidence, has been set forth by appropriate regulations[36].

Based on the systematic collection of data on various aspects of quality and analyses obtained in this process, appropriate measures have been taken periodically, to improve different areas of education programs' implementation. In the pre-university education, the focus of quality measurement in the field of educational work are: the school curriculum and annual work plan, teaching and learning, educational achievements of students, support provided to students, ethos, work organization and management of schools and resources. In higher education, improvement activities are carried out in the following areas: curriculum, teaching, teaching staff, grading of students and evaluation of textbooks and literature.

Students are included in the process of self-evaluation and external evaluation.

In the non-formal education within the implementation of the NQFS, it is necessary to establish quality standards for monitoring the implementation of training programs and to clearly specify the procedures and competent bodies.

4.6. Certification

Quality assurance in the field of certification, and/or assignment of qualifications to individuals, includes the regulation of the field related to the assessment of the achievement of learning outcomes and/or the types and content of public documents proving this.

The current legislation framework sets forth the criteria and method of evaluating the qualifications at different levels. NQFS ensures that the criteria of evaluation are based on the learning outcomes for the given qualification.

Achievements monitored and evaluated at final exams in pre-university education, are based on the standards of achievements in general education, that is, the qualification standard in the vocational education.

The principles, implementation procedures and evaluation criteria for qualification exams have been standardized and established at the national level.

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[32] Rulebooks on the type of education of teachers, assistant teachers and professional associates of schools and the Rulebook on more detailed conditions relating to the space, equipment and teaching aids for the implementation of education curricula (per types of schools, areas of work and educational backgrounds)

[33] Rulebook on standards and procedure for accreditation of higher educationi institutions and study programs,"Official Gazette of RS",no. 106/2006, 112/2008 and 86/2016

[34] Rulebook on more detailed conditions relating to the programmer, staff, premises, equipment and teaching tools for the acquisition of the status of publicly recognized organizer of adult education activities, "Official Gazette of RS", no. 89/2015

[35] Responsibilities of the Agency have been provided in Chapter 5 hereof

[36] Law on the Foundations of Education System ("Official Gazette of RS", no88/2017);
Rulebook on Quality Standards relating to the work of Institutions ("Official Gazette of RS", no 7/2011 and 68/2012); Rulebook on self-assessment and quality evaluation at higher education institutions ("Official Gazette of RS", no. 106/2006.); Rulebook on standards andprocedures for external verification of quality of higher education institutions("Official Gazette of RS",no. 106/2006, 73/2011, 101/2012, 103/2012 –corrig. and 13/2014)

The types of qualification exams for the appropriate level in pre-university education are:

- Final exam in elementary education,

- exam in professional competence, i.e. final exam for the qualification level 2,

- Final exam for level 3 qualifications,

- *Matura* exam (general, professional and art school Matura) for qualification level 4,

- specialist or master's exam for the qualification level 5.

Types of exams for acquiring the qualification of appropriate level in higher education are:

- exams on individual courses within the study program and

- final work of the study program.

The student's success in mastering the learning outcomes of individual courses is being continuously monitored during the classes and evaluated in the form of points for the pre-examination assignments and at exams.

The study program of undergraduate and specialist studies may require a final paper to be submitted, while the study program of master academic studies and master vocational studies imposes the obligation of presenting a final paper.

The doctoral thesis is the final part of the PhD study program, except the PhD in Art, that requires an art project.

The programs, the way of conducting the exams and the criteria in the case of non-formal adult education, have been prescribed by the relevant subordinate legislation. Within this system, it is possible to recognize a group of learning outcomes or individual professional competencies acquired through PRAO training, that is, to obtain a document for a partially achieved standard of professional competences or a mastered training course.

The types of public documents acknowledging the acquired qualifications have been provided in the Table under Annex 5. The official document contains the data on acquired learning outcomes, quality of achievement and acquired competences for the respective qualification.

A full implementation of NQFS requires prior establishment of standards and procedures for assigning the qualifications in the process of validating the non-formal and informal learning that will ensure the equal value of qualifications acquired in such manner, compared to those acquired in a formal way.

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Flow charts of ensuring the quality of NQFS in pre-university and university education, covering all the described processes of ensuring the quality in the qualification development, including the procedures, competent bodies and institutions, has been presented in Annex 6.

5. IMPLEMENTATION OF NATIONAL QUALIFICATIONS FRAMEWORK IN SERBIA

The implementation of NQFS assumes prior setting up of legal framework and responsibilities of bodies and institutions tasked with the development and coordination of the qualifications system in Serbia.

5.1. Legal regulation of the National Qualifications Framework in Serbia

The current legal framework of education covers a large number of laws in the education system and an even more extensive subordinate legislation, which not only reflects the importance and abundance of the system and the subject-matter, but to some extent also the fragmentation of the regulatory framework. Since the quality assurance is in its phase of development and acquisition of qualifications requires a comprehensive and consistent application of appropriate procedures and standards, it is necessary to establish a single regulatory framework, or in particular, adopt a special law that will regulate the field of qualifications at the national level.

