

Government of Montenegro
Ministry of Education

STRATEGY
FOR THE DEVELOPMENT OF HIGHER EDUCATION IN MONTENEGRO
(2016-2020)

Podgorica, July 2016

INTRODUCTION

The strategic goal of Montenegro is to develop an effective and high-quality system of higher education and research, which will foster the social and economic development of Montenegrin society, as a society of equal opportunities for all, in line with the principles of freedom and democracy.

Achieving the stated objective entails the implementation of large number of measures and activities which will contribute to the improvement of quality in higher education, sustainable and stable funding of higher education, more adequate response to the labour market needs, higher degree of internationalization, strengthening the research component of higher education, strengthening the role of higher education in society development and producing competitive and competent human resources. This will also have impact on changes in actual higher education institutions and their organization in terms of teaching, resources and strengthening the quality assurance system.

Higher education institutions recognise their role in making continuous contribution to emancipation of Montenegrin society, preserving and recognising traditional identity and other values, and contemporary strategic aspirations of Montenegro.

The mission and the objectives of the Strategy have been harmonized with EU strategic documents, such as the Europe 2020 Strategy, Rethinking Education, Modernization of Higher Education, etc.

Current Situation

Within the “Higher Education and Research for Innovation and Competitiveness” project implemented by Ministry of Education and Ministry of Science, and funded from a World Bank loan, higher education institutions in Montenegro underwent external evaluation during 2014.

The evaluation was conducted by a team of independent international experts engaged by the European University Association (EUA) within the Institutional Evaluation Program (IEP). The external evaluation process went on for one year, and resulted in ten individual reports for higher education institutions and a comprehensive, integrated, report on the system of higher education in Montenegro, which identified the problems and challenges common for the entire higher education sector.

The evaluation focused on the following:

- governance at higher education institutions;
- strategic planning and internal quality assurance;

- achieving institutions' missions;
- research work;
- service to community;
- internationalization;
- three-cycle higher education system;
- student to staff ratio (number of students per teacher);
- integration of practical teaching, i.e. practical work in academic and applied study programmes; and
- quality of doctoral studies, including organizational aspects.

The evaluation included ten higher education institutions in Montenegro: University of Montenegro, University Donja Gorica, Mediterranean University, Faculty of Business Economics - Bar, Faculty of Business Management - Bar, Faculty of Transport, Communications and Logistics - Berane, Faculty of Business and Tourism - Budva, Faculty of Management - Herceg Novi, Faculty of Administrative and European Studies - Podgorica and Faculty for Mediterranean Business Studies - Tivat, which are attended by 24,927 students.

Table 1: Institutions that underwent external evaluation

Name of Institution	Type	Status	Number of students
<i>Bar</i>			
Faculty of Business Economics	Faculty	Private	190
Faculty of Business Management	Faculty	Private	442
<i>Berane</i>			
Faculty of Transport, Communications and Logistics	Faculty	Private	168
<i>Budva</i>			
Faculty of Business and Tourism	Faculty	Private	165
<i>Herceg Novi</i>			
Faculty of Management	Faculty	Private	310
<i>Podgorica</i>			

University Donja Gorica	University	Private	1,600
Mediterranean University	University	Private	1,375
University of Montenegro	University	Public	20,229
Faculty of Administrative and European Studies	Faculty	Private	120
<i>Tivat</i>			
Faculty for Mediterranean Business Studies	Faculty	Private	328

Quality Assurance

Quality assurance has been promoted as a key lever of sustainability and enhancement of European Higher Education Area. In 2005, ministers in charge of higher education adopted *Standards and Guidelines for Quality Assurance in the European Higher Education Area*¹ (ESG), thus providing a further impetus and guidance for the development of both external and internal quality assurance.

Quality assurance comprises accreditation, self-evaluation and re-accreditation. Accreditation is the process of evaluating the quality of a study programme and its compliance with professional needs and adopted standards, which is carried out by a Commission appointed from an established list of experts by Council for Higher Education.

External evaluation of an institution is carried out by an internationally recognized accreditation agency for quality assurance, following the decision of the Ministry, and the opinion of the Council. Based on the self-evaluation report and the conducted evaluation procedure, the agency prepares a re-accreditation report and delivers it to the Council for Higher Education. The Council issues a certificate of re-accreditation of the institution on the basis of positive re-accreditation report prepared by the foreign accreditation agency.

A very important segment in quality improvement is the implementation of self-evaluation procedure with regard to the quality of study programmes, teaching and working conditions at the end of each academic year. The process of self-evaluation is carried out by an institution itself. Within the self-evaluation process a student survey regarding study programmes, teaching, conditions and work of academic staff is carried out at least twice a

¹ See: http://www.enqa.eu/wp-content/uploads/2013/06/ESG_3edition-2.pdf

year at all levels. These surveys focus mostly on teaching, i.e. teachers' performance rather than on the assessment of students' own involvement and commitment to learning.

Model of Studies

Three-cycle system has been established at all higher education institutions in accordance with the Bologna Declaration, though postgraduate specialist studies deviate from this model. Postgraduate specialist studies, or a specialist degree acquired after the completion of these studies, represents legacy from former Yugoslavia, when undergraduate studies took minimum four years.

In Montenegro, three-year Bachelor studies are often perceived as incomplete and fragmentary education due to which the majority of students decide to continue education at postgraduate specialist studies. After completing specialist studies a very small number of students continue their education at Master studies. The existence of postgraduate specialist studies, i.e. two-degree model of postgraduate studies, has more than once been characterized as a singularity i.e. as atypical, even by external evaluators in the accreditation processes of Montenegrin universities, and it has therefore been recommended to harmonize the study model with the model dominant in the European Higher Education Area.

The presence of specialist studies is not in line with the three-cycle Bologna system. Specialist studies, i.e. qualifications acquired through their completion, are preferred by employers who believe that the completion of three-year studies provides insufficient knowledge for the performance of a certain job. IEP team for external evaluation found that there are indications that employers in private sector would perhaps be ready to better accept students with a diploma of completed three-year studies provided that they also acquired certain practical skills during their studies and improved the so-called soft skills, whereas public sector employers are much more reserved in this regard. The dialogue between employers and institutions might result in better harmonisation between the content of programmes and the labour market needs.

Preparing students for labour market entails practical work, internship in companies, promotion of extracurricular activities, part-time engagement of persons professionally employed in either private or public sector for teaching purposes, engagement of employers as lecturers, consultations with competent authorities and other stakeholders during the preparation of a study programme, etc.

It is evident that the practical part of a study programme corresponds to a fair number of merely three ECTS credits. In a majority of cases, internships are not structured, nor formally assessed, and the access to internship does not focus on the expected result. Furthermore, in a certain number of cases students have to arrange the performance of

internship on their own, without considering whether the selected internship position and the content of internship activities are integrated in the study programme itself.

Internship should last two to three months, and the institution where the internship is performed would be obliged to issue a certificate of completed internship.

Human Resources at Higher Education Institutions

Determining the ratio between the number of students and the number of staff is of considerable importance. Through self-evaluation reports, institutions noted that this ratio ranged between 1:16 and 1:83.