The Law on NQFS would regulate:
1. Basic terms and their meaning,
2. Purpose and objectives of NQFS,
3. Underlying principles of NQFS,
4. Types and levels of qualifications,
5. Methods of acquiring the qualifications,
6. Descriptors of qualification levels,
7. Bodies and institutions responsible for the implementation and development of NQFS,
8. Ensuring the quality of NQFS implementation and

Enactment of the Law on NQFS should be followed by the adoption of a larger number of subordinate legislation that will regulate the functioning of NQFS system at an operational level.

5.2. Institutional regulation of the National Qualifications Framework in Serbia

Based on the purpose and objectives of NQFS and according to the conducted institutional and functional analysis[37], the functions and tasks of NQFS have been mapped.

The key functions were established in two fields: 1) strategic management of development and implementation of NQFS and 2) Quality assurance.

The Ministry is responsible for the strategic development and coordination of activities of NQFS implementation. Aside from the Ministry, the important roles in individual segments have been assigned to other institutions and bodies (MLEVSA, NES, educational institutions and councils, ABS etc.). The conducted analysis[38], has shown that the existing network of institutions does not provide for an efficient or synchronized system of NQFS development and implementation, nor any principles of social partnership. The establishment of special bodies and institutions contributes to the provision of key functions of the NQFS. At the strategic level of the system management it is necessary to form a representation body – *the Council for NQFS*, formed from the representatives of relevant stakeholders. The respective advisory body should ensure recommendations on the planning process policies and development of human resources, in line with the relevant public policies relating to the lifelog education, employment, career management and counselling, regional/local development.

A detailed definition of responsibilities and the organization and composition of *the Council for the NQFS* will be elaborated and regulated by the Law on NQFS.

To ensure the quality, all the aspects of NQFS development and implementation at both operational

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[37] Institutional and functional analysis of development and implementation of the National Qualifications Framework in Serbia, Project: "Support to the implementation of policy and employment and social policy in Serbia, with the focus on the policy of employment and increased employability among the young population", MESTD, SDC, 2016.
[38] Ibid

and technical level, need to form a *Qualifications Agency*, including the *sectoral councils*. The initial idea and legal grounds for the foundation and partially, for defining the competences of this agency have been included under the Law on the Foundations of the Education System[39]. Based on the existing legal and institutional framework and the conducted functional analysis, the Agency is to be in charge of the following:

1. Reviewing initiatives for the introduction of new qualifications;

2. Providing of expert assistance to the sectoral council when drafting the proposed qualification standards;

3. Providing of administrative and technical support to the work of sectoral councils;

4. Managing the Register and taking care of entering the data into appropriate sub registers based on the decision of the Ministry in charge of education;

5. Classification and allocation of codes for classifications, according to the CLASS NQFS systems;

6. Recognition of foreign school documents;

7. Conduct the procedure of recognizing the foreign school document for the purpose of employment (hereinafter: professional recognition);

8. Conduct the first evaluation of a foreign study programme;

9. Maintain records on professional recognition in line with this Law and the law regulating the higher education

10. Perform external verification of quality of PRAO, once in the course of a five-year mandate of such approval;

11. At the request of the Ministry in charge of education, present reports on the fulfilment of conditions about the adult education curricula, delivery of the programme and the staff:

12. Prepare development projects, analyses and research relevant for the development of qualifications;

13. Monitor and measure effects of implementation of (new) qualifications on employment and lifelong learning;

14 Propose measures to improve quality assurance in the overall system.

Sectoral councils are the bodies founded on the grounds of the social partnership principles. The critical role of these professional bodies is to set up the qualifications required for the operation of Serbian economy and society as a whole, through the partnership with the Agency. The Sectoral council is the body formed based on the principle of social partnership, by the Government, at the proposal of the Council.

The Government will appoint the members of the Sectoral council belonging to the field for which the respective council is being formed, at the proposal of:

• Serbian Chamber of Commerce and Industry and representative associations of employers from the companies belonging to the field for which the Sectoral council was formed;

• Professional chambers and/or associations;

• Council for Professional Education and Education of Adults, by the experts from the field of education and adult education;

• University Conference and Conference of Academies and Higher Education schools, by the teachers of higher education institutions;

• National Employment Service;

• Ministries responsible for: educational activities, employment and labour and activities founded by the sectoral council;

• Representatives of the association of vocational schools;

• Representative trade unions of respective industries;

• and other relevant institutions, offices and organizations.

The implementation of activities relating to the specific qualifications, may be proposed by the Sectoral council by addressing the proposal for forming the expert teams to the Agency.

The major tasks of sectoral councils in the process of development and implementation of NQFS are:

• analysis of the current and introduction of required qualifications in the particular sector;

• identification of qualifications that need to be updated;

• identification of qualifications that no longer reflect the needs of the sectors;

• defining of draft qualification standards within the sectors;

• providing opinion about expected learning outputs and skills within the sectors;

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[38] Articles 24a and 246 of the Law, "Official Gazette of RS", no. 72/2009, 52/2011, 55/2013, 35/2015 and 68/2015

• to promote dialogues and direct cooperation between the segments of work and education;

• to promote opportunities for education, training and employment within the sectors;

• to identify opportunities for training of adults within the sectors;

• review implications of the National Qualifications Framework upon the qualifications within the sectors;

• to propose a list of qualifications per levels and types that may be acquired by way of recognizing the previous learning.

Responsibilities of the Qualifications Agency and sectoral councils will be elaborated and regulated by the Law on the NQFS.

Based on the conducted institutional and functional analysis, the financial analysis was made[40] related to the introduction of the National Qualifications Framework in Serbia that will assume the current status and the planned development. The analysis also covered the appropriate recommendations that will be used for defining the method and model of funding the NQFS within the Law on the NQFS.

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[40] National Qualifications Framework in Serbia– Financial framework, analysis and proposals, Belgrade, July 2016, Project: "Support to the implementation of policy and employment and social policy in Serbia, with the focus on the policy of employment and increased employability among the young population", Subcomponent 2: Support to the development of the National Qualifications Framework and sectoral councils

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ANNEXES

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Annex 1 – Comparison between the levels of qualifications and types of education
Annex 2 – Specification of qualifications levels
Annex 3 – Criteria and procedures for the interconnection between the National Qualifications Framework
in Serbia and European Qualifications Framework
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education
Annex 6 – Flowchart of quality assurance for the qualifications' levels 1-5 and 6-8

Annex 1. Comparison between the levels of qualifications and types of education

Comparative table of qualification levels and types of education

NQFS LEVEL		COMPARATIVE TABLE OF QUALIFICATION LEVELS AND TYPES OF EDUCATION	
		CURRENT	PREVIOUS
1.		• Primary school education • Primary school education for adults • Primary music /ballet school	• Nonqualified (NQ) worker • First level of education (1. EL*)
2.		• Professional training (1 year) • Education for work (2 years) • Training (120 – 360 hours of training)	• Semi qualified worker (SQ) • Second level of education (2. EL)
3.		• Secondary vocational education lasting three years • Non-formal adult education (min 960 hours of training)	• Qualified worker (QW) • Third level of education (3. EL)
4.		• Four-year secondary education (vocational, art, general high school)	• Fourth level of education (4. EL)
5.		• Craft and specialist education	• Highly qualified worker (BKB) • Fifth level of education (5. EL)
6.	6.1	• Undergraduate academic studies(UAS, 180 ECTS) • Undgraduate vocational studies (UVS, 180 ECTS)	• College degree education lasting from two to three years of studies (6.1 EL) • First-level university degree (until 2005, 6.1 EL)
	6.2	• Undergraduate academic studies(UAS, 240) • Specialist vocational studies, first level (EL, 180+60 ECTS)	• College degree with specialization lasting up to one year (6.2 EL)
7.	7.1	• Integrated academic studies (IAS, max. 360 ECTS) • Master of academic studies (MAC,180+120 or 240+60 ECTS) • Master of vocational studies (MVS, 120 ECTS)	• Undergraduate (diplomatic) studies lasting for to six years (until 2005, 7.1 EL) • Specialist vocational studies, second level (EL, 180+60 ECTS)
	7.2	• Specialist academic studies (SAS, 60 ECTS)	• Master studies lasting two years (until 2005, 7.2 EL) • Specialist studies lasting from one to two years (until 2005, 7.2 EL)
8.		• Doctoral (PhD) studies (DS, 180 ECTS)	• PhD in Sciences (until 2005, 8. EL)

Annex 2. Specifications of qualification levels

Key elements defining the level of qualification (descriptors, types, preconditions, scope, vertical progression, official document) have been presented individually, for each level 1 to 8, in the tables below (Tables 1 – 10):

TTable 1: Qualifications Level 1

QUALIFICATIONS FRAMEWORK	Descriptor levels	Knowledge	Acquired basic general knowledge enabling further learning
		Skills	Applies skills necessary for performing simple, predictable tasks
		Abilities and attitudes	Performs tasks or learns upon simple oral or written instructions, with direct supervision

	Method of acquisition	Formal education	Non-formal education	Recognition of previous learning (RPL)
QUALIFICATION SYSTEM	Preconditions	Preparatory preschool programme		
	Duration of the Programme	Eight years for regular population or three for adults		
	Document	Certificate on completed primary education; Certificate on accomplished final exam of primary education		
	Vertical progression	Acquisition of qualification of third or fourth level through a formal education Acquisition of qualifications of the second or third level through a non-formal education or RPL		
	Example	Primary school education; Primary education for adults; Primary education in music/ballet		

Table 2: Qualification level 2

QUALIFICATIONS FRAMEWORK	Descriptor levels	Knowledge	Acquired general and vocational knowledge about the facts and basic principles required for work and/or learning
		Skills	Applies skills required for performing less complex, operational assignments defined in advance; Handles tools and machines upon detailed technical instructions, using the prescribed materials for work
		Abilities and attitudes	Performs tasks in line with the set technical and technological procedures, with occasional supervision; Responsible for applying the defined procedures, using the means and organizing of own work