It is evident that a large number of institutions rely on visiting professors from Montenegro and abroad in terms of staff. Visiting professors make themselves available to students through face to face sessions or by e-mails. Relying on visiting lecturers causes: scheduling lectures and exams subject to the availability of teachers, scheduling lessons on short notice, information about scheduled lessons announced week in week out, students waiting for several hours to take oral examinations, engaging assistants to carry out teaching and mentoring work. Employees at Montenegrin higher education institutions are mostly or entirely, involved in the implementation of teaching activities.

Teachers' workload, i.e. the number of courses they are engaged with has often been highlighted as a problem that affects the quality of teaching, and thereby the quality of knowledge acquired by students. An institution is obliged to provide the total number of teachers sufficient to cover the total number of teaching hours in study programmes it carries out, so that a teacher realises the average prescribed number of hours in a year, in compliance with regulations.

Compliance of Enrolment Policy with Labour Market Needs

Higher education enrolment policy in Montenegro is characterized by insufficient cooperation between key stakeholders, i.e. the actual higher education institutions, ministries, Employment Office, employers and other relevant institutions. The existing cooperation is merely formal. Primary weakness of enrolment policy is that it is largely guided by staffing and material circumstances at an institution, rather than by labour market needs and economic development policy of the environment in which it operates.

The enrolment policy does not sufficiently take into account unemployment rate among graduates of different disciplines and the need for highly educated staff, which results in inadequate enrolment planning and producing a surplus of non-productive staff in the labour market. An education policy which is not designed to regulate the number and types of

qualifications of future student generations in line with the labour market needs, results in a long-term unemployment problem. Other countries encounter similar problems as well, and the means used to prevent this phenomenon vary. Some believe that implementing a restrictive enrolment policy, or carrying out certain programmes periodically (e.g. every four years), or both, would be sufficient to solve this problem.

Labour market analyses² have shown that crucial factors that young people take into account in the course of enrolment, i.e. when choosing a study programme, include employment opportunities after graduation (45%), interest in a particular area taught at a faculty (44%), financial capabilities (28%), whereas about 25% of them believe that the selection of a programme is greatly influenced by their social environment, i.e. family and friends.

In view of employers, the quality of higher education in Montenegro is at an acceptable level, although it is estimated as slightly weaker compared to education in other countries, primarily due to the work experience of graduates outside of Montenegro, as well as their easier, faster and better integration into the real working environment. Employers believe that students who acquire a diploma outside Montenegro possess better communication skills, more confidence, resolve conflicts more easily, have teamwork abilities and other skills. Employers' opinions on whether Montenegrin higher education system is better or worse compared to the situation 10 years ago are mainly divided. Employers believe that institutions provide students with insufficient practical knowledge and skills relevant to perform work tasks. Employers from the sector of services, public administration, education and industry place the greatest trust in the education system of Montenegro.

Recognizing the importance of practical knowledge acquisition, Montenegro has for the fourth consecutive year implemented a Professional training programme of higher education graduates. The main reason for launching this government program is to support young people with higher education who lack work experience, to acquire through a nine-month training process, knowledge, skills and competences for independent work and to connect with employers with the aim of finding employment more easily. Over the nine months of professional training users receive compensation amounting to 50% of average net salary in Montenegro in the previous year.

An analysis of supply and demand of university graduates for the period 2012-2015 was conducted last year, revealing the following:

In nominal terms, supply is higher than demand concerning almost all professions that require higher education, whereas demand is higher than supply only in case of few (for

² Study on labor market needs in the field of higher education, February 2014

occupations in mining industry, electromechanical technicians, electronics technicians, land surveyors, teachers of natural sciences, veterinarians and pharmacists), yet nominally, these differences are significantly lower when compared to those recording surplus.³

Supply, demand and employment, in nominal terms, are the largest in the following occupational groups: preschool teachers and teachers of social sciences and humanities, where the ratio was 2,869 : 989 : 728; economists: 2,846 : 775 : 566; managers and organizers 2,142 : 121 : 281; lawyers 2,010 : 614 : 294 and occupations in the area of social sciences and humanities 1,330 : 189 : 176, etc. These occupational groups account for over 50% of total nominal supply and demand, with the largest recorded employment of university graduates in 2015, and the greatest number of new entrants from the education system to Employment Office register. In the above occupational groups, the highest nominal surplus in supply and demand ratio (supply was greater than demand) was shown in 2015. Thus, accounting for 2,071 economists, 2,021 managers and organizers, 1,880 preschool teachers and teachers of social sciences and humanities, 1,396 lawyers, and 1,141 occupations in the area of social sciences and humanities. The least favourable relative ratio between supply and demand, in these professions, was with managers and organizers where demand accounts for only 5.6% of the supply, but it is much higher with preschool teachers and teachers of social sciences and humanities, accounting for 34.5%. These occupations record respectively less positive or more positive ratio between employment and supply and recorded employment and the number of new entrants from the system of education to the Employment Office register.

In 2015, demand was higher than the reported supply i.e. deficit was recorded with several occupational groups – areas of work. Thus, the greatest deficit was recorded with teachers of natural sciences, where the ratio between supply and demand was 139 : 299, and nominally it was considerably lower with: veterinarians 6 : 17, teachers of technical and technological profession: 5 : 16, electronic technicians 44 : 66, pharmacists 94 : 96, professions related to telecommunications 11 : 16, etc. The large increase in supply of university graduates achieved in the past few years (in 2015, by 6.3% more than in 2014, and 2.4 times more compared to 2008) is the result of increased in production in the higher education system. So during 2015, 3,368 persons were registered at the Employment Office, in 2012, 3,210 persons, and in 2008, 1,345 persons. This is primarily, a consequence of the increase in the number of high school students enrolled at higher education institutions (of about 7,500 high school graduates in the academic 2014/15, more than 70%) which, year in year out resulted in increased number of university graduates⁴.

³ In Higher Education the reported supply shown in 2015 was higher by 6.3% as compared to 2014 (18,972 : 17,850), the reported demand was by 4.8% lower (5,505 : 5,785), registered employment was higher by 9.4% (3,480 : 3,182).

⁴ Analysis of supply, demand and employment in the labor market in Montenegro, Employment Office of Montenegro, March 2016

In nominal terms, the largest increase in university graduates registered by Employment Office in 2008-2015 period was in the occupational groups of economists (from 243 to 561), preschool teachers of social sciences and humanities (from 194 to 264), lawyers (from 186 to 390), managers and organizers (from 154 to 298) and occupations in the area of social sciences and humanities (from 65 to 281), occupations in computer technology (from 65 to 139), medical occupations (from 47 to 147), tourism and hospitality occupations (from 18 to 132), occupations of defence, safety and protection (from 27 to 131), etc.

Research and Doctoral Education

University of Montenegro is an institution with the greatest capacity for conducting significant research. In order to reach the international level of research, in the immediate future activities of all institutions should be focused on capacity building. Research activities are limited by the lack of basic funding, which is largely a consequence of the funding model applied for higher education institutions which focuses on teaching. It is necessary to allocate funds for areas that have the potential for the development of excellence, or areas considered important for the development of Montenegrin society. There is an evident need to build and maintain infrastructure such as laboratories and libraries, as well as to provide access to international journals.

University of Montenegro, University Donja Gorica and Mediterranean University, as institutions with university status, are entitled to carry out doctoral studies. Doctoral studies have the scope of 180 ECTS credits, of which 60 ECTS credits relate to the initial training and courses and 120 credits relate to research. Doctoral students are expected to publish two articles in a journal on the SCI list and defend their doctoral thesis.

Good research training makes a fundamental component of building research capacities, yet at the same time it requires a critical mass of researchers and inclusive research environment in which doctoral candidates are considered as fellow researchers and professionals. This represents a challenge, given that research activities are quite rare, and that there are very few PhDs. There is a close link between the need to build research capacities in Montenegrin system in general, and the development of doctoral education. Montenegrin PhDs are professional researchers who need to complete their training in adequate research conditions. Overcoming this challenge will require a long-term shared strategy with doctoral education as a key element.

In many European countries doctoral schools have a significant role in ensuring conditions for professional development and mobility of doctoral students, as well as in facilitating the improvement of the quality and management of doctoral education. Montenegrin universities would be able to extend their knowledge on the basis of these

experiences, adapting them to their own circumstances. It also seems productive to link the activities of doctoral schools to the development of research capacities. The practice of publishing articles in journals on the SCI list might be present (and at times even required) in some disciplines, but in general, thesis and its defence, should be an adequate confirmation that a PhD student has conducted research at the level of seriousness and originality that is expected for the relevant discipline.

Serving Society and Internationalization

Higher education institutions play an important role in overcoming some of the challenges Montenegrin society is generally faced with, given that they are responsible for education and training of more than 50% of a generation. Institutions have a role in regional development, developing technology transfer, including those areas where population displacement is evident.

Lifelong learning is largely underdeveloped and the understanding of this concept and its importance is rather inconsistent. Where there are lifelong learning strategies their implementation is missing. Nevertheless, some institutions successfully participate in organization of civil society gatherings and debates, which is a practice worthy of praise.

University of Montenegro has several campus facilities throughout the country, including the areas threatened by population displacement. The presence of higher education institutions, especially in the north of Montenegro, is construed as a response to the risk of population displacement, with the expressed fear that the quality of conditions in which teaching is carried out, as well as the teaching itself, are not on the level of conditions of organizational units based in Podgorica.

In the forthcoming period it is necessary to work further on the improvement of technology transfer between universities and privately-owned companies, as the activities in these areas are on a rather low level (e.g. university offers its equipment or even has accredited laboratories for the provision of certain services to privately-owned companies). These activities generate additional income for faculties, although not at the level that could compensate for the entire lack of funds. Some of the private institutions are being engaged for the provision of consultancy services. Although such activities are useful for establishing bridges towards the private sector, it is necessary to consider the comparative advantages of providing these services directly from an institution or through “spin-off” companies.

Internationalization is increasingly becoming a strategic priority for the European higher education institutions. The establishment of European Higher Education Area is merely one manifestation of a broader trend in the development of international recognition

by establishing links with European and non-European institutions. These links will enable institutions to improve and promote the quality of their teaching and research activities.

Higher Education Funding

The present funding model demonstrates clear limitations given that it combines the elements of direct funding of the University of Montenegro and the elements of indirect funding defined by a number of students who are eligible for scholarships and student loans. The application of this model, in terms of effectiveness, efficiency and equity, does not provide sufficient funds for the University of Montenegro and does not provide an incentive for delivering better performance, as well as fails to fund the majority of Montenegrin students.

The largest portion of direct funding provided by the country is allocated for the University of Montenegro, which is determined on the basis of past trends and the number of students who are officially funded by the country. The amount received by the University each year reflects a long-standing commitment of the Government to the development of University of Montenegro, the main higher education and research institution in the country. Funds transferred to the University traditionally cover the costs of salaries of academic and administrative staff, which is loosely associated with the standard student to teacher ratio, as well as basic investment costs. Allocated Budget funds do not include the funding of basic research activities of the University, nor the cost of educating doctoral students.

In the domain of indirect funding, Ministry of Education offers a comprehensive package of support for students, comprising scholarships for the best students and student loans. The existence of a system for awarding student loans is positive in itself, yet it needs to be upgraded regardless of this fact.

Out of the total number of students at the University of Montenegro, 21% of them are funded from the Budget, i.e. have the status of budget-funded students, whereas others cover tuition fees from their own resources and have the status of self-funded students. An expert who was engaged to prepare the analysis of possible models of higher education funding, noted that the state university functions more as a subsidised private university. At the University of Montenegro, funds are allocated in line with the Collective Agreement. According to this Agreement funds are allocated on the basis of teaching activities. As the funds are quite small, missing funds are made up through tuition fees of self-funded students, which can ultimately have a negative impact on the staff to student ratio. In addition, the present funding model does not allow investing in on-going maintenance and infrastructure, or research activities funding.

Implementation of Bologna Declaration Principles

In creating a modern European society, harmonization and cooperation in the field of education and training play a crucial role. The primary goal of Bologna Declaration, formulated in 1999, is to create a single European higher education area which, above all, stimulates a balanced exchange of students and staff and cooperation between higher education institutions, as well as the provision of comparable, compatible and coherent systems of higher education.⁵

The implementation of the Bologna Declaration principles at higher education institutions in Montenegro is being successfully carried out, as confirmed by the results provided in the Implementation Report 2015⁶. Average score of the implementation level of the Bologna principles was calculated in accordance with scorecard indicator-based maps, and Montenegro, with the score of 3.61, is very well positioned compared to the countries from the Region. For the sake of comparison, the average score of Austria is 4.23, Italy 3.84, Germany 4.53, France 4.38, Poland 4.46.

The fact is that significant results in the implementation of the Bologna principles have been achieved in the previous period, which resulted in adopting and implementing a new cycle-based structure of studies, introducing Diploma Supplement, introducing the European Credit Transfer System (ECTS), significantly improving mobility of students, researchers, teaching and administrative staff, recognizing the importance of learning outcomes and students as key partners in the decision-making process, improving the studies and their quality. The establishment of credit transfer system, made conditions for improving student mobility. Montenegro, as a signatory country to the Bologna Declaration, is included in a large number of mobility programmes. Student mobility is implemented on the basis of concluded bilateral cooperation agreements and on the basis of scholarships offered by foreign governments.

Despite the achieved results it is necessary to work on further improvement of higher education quality and its harmonisation with trends in the European Higher Education Area, in order to make the Montenegrin higher education system recognized beyond the borders of Montenegro and Region, and to make Montenegrin students competitive to their peers studying at prestigious European higher education institutions.

⁵ At the Ministerial Conference which took place in Berlin in September 2003, Montenegro became a member of the so-called "Bologna Family" and at the Ministerial Conference on Higher Education, which took place in London in 2007, the membership and the status of Montenegro in the Bologna Process as an independent and internationally recognized state was confirmed.

⁶ The report is available on the website www.ehea.info

MISSION/Vision:

Montenegrin higher education system strives toward becoming more recognised and referential within the European system of higher education. Providing high standard in quality of higher education and research, creating equal opportunities in the system of education, establishing and strengthening international cooperation, creating productive and referential human resources, developing the concept of lifelong learning, observing the principle of quality assurance, all with a view to promoting social and economic development of Montenegrin society.