	Method of acquisition	Formal education	Non-formal education	Recognition of previous learning (RPL)
QUALIFICATION SYSTEM	Preconditions	Primary school education; Accomplished final exam upon primary education	Primary school education	Primary education and two years of relevant work experience
	Duration of the Programme	Professional training up to 1 year; Education for work – 2 years	Training – 120 to 360 hours	
	Document	Certificate of passed exam for professional training; Diploma on acquired education for work lasting two years	Certificate of partially accomplished standard of professional competences; Certificate of accomplished standard of professional competences; Certificate of fully accomplished standard of the qualification	
	Vertical progression	Acquiring a third level qualification (through a non-formal education or RPL)		
	Example	Farmer - nursery	Producer of organic medicinal herbs – marigold and anise	

Table 3: Qualification level 3

QUALIFICATIONS FRAMEWORK	**Descriptor levels**	**Knowledge**	Acquired general and vocational knowledge about facts, basic principles and processes required for work and/or learning
		Skills	Applies skills required for performing assignments of medium complexity, diverse, occasionally non-standard operational tasks. Collects and makes selection of relevant information Handles specialized equipment, machines and plants using different materials
		Abilities and attitudes	Performs assignments independently, in line with technical and technological procedures; Organizes own work and/or work of others; Responsible for the implementation of procedures and means of own work; Proactive at work

	Method of acquisition	**Formal education**	**Non-formal education**	**Recognition of previous learning (RPL)**
QUALIFICATION SYSTEM	**Preconditions**	Primary school education Completed final exam in primary education	Primary education or qualification of second NQFS level	Primary education and five years of appropriate work experience
	Duration of the Programme	Three years or two years for adults	Training – 960 hours	
	Document	Diploma on acquired secondary education lasting three years; **Diploma Supplement**: Certificate of passed exams within the accomplished programme for the education profile	Certificate of accomplished standard of key competences for general educational segment of secondary school education for adults; Certificate of partially accomplished standard of professional competences; Certificate of accomplished standard professional competences Certificate of fully accomplished standard qualification	
	Vertical progression	Acquiring the fourth level qualification (additional qualification) or qualifications level five		
	Example	Baker	Baker	

Table 4: Qualification level 4

QUALIFICATIONS FRAMEWORK	**Descriptor levels**	**Knowledge**	Acquired systemic and full knowledge required for work and/or learning
		Skills	Applies skills required for performing complex, diverse, often non-standard assignments using different methods and techniques; Conducts critical selection of relevant information collected from different sources in order to implement them in the work or learning; Handles diverse types of equipment, machines and plants using different materials
		Abilities and attitudes	Performs the job independently, with sporadic consultations; Organizes and controls own work and/or smaller groups. Identifies problems and participates in their resolving; Responsible for the selection of procedures and means for own work and/or work of others

	Method of acquisition	**Formal education**	**Non-formal education**	**Recognition of previous learning (RPL)**
QUALIFICATION SYSTEM	**Preconditions**	Primary school education; Completed final exam in primary education; Music, ballet and specialized high schools – passed enrolment exam for checking the extraordinary abilities; completed , three years of secondary school (for additional training)	Completed a four year education (for retraining)	Completed three years of education and acquired work experience of two years (for additional qualification); completed four year education and acquired work experience of two years (for retraining).
	Duration of the Programme	Four years of three years for adults		
	Document	Diploma on secondary school lasting four years; **Diploma supplement**: Certificate of passed exams within the accomplished programme for the education profile	Certificate	Certificate
	Vertical progression	Acquiring qualification level five – specialization; Acquiring qualification level six (UVS, UAS) or level seven (IAS)	Acquisition of qualification level five	Acquisition of qualification level five
	Example	Food technician		

Table 5: Qualification level 5

QUALIFICATIONS FRAMEWORK	**Descriptor levels**	**Knowledge**	Acquired specialized professional knowledges required for work
		Skills	Applies skills required for performing complex, specific and predominantly non-standard assignments requiring participation in creating new solutions; Handles diverse types of equipment, machines and plants using different materials
		Abilities and attitudes	Performs assignments with predominant independence in decision making. Conducts organization, control and evaluation of own work and/or work of others, including the training of others for work; Takes responsibility for defining own way and method of work including for operational performance of others; Displays Proactiveness in upgrading the work processes and problem solving in unpredictable situations

	Method of acquisition	**Formal education**	**Non-formal education**	**Recognition of previous learning (RPL)**
QUALIFICATION SYSTEM	**Preconditions**	Secondary vocational education lasting three or four years and minimum two years of relevant work experience	Secondary vocational education lasting four years and minimum five years of relevant work experience	Secondary vocational education lasting four years and minimum five years of relevant work experience
	Duration of the Programme	1 to 2 years	6 months to 1 year	
	Document	Certificate of passed specialist exam; Crafts specialist letter	Certificate	Certificate
	Vertical progression	—		
	Example	Baker – specialist		

Table 6: Qualification level 6.1

QUALIFICATIONS FRAMEWORK	Descriptor levels		
		Knowledge	Acquired advanced academic and/or professional knowledge in theory, principles and processes including evaluation, critical understanding and implementation in the field of learning and/or work
		Skills	Resolves complex problems in the field of learning and/or work under standard circumstances; Applies skills of successful communication and cooperation with others from different social groups; Uses equipment, instruments and devices relevant for the field of learning and/or work
		Abilities and attitudes	Proactive in resolving problems under standard circumstances. Leads complex projects independently and with full responsibility; Applies ethical standards of own profession; Organizes, controls and trains others for work; Analyses and evaluates different concepts, models and principles of theory and practice; Displays positive attitude towards the significance of lifelong learning in personal and professional development

QUALIFICATION SYSTEM	Method of acquisition	Formal education	Non-formal education	Recognition of previous learning (RPL)
	Preconditions	Completed secondary school lasting 4 years and Passed Matura exam		
	Duration of the Programme	180 ECTS (UVS, UAS)		
	Document	Diploma and Diploma supplement		
	Vertical progression	Acquisition of Qualification level 6.2 and 7 through formal education		
	Example	Professional engineer of information technologies		

Table 7: Qualification level 6.2

QUALIFICATIONS FRAMEWORK	Descriptor levels		
		Knowledge	Acquired advanced academic and/or professional knowledge in theory, principles and processes including evaluation, critical understanding and implementation in the field of learning and/or work
		Skills	Resolves complex problems in the field of learning and/or work under standard circumstances; Applies skills of successful communication and cooperation with others from different social groups; Uses equipment, instruments and devices relevant for the field of learning and/or work
		Abilities and attitudes	Proactive in resolving problems under standard circumstances. Leads complex projects independently and with full responsibility; Applies ethical standards of own profession; Organizes, controls and trains others for work; Analyses and evaluates different concepts, models and principles of theory and practice, improving the existing practise; Displays positive attitude towards the significance of lifelong learning in personal and professional development;

	Method of acquisition	Formal education	Non-formal education	Recognition of previous learning (RPL)
QUALIFICATION SYSTEM	Preconditions	Completed secondary school lasting 4 years and Passed Matura exam or acquired qualification level 6.1		
	Duration of the Programme	240 ECTS (UAS) 60 ECTS (EL)		
	Document	Diploma and Diploma supplement		
	Vertical progression	Acquiring of Qualification level 7.1 through the Formal education		
	Example	Graduated Sociologist		

Table 8: Qualification level 7.1

<table>
<tr><td rowspan="3">QUALIFICATIONS FRAMEWORK</td><td rowspan="3">Descriptor levels</td><td>Knowledge</td><td>Acquired highly specialized academic and/or professional knowledge in theory and principles and processes including evaluation, critical understanding and implementation in the field of learning and/or work</td></tr>
<tr><td>Skills</td><td>Resolves complex problems in and innovative way thus contributing to the development in the field of learning and/or work;
Maintains and leads complex communication, interaction and cooperation with others from different social groups;
Applies complex methods, instruments and devices relevant for the field of learning and/or work</td></tr>
<tr><td>Abilities and attitudes</td><td>Acts in an entrepreneurial way and takes on managerial activities;
Independently and with full responsibility manages the most complex projects;
Plans and carries out the scientific and/or applied scientific research;
Controls the work and evaluates the results of others in order to ensure the enhancement of the existing practise</td></tr>
</table>

<table>
<tr><td rowspan="6">QUALIFICATION SYSTEM</td><td>Method of acquisition</td><td>Formal education</td><td>Non-formal education</td><td>Recognition of previous learning (RPL)</td></tr>
<tr><td>Preconditions</td><td>Completed secondary school lasting 4 years and
Passed Matura exam or acquired qualification level 6.1</td><td></td><td></td></tr>
<tr><td>Duration of the Programme</td><td>300 – 360 ECTS (ИМАС) or
60-120 ECTS (MAC)
120 ECTS (MCC)</td><td></td><td></td></tr>
<tr><td>Document</td><td>Diploma and Diploma supplement</td><td></td><td></td></tr>
<tr><td>Vertical progression</td><td colspan="3">Acquiring of academic Qualification level 7.2 and/or 8 through Formal education</td></tr>
<tr><td>Example</td><td>Master engineer of electric engineering and computer science for electrical energy</td><td></td><td></td></tr>
</table>

Table 9: Qualification level 7.2

QUALIFICATIONS FRAMEWORK	Descriptor levels		
		Knowledge	Acquired highly specialized academic and/or professional knowledge in theory and principles and processes including evaluation, critical understanding and implementation in the field of learning and/or work
		Skills	Resolves complex problems in and innovative way thus contributing to the development in the field of learning and/or work; Maintains and leads complex communication, interaction and cooperation with others from different social groups; Applies complex methods, instruments and devices relevant for the field of learning and/or work
		Abilities and attitudes	Acts in an entrepreneurial way and takes on managerial activities; Independently and with full responsibility manages the most complex projects; Controls the work and evaluates the results of others in order to ensure the enhancement of the existing practise