OBJECTIVES OF STRATEGY FOR THE DEVELOPMENT OF HIGHER EDUCATION

The strategy of reforming higher education aims to improve the quality of higher education, improve competences and achieve greater activism and creativity of students, which will altogether contribute to strengthening higher education foundations as the basis and key precondition of faster development of economy and society as a whole.

Higher education institutions as institutions of considerable social importance, should take responsibility for the implementation of reforms that will improve standards and mechanisms for ensuring the quality of higher education, harmonising enrolment policy with the labour market needs and strategic development plans of Montenegrin economy and society, which will be reflected in greater employability of university graduates and reduced period of waiting for the first job in profession.

Modification and modernization of studying model represents a basic reform which will contribute to greater mobility of students and teachers, and at the same time it is the most certain and the fastest path towards the internationalization of our higher education system.



Objective 1: Improving the quality of higher education and creating competitive human resources

1.1 Reform of studying model

In Montenegrin higher education system studies are organized in three cycles: undergraduate, postgraduate and doctoral studies, with postgraduate studies structured as specialist and master studies. Postgraduate studies organised in this manner represent an exception for countries in the European Higher Education Area. The introduction of postgraduate specialist studies, a studying model unknown to the European practice, was caused by an insufficient coverage structural approach to the reform, i.e. succeeding to the previous system and the notion of the four-year studies. This situation cannot be sustained due to several reasons. Firstly, the existence of such studying model different from those in other countries reduces the possibility of student and staff mobility.

In European Higher Education Area there are typically different studying models, following the scheme: 3+2+3, 4+1+3, 5+0+3. The 3+2+3 model prevails in Europe, mostly because of the possibility of completing the cycle of studies and opportunities for greater mobility. This model prevails in most countries belonging to the European education area

(Slovenia, Finland, etc.). The 4+1+3 model provides better undergraduate education, yet there are certain risks and deficiencies in its application. Primarily, enrolment in master's studies would still remain underrepresented, as one-year master studies are too short to be effective in terms of quality, which would consequently lead to lower enrolment in doctoral studies. The system of education would basically stop at four-year bachelor. Accordingly, the 3+2+3 model offers continuity in studying and full compliance with international standards of quality. In the coming period abandoning the insufficiently recognized specialist studies and one-year master's studies should be considered, so as to improve the quality of education and to harmonise it with regional and European labour market needs.

The introduction of the new model, dominantly 3+2+3, as a model which ensures full compatibility with European Higher Education Area, calls for amending the Law on National Qualifications Framework, as well as other laws and secondary legislation, with a view to a clear recognition of new qualifications. Particular care should be taken about the specific features of individual study programmes the completion of which leads to qualifications in the field of regulated professions. In this sense, the duration, i.e. the model of studies and the content of these study programmes should be adapted to EU Directive 2005/36 EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications, to facilitate access and entry into the labour market in EU countries, as well as continued education for graduates. Bearing in mind that the process of harmonization, or the comparison and harmonization of all laws and secondary legislation with the Directive, as well as study programmes for seven sector professions: medical doctor, dentist, veterinarian, architect, pharmacist, general care nurse and midwife, is a very demanding and complex task, the Government has adopted a National Plan of Qualification Development for Practicing Regulated Professions (2013-2018) with Action Plan defining the deadlines for implementation.

Enrolment in undergraduate studies according to the reformed model of studies would begin in academic 2017/2018, whereas enrolment in two-year master's studies for this generation of students would begin as of academic 2020/2021. Generations of students that began studying before introducing the reformed model of studies will continue their studies according to the rules applied until the new model has been introduced and in accordance with their Learning Agreement.

Some of the neighbouring countries (Slovenia, Croatia, Serbia) equalized the degrees acquired after completed four-year studies under the old studying system, that is prior to introducing the Bologna Declaration principles in higher education system, with master degrees, i.e. with qualifications having the scope of 300 ECTS. The Government will decide

on the option to introduce such practice in Montenegrin system, which would also require amendments to the national legislation.

Transition Period

Students enrolled in institutions before introducing the new model of studies are entitled to complete their studies according to their curriculum, i.e. the model of studies that was in force at the time of their enrolment in the first year of studies. Law on Higher Education will prescribe the implementation of a new model, as well as the transition period for students enrolled prior to introducing the new model at all institutions.

1.2 Development and Optimization of Study Programmes

Development and reorganization of study programmes at higher education institutions are directly related to labour market needs, national strategic plans, demands to increase mobility of teachers and students, internationalization and strengthening the role of higher education. Dispersion of study programmes should be aligned with the actual needs of Montenegrin economy and society, human resources and infrastructure. In order to achieve better compliance of our study programmes with the needs of society, among other things, it is necessary to analyse the current situation and define guidelines and standards for optimizing studies and the structure of study programmes.

The analysis of the current situation must particularly focus on the quality of knowledge and learning outcomes in the existing concept of studying at Montenegrin higher education institutions. In this context, it is necessary to consider the quality of programmes at all study cycles, their comparability in international frameworks, importance and applicability on national labour market, as well as the provision of adequate learning outcomes for progression to higher levels of studies etc. Based on the analysis of the situation and the defined indicators, guidelines to the reorganization of studies at higher education institutions should be determined. In this context, it is necessary to follow the guidelines of the best practice in the European Higher Education Area, which point out to the obligation of accepting the concept of three-cycle studies.

In accordance with Law on Higher Education, study programmes must be designed to contain at least two elective modules. Through elective modules and elective courses, which in the aggregate offer the possibility of having approximately 20% of elective content out of the total number of ECTS credits at an individual study programme and the level of studies, the new concept of the programme results in improved competences of diploma holder.

Also, for studies in the field of regulated professions which are subject to the Directive and other special regulations, it is necessary to take into account the mandatory workload for

studying certain disciplines, such as medical doctor, midwife, which also needs to be included in curricula.

In defining guidelines that will determine the structure of future study programmes it is necessary to establish standards used in the European practice which define the framework for organising and implementing study programmes, as well as the sustainability of study programmes, specifically:

- the adequacy of staffing structure, spatial capacities and teaching and research equipment;
- student to teacher ratio in accordance with international standards (OECD);
- competence of teachers for teaching and mentoring;
- weekly workload of students and elective nature of study programmes reflected in elective modules and elective courses;
- compliance with the referential programmes at other universities within the European Higher Education Area; and
- provision of conditions for fostering mobility and development multidisciplinary study programmes etc.

Learning outcomes represent the basis for the recognition of quality of a particular study programme and teaching discipline. Knowledge acquired by a student, which is expressed through learning outcomes, must be complementary to the labour market needs and the best comparative practice. To this end, it is necessary to implement and constantly review, optimize and improve learning outcomes, harmonising them with modern trends in higher education as well as labour market trends. Continuous harmonization of learning outcomes should be carried out through comparison with referential universities in order to achieve better quality and increase competitiveness.