	Method of acquisition	Formal education	Non-formal education	Recognition of previous learning (RPL)
QUALIFICATION SYSTEM	**Preconditions**	Acquired qualification level 7.1		
	Duration of the Programme	Minimum 60 ECTS		
	Document	Diploma and Diploma supplement		
	Vertical progression	Acquiring of Qualification level 8 through Formal education		
	Example	Specialist in biology sciences		

Table 10: Qualification level 8

QUALIFICATIONS FRAMEWORK	Descriptor levels		
		Knowledge	Acquired supreme theoretical and practical knowledge required for a critical analysis and original research in fundamental and applied sciences field with the aim to expand and redefine the existing knowledge, science or field of work
		Skills	Applies advanced and specialized skills and techniques required for solving the key problems in the research and for expending and redefining of existing knowledge or field of work; Applies communication skills to explain and criticise theories, methodologies and conclusions including the presentation of results of research with the reference to international standards and scientific community; Develops new tools, instruments and devices relevant for the field of science and work
		Abilities and attitudes	Independently evaluates contemporary results and achievements with the aim of improving the existing ones and creating new models, concepts, ideas and theories; Displays innovative approach, scientific and professional integrity and dedication to the development of new ideas and/or processes being the focal point of the context of the work or science, through the principle of self-evaluation of own work and achievements; Designs, analyses and implements the research that constitutes the significant and original contribution to general knowledge and/or professional practice; Leads interdisciplinary and multidisciplinary projects; Capable of independently initiating the national and international cooperation in science and development

QUALIFICATION SYSTEM	Method of acquisition	Formal education	Non-formal education	Recognition of previous learning (RPL)
	Preconditions	Acquired qualification level 7.1		
	Duration of the Programme	180 ECTS		
	Document	Diploma and Diploma supplement		
	Vertical progression	—		
	Example	PhD in Electrical engineering and computer technologies		

Annex 3. Criteria and procedures for referencing the National Qualifications Framework in Serbia to the European Qualifications Framework:

1. Responsibilities and/or competencies of relevant national bodies in the process of referencing, including the National Coordinating Point, have been clearly established and published by the competent national authority;
2. There is a clear and demonstrable link between the qualifications level in the National Framework or Qualification system and the descriptors of the levels of the European Qualifications Framework;
3. National Framework or Qualification system and its qualifications are based on the principle of learning outcome and they are connected with the mechanisms for validation of non-formal and informal learning and the systems of credit worthiness assessment, where any;
4. The procedures for inclusion of qualifications in the National Qualifications Framework or for describing the place of such qualifications within the national qualifications system are transparent;
5. The national system(s) for quality assurance in education and training, point to the national framework or Qualification system and they satisfy the relevant European principles and guidelines;
6. The linking process will involve the confirmed approval by appropriate bodies responsible for quality assurance;
7. International experts will be involved in the referencing process;
8. The competent national body or bodies will certify the establishing of the links between the national frameworks of the qualification system with the EQF. The competent national bodies, including the National coordination point, will publish a comprehensive report and separately present the fulfilment of each criterion;
9. Official EQF platform contains a list of member states who confirmed that they published the process of referencing, with the links made for the completed reports on the respective referencing; -
10. Following the referencing process, in keeping with the time frame set forth in the Recommendations, all the new certificates, diplomas, diploma supplements and Europass documents on qualifications, issued by the competent bodies, will contain the clear references with appropriate European Qualification Levels, in the manner defined under the national qualification systems.

Annex 4. CLASS NQFS classification of education sectors and training:

	Department		Sub-department		Subsection
0	**General programmes and qualifications**	001	General programmes and qualifications	0011	General programmes and qualifications
		002	Literacy and numeracy	0021	Literacy and numeracy
		003	Personal development	0031	Personal development
1	**Education**	011	Education	0111	Education science
				0112	Education of teachers in preschool institutions
				0113	Education of teachers in charge of classes (and primary grades 1-4)
				0114	Education of teachers of individual courses
2	**Art**	021	Art	0211	Audio visual techniques and media production
				0212	Fashion and industrial design and interior design
				0213	Fine arts
				0214	Crafts
				0215	Music and performance art
		022	Humane sciences (other than languages)	0221	Religion and theology
				0222	History and archelogy
				0223	Philosophy and ethics
		023	Languages	0231	Language learning
				0232	Literature and linguistics
3	**Social sciences, journalism and information technologies**	031	Social sciences and behavioural sciences	0311	Economy
				0312	Political sciences and civil rights
				0313	Psychology
				0314	Sociology and culture studies
		032	Journalism and information	0321	Journalism and reporting
				0322	Librarian, information and archive studies
4	**Business, administration and law**	041	Business and administration	0411	Accounting and taxes
				0412	Finance, banking and insurance
				0413	Management and administration
				0414	Marketing and advertising
				0415	Secretarial and office administration work
				0416	Wholesale and retail
				0417	Work skills
		042	Law	0421	Law