1.3 Strengthening quality assurance system

Current situation in the implementation of quality control mechanisms is mainly confined to the implementation and analysis of results of student surveys. It is therefore necessary to underline that in the coming period the system of quality must focus on educational process and all of its stakeholders and participants through mechanisms of control that operate in a direct and corrective manner, in order to result in better studying conditions, improvement of teaching process and acquisition of knowledge of greater quality and greater competitiveness, where the priority aspects, should be teaching and learning, research and cooperation and infrastructure and human resources.

Despite the results achieved, it is necessary to work on further improvement of higher education quality and its harmonisation with the European Higher Education Area trends, in

order to make the Montenegrin higher education system recognized beyond the borders of Montenegro and the Region, and Montenegrin students competitive with their peers studying at prestigious European higher education institutions.

To improve the mechanisms for quality assurance, it is necessary to adopt a policy of quality assurance, improvement and control at all higher education institutions, and quality improvement of teaching process and evaluation procedures.

The adoption of the policy on quality improvement primarily entails defining and adopting strategic documents, establishing quality control centres, and intensifying cooperation between higher education institutions in Montenegro, as well as ensuring active participation of all stakeholders in the educational process in quality assurance, improvement and control.

All institutions ought to define and adopt the strategy for quality assurance, improvement and control harmonised with standards and guidelines for quality assurance in the European Higher Education Area, as well as to establish centres of quality. This entails job classifications, defining job descriptions within the centres precisely, adequate staff training, organization of seminars and workshops for employees in centres, organising study visits to reputable higher education institutions abroad having developed centres of this type and similar.

Ensuring intensive cooperation between higher education institutions in all areas, particularly when it comes to improving the quality of education, is of utmost importance for all participants, as it involves the transfer of knowledge, exchange ideas and experiences. Special emphasis should be placed on the implementation of joint international projects aimed at quality improvement, engagement of international experts from this field, conducting a joint promotional campaign aimed at raising awareness of different groups about the importance of improving mechanisms for quality assurance.

1.3.1 Improving the quality of teaching process and the quality of teaching staff

As noted above, higher education institutions face great challenges when it comes to the implementation of teaching process. This primarily refers to the acceptance of flexible learning paths, recognition of competences acquired outside the formal curricula, internationalization process, distance learning concept, etc.

The increasing diversity of student population and greater focus on learning outcomes require student-centred learning and teaching, which led to changes in the role of teachers in educational process. The role of teachers is crucial in creating a high quality education process,

and therefore higher education institutions are obligated to create an adequate environment providing teaching staff with conditions in which their work performance will be higher. In this sense, it is necessary to implement clear and transparent recruitment procedures, encourage the professional development of teaching staff, promote the research component in educational process, etc.

Particular attention should be devoted to modernization of study programmes for education of teachers, as the quality of the teaching staff directly impacts the quality of primary and secondary education. In this regard, a well-planned enrolment policy for these programmes is especially important, as well as defining which profiles and programmes of secondary school education are adequate to continue education in programmes producing human resources for working in education. The matter of successful teacher is very complex and is subject to increasingly frequent researches, particularly from the aspect of student expectations and fulfilment of teachers' multiple roles.

One should take into account the fact that most teachers, except those who have completed teacher training faculties, enter the teaching process unprepared for pedagogical work and with very demanding and heterogeneous population of pupils and students, as well as the rapid development of educational technology for the application of which most teachers are not sufficiently trained. For this particular reason institutions are strengthening the needs for continuous professional development of teachers, so they would gain better teaching skills, be better prepared to apply modern information technology.

Professional development of a university teacher is imposed as a need and includes simultaneous acquisition and development of teaching skills, monitoring the development of scientific work and research engagement. Education, in addition to theoretical knowledge should also provide adequate practical knowledge which is acquired through high-quality practice.

1.3.2 Improving the quality of study programmes by introducing adequate relationship between general and professional competences

Defining learning outcomes both at the level of study programmes, and at the level of courses or modules must be based on the necessary knowledge, skills and competences of students. Particular attention should be devoted to competences, taking into account the specific features of general and professional competences and their mutual relation. The model which is usually suggested when it comes to university education is the one that contains 30:70% ratio between general and professional competencies, thus it is necessary to work intensively on harmonization of study programmes with the given model in the coming period.

1.3.3 Encouraging the use of modern IT technologies in teaching process implementation (E-learning)

In the coming period it is necessary to encourage the application of e-learning concept in higher education. Higher education institutions in Montenegro have made significant progress in terms of application of this concept, but the degree of implementation of modern IT technologies in conducting teaching process is still at an unsatisfactory level. It is therefore necessary to continue working on provision of needed IT resources in the future, primarily through participating in international projects, as well as teacher training in terms of implementing modern IT technologies. To achieve this goal it is necessary to organize intensive training for academic and non-academic staff and students, particularly when it comes to the use of e-learning platform or LMS (Learning Management System).

1.3.4 Establishing mechanisms for analysing student progress

Establishing mechanisms for the analysis of student progress is an activity that has already been implemented at most higher education institutions in Montenegro. The main objective of this mechanism is to check the level of performance achieved by students in completing the volume planned for each cycle, and each academic year. It is conducted at the level of a university's organizational units after a completed enrolment period for the following academic year. A detailed analysis is carried out on the basis of collected information which is followed by evaluating the performance, and consequently laying down measures to improve the quality of the study programme (from the aspects of staff, curriculum, conditional nature of courses, material and technical conditions of studying, work of support services, etc.). This practice needs to be continued in the future, devoting greater attention to defining and implementing measures for quality improvement of the educational process.

An important contribution to the implementation of this activity may be provided through establishing alumni clubs at all higher education institutions in Montenegro, which would represent an important factor of quality control, as well as their networking with a view to creating a high-quality database and intensifying cooperation between different higher education institutions on one hand, and higher education institutions, graduates and employers on the other hand.

1.3.5 Self-evaluation procedure

In accordance with Law on Higher Education and the best experiences in quality assurance, higher education institutions are obliged to carry out self-evaluation procedures. This procedure has to include self-evaluation in the domain of study programmes, teaching, working conditions, results of student surveys conducted twice a year. Survey questions mainly relate to the quality and the manner of carrying out teaching, the work of teachers and

associates, quality of recommended literature and equipment available to students, etc. In the coming period it is necessary to approach the implementation of this activity more seriously, so that students do not perceive the survey as formal fulfilment of an obligation, but as a tool which will additionally enable their active participation in development of teaching process and quality improvement. Further to that, the content of the survey should be continuously modified in order to use data from the questionnaires for analysing the implementation of studies from the viewpoint of students, for analysing strengths and weaknesses of studies altogether, implementation of practical education, and accordingly for planning possible measures of quality assurance, etc.

Re-accreditation is one of the key mechanisms for evaluation of study programmes and assessment of degree of compliance with international standards of quality. It is of great importance for the system of ensuring and improving the quality of studies, as well as the quality of the level of knowledge acquired. For this reason it is necessary to continue improving the criteria for re-accreditation process, taking international standards into account, as well as the specific features of Montenegrin system of education and higher education institutions themselves.