	Department	Sub-department		Subsection	
5	**Natural sciences, mathematics and statistics,**	051	Biology and related sciences	0511	Biology
				0512	Biochemistry
		052	Environment	0521	Science of Environmental protection
				0522	Natural environment and wildlife
		053	Physics	0531	Chemistry
				0532	Earth sciences
				0533	Physics
		054	Mathematics and statistics	0541	Mathematics
				0542	Statistics
6	**Information and Communication Technologies**	061	Information and Communication Technologies (ICT)	0611	Computer skills
				0612	Database, network designing and administration
				0613	Development and analysis of software and applications
7	**Engineering, production and civil engineering**	071	Engineering and engineering industries	0711	Chemical engineering and processes
				0712	Technology of environmental protection
				0713	Electrical engineering and energy
				0714	Electronics and automatics engineering
				0715	Mechanical engineering and metal processing
				0716	Traffic engineering (motor vehicles, vessels and aircrafts)
		072	Production and processing	0721	Food production
				0722	Processing of material (glass, paper, plastic and wood)
				0723	Production of textile and leather (clothes, footwear and items made of leather
				0724	Mining and metallurgy
		073	Architecture and civil engineering	0731	Architecture and urban planning
				0732	Civil Engineering
8	**Agriculture, forestry, fishery and veterinary science**	081	Agriculture	0811	Production of plants and growing of domestic animals
				0812	Horticulture
		082	Forestry	0821	Forestry
		083	Fishery	0831	Fishery
		084	Veterinary science	0841	Veterinary science

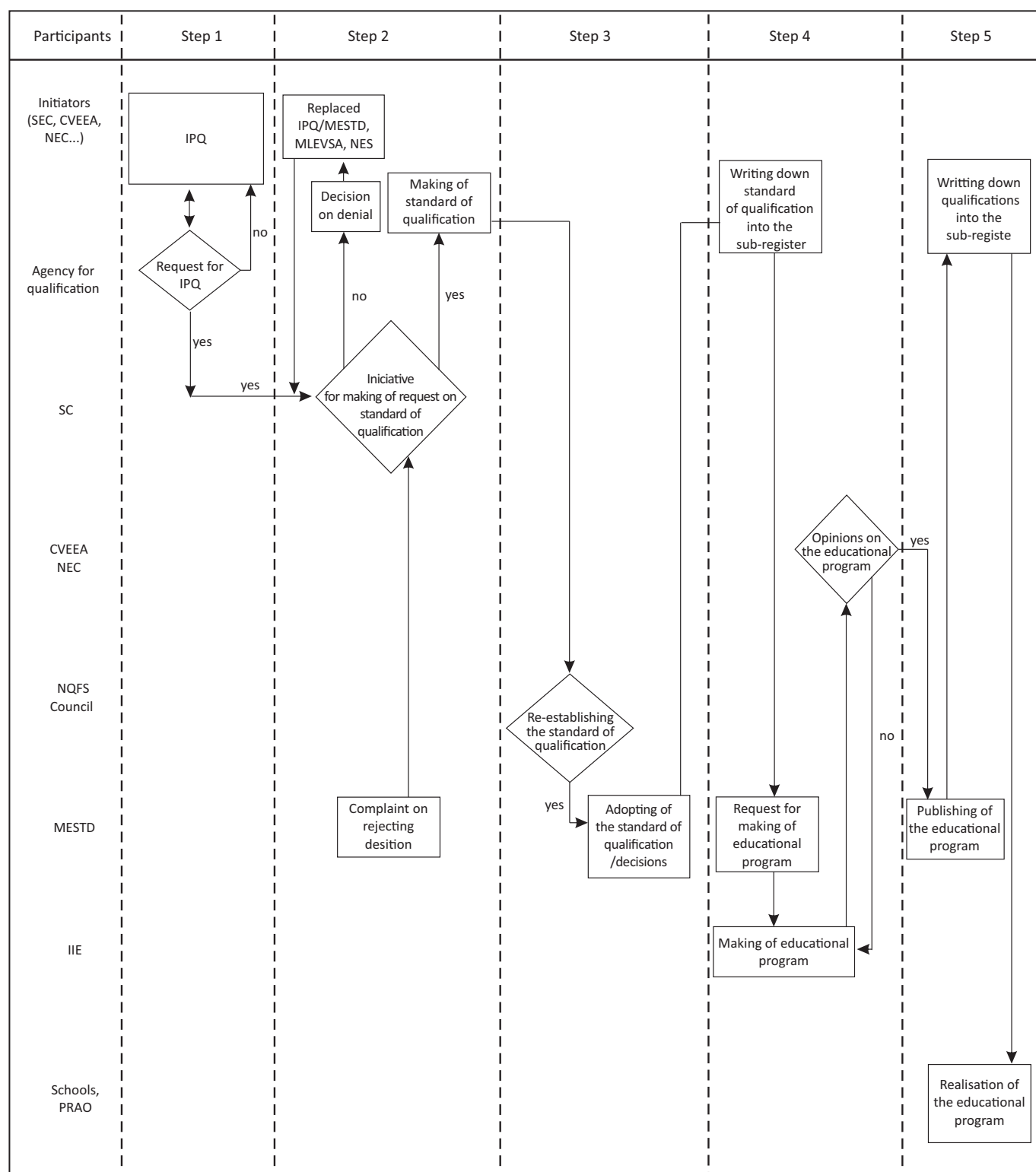|	Department	Sub-department		Subsection	
9	**Health and health care**	**091**	Health care	0911	Dentistry
				0912	Medicine
				0913	Medical care and midwives
				0914	Technologies of medical diagnostics and treatment
				0915	Therapy and rehabilitation
				0916	Pharmacy
				0917	Traditional and complementary medicine and therapy
		092	Social welfare	0921	Care about elderly persons and the disabled persons
				0922	Child and Youth care
				0923	Social and counselling services
10	**Services**	**101**	Personal services	1011	Household services
				1012	Hairdresser and beauty services
				1013	Hotels, restaurants and catering
				1014	Sports
				1015	Travel, tourism and leisure
		102	Hygiene and health services	1021	Utility services
				1022	Occupational Health and Safety
		103	Protection services	1031	Army and Defence
				1032	Protection of people and property
		104	Transport services	1041	Transport services