Recognising the importance of higher education institutions' reorganization and the introduction of new teaching methods in accordance with the Bologna principles, as well as complying with European standards and guidelines in this field, the existence of the quality assurance agency might potentially give a new impetus for the improvement of quality of institutions' operation. The Bologna Declaration, and particularly the documents that followed it, clearly emphasize that the quality assurance system plays a vital role in the application of high quality standards and in facilitating the comparability of qualifications throughout Europe. Through the work and activities of a professional independent agency, cooperation with other agencies from the region and beyond, as well as the development of common standards, procedures and guidelines would contribute to greater transparency and confidence-building, greater mobility of students and teaching staff and overall internationalization of higher education.

1.4 Procedure of licensing of institutions

The procedure of licensing higher education institutions is regulated by Law on Higher Education, and a Rulebook on more detailed conditions for the establishment, performance of activities, licensing procedure and the manner of keeping a register of higher education institutions. An institution may perform activities and carry out student enrolment after the Ministry of Education has established that the institution meets the conditions prescribed by the Law and issued a decision on licensing. The licensing procedure defines conditions for the establishment and performance of activities of higher education institutions in terms of

premises, provided academic and associate staff, provided funding, teaching resources, equipment and other resources necessary to perform the activities, as well as the conditions for unimpeded access for persons with disabilities hygienic and technical requirements in accordance with special regulations.

A license or a decision on issuing the license, defines the type of institution, accredited study programmes, maximum number of students that may be enrolled in certain study programmes, levels of education and diplomas acquired at the institution.

1.5 Development of interdisciplinary studies

Organising interdisciplinary studies should represent the aim and the obligation of each higher education institution in accordance with the best comparative experiences and in accordance with the actual labour market needs for students who possess knowledge from several areas, and thereby possess prerequisites for being included in a flexible labour market. Interdisciplinary studies are the studies organized in at least two scientific fields which result in adequate learning outcomes. As the emphasis in these studies is on learning outcomes and particularly strong links with the labour market, the concept of these studies should generally fall within the framework of two-year cycle of master studies with courses that provide highly developed specialist knowledge and facilitate integration in the labour market.

1.6 Development of colleges

In terms of harmonisation with the European Higher Education higher education institutions in Montenegro must draw a clear line between academic studies and those having an applied character. Applied study programmes should be organized at higher education institutions that have the status of colleges, as is the practice in the countries of the region.

Should we opt for this model, it is necessary to amend laws and secondary legislation.

1.7 Further improvement of higher education quality

Of particular importance for the further improvement of higher education quality is the consistent application of Bologna Declaration principles, following higher education trends and the implementation of recommendations from the Ministerial Conferences.

Activities that should be conducted in this regard include: adequate credit valuation of each course, harmonisation of laws governing quality assurance mechanisms with European guidelines and standards for quality assurance (ESG), valuation of prior learning and removing

obstacles for the recognition of previously acquired knowledge and other activities recognised by the Bologna Declaration.

Objective 2: Harmonising education with labour market needs

The development of higher education in Montenegro should enable students to gain competences for future occupations. It should also encourage their creative and innovative work and development in the function of self-employment and launching new economic and social initiatives. This poses as an imperative, given that institutions, i.e. the majority of study programmes, fail to provide students with conditions that would guarantee them the development of entrepreneurial initiatives, and acquisition of useful practical knowledge to work in a real working environment. Enrolment policy at higher education institutions is a very important and largely a predisposing factor for the quality of studying and the quality of knowledge. Enrolment policy parameters must be based on the specific needs of Montenegrin society, harmonized with contemporary trends in higher education, development of new technologies and new professions. Enrolment policy planning should also be done through harmonisation with the labour market needs.

High unemployment rate of university graduates, though partly caused by state of economy, is largely a consequence of lack of skills students which should acquire during their higher education. There is no official data on the number of university graduates who founded their own companies, which confirms that these are mostly exceptions, and that the practice of self-employment of students is still not significant. On the other hand, employers also believe that higher education institutions provide students with insufficient practical knowledge and skills relevant for the performance of job. They confirm that students who have already acquired work experience or have completed their studies abroad, fit into the company more easily, faster and better, even before grasping the work tasks. Employers believe that formal education provides students primarily with theoretical knowledge necessary for their future work, followed by the knowledge of English language and computer skills. Practical knowledge, as well as the so-called soft skills such as communication skills, problem-solving, decision-making skills necessary for conflict resolution, team work and self-confidence, are insufficiently developed during the studies which is why they should receive special attention in the forthcoming period. Internship and practical part of a study programme, if they do exist, are in most cases not structured, or formally evaluated and do not focus on the result.

2.1 Defining learning outcomes

The request for a clear and explicit formulation of learning outcomes is part of a broader context in which the focus of education is shifted from teaching and teachers to students. From the perspective of teachers who create the curriculum of a course, learning outcomes represent *a clear description of what a student should know, understand and know how to do after completing learning*, and therefore they are the basis against which a course content, teaching materials and teaching methods should be planned. From the perspective of students, clearly defined learning outcomes⁷ help in the selection and mastering study programmes, but also represent an important note on what is expected of them.

After defining learning outcomes, it is necessary to link them to ECTS credits of individual courses or modules which entails adding to this relationship available time a student can devote to obligations concerning a course and the ability of a student to achieve planned outcomes during that time. In addition, it is necessary to make the choice of methods and forms of teaching that will contribute to the effective achievement of defined learning outcomes. Moreover, it is necessary to harmonize the methods of assessment with defined learning outcomes, as evaluation and assessment aim to identify and show whether the defined learning outcomes have been achieved. In addition, it is necessary to prescribe conditions for writing textbooks by introducing standards of writing university textbooks with learning outcomes clearly indicated after each chapter.

2.2 Implementing practical teaching through curricula with a view to improving learning outcomes

Practical teaching represents one of the important segments of learning which determines the quality of learning outcomes and provides greater opportunities for graduates at the beginning and during the development of their professional careers. The importance of practical teaching and its binding nature is also recognized by legal solutions. Depending on the science area of a specific study programme and the nature of the course, as well as based on comparative experiences of considering the quality of learning outcomes, practical teaching should be implemented through separate teaching units (courses) and/or through exercises within teaching disciplines. A higher the degree of implementation of practical teaching leads to higher quality in learning outcomes and competitiveness, as students gain experience through practical examples, which is of great importance for their easy inclusion in working processes in a real working environment.

The implementation of practical training can be conducted within a higher education institution itself or an employer with whom the institution has signed a contract on performing

⁷ http://www.ucg.ac.me/userfiles/UCG%20INFO%20fakulteti_6.pdf
http://fit.unimediteran.net/fajlovi/razno/Ishodi_ucenja_UNIM.pdf

practical teaching for students. In this way we also ensure the strengthening of innovation and entrepreneurial component in higher education and the capacities of graduates for self-employment and entrepreneurship.

Furthermore, it is necessary to provide better and more modern laboratory conditions, equipment and infrastructure at higher education institutions by taking up funding opportunities and otherwise, which will create an environment for further development of innovative and entrepreneurial components of higher education.

2.3 Learning a foreign language

The internationalization of higher education institutions, fostering mobility, providing conditions for access to other labour markets and knowledge markets and similar, are becoming strategic goals of all universities. In this regard, it is necessary to provide conditions for learning foreign languages at all study programmes, so as to acquire a higher level of knowledge. Introducing foreign language learning must be conducted by strictly taking into account foreign language knowledge a student has acquired during their secondary education, as well as the actual quality of this knowledge. Global representation of the English language, as well as the availability of foreign literature, determines English language as a mandatory course. Bearing in mind these aspects and obligations, as well as the analysis of the current situation, all institutions are recommended to have during the studies as big class load of English or another foreign language as possible, so that the knowledge of the foreign language would to higher advanced level C1.2 at the end of studies.

2.4 Enrolment policy

Enrolment policy at our higher education institutions is mostly liberal. Concerning the harmonization and optimization of enrolment policy, the following activities should be conducted:

- conducting regular labour market analyses;
- analysing national strategies and directions of development;
- optimising enrolment policy in relation to the evident popularization of higher education in Montenegro; and
- introducing changes in criteria for enrolment in study programmes.

In the forthcoming period it is necessary to work on strengthening cooperation between higher education institutions and employers, so that employers would take active part in creating curriculum, providing practical training and providing information about the qualifications needed in the future. Periodical labour market analyses are particularly important

for the implementation of this objective, which should be carried out in cooperation with the Chamber of Economy, Union of Employers and Employment Office.

Through the system of monitoring careers of university graduates (Tracer Study) and through a specially developed questionnaire for graduates, with the support of all higher education institutions we will have access to information of having great importance for creating enrolment policy, in terms of its better harmonization with the actual needs of the labour market. Through the survey procedure we will gain insight into the quality of programmes, and on the basis of information collected about whether they are currently employed, how long it took them to find a job, which jobs they were employed in, the extent of progress in their career, etc. In addition to this information, the tracer study will also collect socio-biographical data, information on education and employment, which will provide analysts with a solid basis for analysing and comparing employment outcomes. One of the main objectives of this activity is to collect experiences of university graduates about their career after graduation in an objective and standardised manner. The survey of graduates is expected to begin as early as in the fourth quarter of 2016, with generation of student who graduated in 2007.

Rulebook on conditions and criteria for admission to the first year of undergraduate studies at all higher education institutions will prescribe adequate educational profile acquired by a candidate after completing secondary education as a key criterion for continuing education in the relevant study program, as opposed to the completed relevant secondary school as defined by the existing regulations. On the occasion of enrolment, results achieved by a candidate on the external graduation exam, results achieved at the end of secondary school and results achieved in subjects important for further education will be valued. Moreover, in the event that a candidate has not acquired adequate educational profile for being admitted to a particular study programme, the possibility of introducing additional entrance examination should be considered.

For the purpose of better harmonisation of education with the labour market, in addition to introducing practical education, becoming proficient in foreign languages and the developing the so-called soft skills, the following activities are proposed:

- Modernising curricula in line with labour market needs;
- Introducing new learning methods, information technologies and e-learning;
- Achieving greater presence of entrepreneurship education in curricula;
- Introducing teaching in English language.

Objective 3: Improving research work and increasing the level of participation in EU projects

Bearing in mind that the research activity is one of the most important elements of every country's development, it is necessary to continuously work on the improvement of quality of research process in Montenegro and the harmonization of science policy and legislation in the field of science and research in Montenegro with the Lisbon Treaty and the EU objectives, guidelines and priorities in this area. Establishing a national research system integrated into the European Research Area, represents a key factor of future economic, social and cultural development of Montenegro.

It should be noted that significant progress has been made in the previous period in terms of improvement of research activities and that researchers from our country already take part in numerous international cooperation programmes. However, despite the results achieved, the fact is that science in Montenegro is not fully integrated in the European Research Area and that there are numerous opportunities for further improvement. This primarily refers to the provision of additional sources of funding from international funds, achieving excellence through collaboration with leading international research institutions, improving mobility process, etc. in order to achieve full integration in the European Research Area.

In order to achieve this objective, it is necessary to take the following measures:

3.1 Improving doctoral studies and strengthening the research component

Within the EU area, there is a clear consensus in the field of higher education about recommendations related to improving the efficiency and effectiveness of doctoral studies. Efficiency primarily relates to their completion within three or four years and increase in percentage of successfully defended dissertations, whereas effectiveness is observed in a much broader context (expediency of doctoral research - scientific/national, labour market, quality of doctoral studies, preparation of future teaching and research staff of the University). Basic recommendations contained in the EUA - IEP Evaluation are aimed at forming a broader interdisciplinary doctoral school and establishing doctoral programmes that would provide the opportunity to develop the capacities and approaches toward the most modern research environments.

Salzburg principles should be observed in terms of all activities related to organization and improvement of doctoral studies, which among other things include original research, improved mentoring and increased mobility.

With the aim of using the results of doctoral studies and knowledge transfer, it is necessary to develop research and technology centres, as innovation and research bases of doctoral studies. Montenegro does not have sufficiently developed research capacities, in terms of structures and human resource potential. Despite the fact that remarkable results have been achieved in certain areas of research, they are not systematically included in doctoral studies. During the 2016-2020 period, proper research environment should be provided and the structure of research should be improved, and above all centres of excellence and knowledge should be developed. A more powerful link to social and business community is necessary as well. In order to improve the existing situation and the quality of doctoral studies it is necessary to provide functional organization of studies and more rational use of scientific potential; standardizing doctoral studies criteria and more efficient implementation and monitoring of procedural actions; internationalization of research work at universities and the development of international cooperation, as well as support to career development.

3.2 Improving infrastructure for carrying out research work

Providing a high-quality research infrastructure and equipment is a necessary condition for carrying out high-quality research, and therefore the socio-economic development of the country.

Although in the previous period, owing to the participation in international projects, computing infrastructure as part of research infrastructure has been significantly improved at many research institutions, primarily at higher education institutions. A more active participation in EU programmes in the forthcoming period should lead to further modernisation and encourage the purchase of other research equipment, which will enable the improvement of present research and the development of future ones (establishing research centres, science and technology parks, laboratories, etc.).

In addition to mapping the existing infrastructure for conducting research work, previously mentioned joint website could significantly contribute to networking of research institutions with a view to better use of available capacities. Such website could become a centralized virtual network location for the supply and demand of equipment, or knowledge and services, finding new partners for cooperation and capacity building and research opportunities.

3.3 Development of digital libraries in Montenegro and their networking

In the forthcoming period it is necessary to work more intensively on the development of digital libraries and their networking within Montenegro. It should be noted that the National Library of Montenegro “Đurđe Crnojević” which is a member of the Conference of European National Librarians (CENL), has already set up their own electronic catalogue, a

shared catalogue of Montenegrin libraries, as well as one part of its digitalized collection on the web portal of national libraries of Europe - TEL (The European Library), but it is still necessary to work on the digitalization and networking of university and other libraries with a view to creating the best possible basis for the development of research.

Providing access to international databases of research papers for all relevant research institutions in Montenegro

The implementation of this activity involves the provision of financial support to research institutions in terms of access to relevant international databases of research papers. Responsible ministries (Ministry of Science and Ministry of Education) would, in accordance with available resources, earmark part of budget funds to cover co-payment fees for subscription to the international databases of research papers. In addition, representatives of research institutions in Montenegro would jointly carry out negotiations in order to ensure access to multiple databases with minimum financial investments.