Annex 5 - official documents for acquiring qualifications per levels and types of education

NQFS LEVEL	TYPE OF EDUCATION	OFFICIAL DOCUMENT
1.	• Primary school education	• Diploma on completed primary education • Certificate on passed exam in primary education
	• Primary education for adults	• Certificate on passed primary education exam • Certificate on passed exam in primary education
	• Primary education in music	• Diploma on completed primary music/ballet education
	• Primary ballet dancing	• Diploma on completed primary music/ballet education
2.	• Professional training (1 year)	• Certificate of passed exam for professional training
	• Education for work (2 years)	• Diploma
	• Training (120 – 360 hours of training)	• Certificate of fully accomplished qualification standard
3.	• Secondary vocational education (3 years)	• Diploma
	• Secondary vocational education (3 years) based on qualification standard	• Diploma • Certificate of passed exams within the accomplished programme for the education profile
	• Non-formal adult education (min 960 hours of training)	• Certificate of fully accomplished qualification standard
4.	• Secondary education – vocational, art, high school (4 years)	• Diploma
	• Secondary vocational education (4 years) based on qualification standard	• Diploma • Certificate of passed exams within the accomplished programme for the education profile
5.	• Crafts and specialist education	• Certificate of passed specialist exam

NQFS LEVEL		TYPE OF EDUCATION	OFFICIAL DOCUMENT
6.	**6.1**	• Undergraduate vocational studies (UVS, 180 ECTS) • Undergraduate academic studies (UAS, 180 ECTS)	• Diploma • Diploma supplement
			• Diploma • Diploma supplement
	6.2	• Undergraduate academic studies (UAS, 240 ECTS) • Specialist vocational studies (EL, 180+60 ECTS)	• Diploma • Diploma supplement
			• Diploma • Diploma supplement
7.	**7.1**	• Integrated Master of academic studies (IMAS, max. 360 ECTS) • Master of academic studies (MAS, 180+120 or 240+60 ECTS) • Master of vocational studies (MVS, 120 ECTS)	• Diploma • Diploma supplement
			• Diploma • Diploma supplement
			• Diploma • Diploma supplement
	7.2	• Specialist academic studies (SAS, 60 ECTS)	• Diploma • Diploma supplement
8.		• Doctoral (PhD) studies (DS, 180 ECTS)	• Diploma • Diploma supplement

Annex 6 – Flow chart of Quality Assurance for the Qualification levels 1-5 and 6-8

Figure 1. Flowchart of Quality Assurance for the Qualification level 1-5

Participants	Step 1	Step 2	Step 3	Step 4	Step 5

Initiators (SEC, CVEEA, NEC...)

Agency for qualification

SC

CVEEA NEC

NQFS Council

MESTD

IIE

Schools, PRAO

IPQ

Request for IPQ

no — yes

Replaced IPQ/MESTD, MLEVSA, NES

Decision on denial

Making of standard of qualification

Iniciative for making of request on standard of qualification

no — yes

Complaint on rejecting desition

Re-establishing the standard of qualification

yes

Adopting of the standard of qualification /decisions

Writing down standard of qualification into the sub-register

Request for making of educational program

Making of educational program

Opinions on the educational program

yes — no

Writting down qualifications into the sub-registe

Publishing of the educational program

Realisation of the educational program

Figure 2. Flowchart of Quality Assurance for the Qualification level 6-8