3.4 Improving the quality of human resources at research institutions

Human resources represent a key element of modern knowledge-based economy, therefore investing in human resources is of great importance not only for the development of research activities in Montenegro, but also for the development of society as a whole. If one keeps in mind the fact that the occupation of a scientist and researcher is rather unattractive not only in Montenegro, but in the countries of the Western Balkans as well (a small number of people choose to work in science and research sector, the departure of a significant number of our scientists and researchers to foreign countries is evident, a significant number of scientists and researchers who have left the science and research sector and subsequently moved to jobs in private and/or public sector, etc.), it is clear why the implementation of this measure is an important incentive for the development of research activities in Montenegro.

This measure will be implemented through the following activities:

- Improving the system of evaluation of research activities;
- Providing continuous encouragement for activities carried out by researchers;
- Involving young people in research process;
- Promoting science and research in society.

3.5 Internationalization of research

In order to encourage internationalization of research it is necessary to intensify the participation of all research institutions in international programs and projects and promote

regional, bilateral and technological cooperation. One of the important goals set by Law on Scientific and Research Activity is the integration of Montenegrin research community in the European Research Area (ERA) and the involvement of Montenegro in framework research programmes of the European Union, which prompted the development of legislative and policy frameworks, as well as national and international programmes focusing on mobility of researchers.

Participation in the European Union programmes of technical assistance, cooperation with the European Union Member States, the use of IPA funds with a view to strengthening institutional and financial capacities of higher education institutions in Montenegro, as well as strengthening mechanisms of support at national level, will provide deeper international and regional research and technology cooperation.

3.6 Intensifying the use of EU structural funds for the development of doctoral studies

This activity will be implemented through active involvement of university units in the European Framework Programme for Science and Innovation - Horizon 2020 and the more efficient use of available EU resources. In addition to this programme, participation in the ongoing programmes such as FP7 Programme, EUREKA; COST; IAEA (International Atomic Energy Agency), ICGEB (International Centre for Genetic Engineering and Biotechnology) will enable the development of doctoral studies and improvement of this level's academic offer by creating new study programmes which would result in greater competitiveness of Montenegrin educational system and Montenegrin economy.

3.7 Strengthening links between science, education and economy to encourage innovation

Measures for the implementation of EU policies in the field of Science - Technology - Innovation, focus particularly on strengthening the sector of knowledge users, linking public and private sectors, linking initiatives between researchers in public and private sectors, as well as encouraging research in the private sector. Special efforts focus on the development of national innovation systems, as well as on the efficiency which implies successful exploitation and commercialization of knowledge and research results in service and production sectors. For these reasons, strengthening the link between science, education and economy is one of the key measures whose high-quality implementation will lead to application of research results in the economy, and thus significantly improve not only the development of research, but also the economy and society as a whole.

This measure will be implemented through the following activities:

- Intensifying research component in the learning process at each higher education institution by innovating the existing and creating new research-oriented study programmes;
- Implementing research in accordance with priorities and strategic goals of Montenegro in the field of research and development;
- Implementing applied and development research, and intensifying cooperation between research institutions and private sector; and
- Conducting knowledge and technology transfer.

3.8 Identifying Montenegrin research diaspora and encouraging its involvement in the home country

One of the important measures for the development of research in Montenegro is defining the means and mechanisms to intensify cooperation with our diaspora which would lead to its active involvement in research activities in Montenegro, allow the transfer of knowledge and technology, but also encourage intensifying cooperation with international institutions and implementation of joint research projects.

Objective 4: Internationalization of higher education

Internationalization of higher education is one of the key aspects in the field of higher education and a strategic priority for all institutions within the European Higher Education Area. Mobility of students and academic staff, established agreements between higher education institutions, joint studies and degrees, international projects and other forms of cross-border cooperation are merely some segments of internationalization, which contribute to the improvement of higher education quality and provide greater opportunities for youth employment in the global labour market. In the context of internationalization, special attention should be devoted to mobility of students and academic staff. Although in the past all higher education institutions in Montenegro achieved noteworthy progress in internationalization, it is evident that there is great room for improvement, so as to position our institution better in the European Higher Education Area.

Although internationalization has been recognized as one of the priorities of all higher education institutions, information on the mobility of students and academic staff, the number of bilateral agreements that exist between our institutions and institutions outside the borders of our country, as well as international projects in which they participate, and problems regarding the recognition of periods of studying spent abroad, point out to a necessity of making considerable efforts to obtain better results in the future. Raising internationalization of higher education to a higher level requires the cooperation of all higher education

institutions in Montenegro, institutional support of relevant line departments when applying for international projects and high-quality and comprehensive promotion and opportunities offered in terms of both outgoing and incoming mobility should be the goals contributing to better results.

In order to achieve this objective it is necessary to implement the following measures:

4.1 Increasing outgoing mobility of students and academic staff

There are international cooperation offices or persons at the level of all university units in charge of promoting mobility and international cooperation, yet in the forthcoming period special attention should be devoted to the improvement of their recognisability both at the level of higher education institutions, and the entire academic community.

Teachers in charge of international cooperation and mobility at the level of units, i.e. higher education institutions, should take extra initiative to increase the mobility of students and academic staff by organising conferences, seminars and presentations; it is also necessary to increase participation at international events where persons employed in these offices would get helpful tips and examples of comparative practice.

Although many bilateral agreements within the higher education area have been concluded between Montenegro and other countries, this segment should be further improved in the forthcoming period, by establishing cooperation through signing new bilateral and international agreements, providing students with additional opportunities for improvement in a foreign country.

As the account of current situation in the field of higher education clearly points out to issues with recognition of periods of studying abroad, it is necessary to prepare and adopt a new Rulebook on the recognition of exams and knowledge gained during the stay at higher education institutions abroad.

4.2 Increasing incoming mobility of students at higher education institutions in Montenegro

Incoming mobility of higher education institutions students in Montenegro is at an even lower level than the outgoing mobility, and a very small number of future degree holders who choose to study in our country points out to a necessity to do a great deal in order to make our institutions attractive for foreign students. The number of foreign students who decide to be educated in Montenegro within the mobility programs has for many years been at a low level and the lack of progress in this area is evident.

For students currently visiting Montenegro within mobility programs there are no lectures in English language and their studying at higher education institutions is mainly confined to individual, i.e. mentoring work with teachers.

In the forthcoming period, teaching in English language should be provided on at least one study programme at each unit of higher education institutions. A study programme which the management of higher education units estimates as particularly attractive to foreign students should be structured to offer lectures in English language as well.

In order to make our higher education institutions, as well as study programmes they organize, attractive to foreign students, academic staff needs to be entirely ready to teach in a foreign language.

4.3 Promotion of Montenegrin institutions in the European Higher Education Area

Increasing the attractiveness of Montenegrin higher education institutions in the broader European area as well as the incoming mobility, requires an adequate promotion of opportunities offered to foreign students in Montenegro, due to the fact that our institutions are not highly positioned on the relevant lists of ranking world universities.

Websites of all higher education institutions in Montenegro, the structure of study programmes and ECTS catalogues should be available to all visitors in English language, and preferably one part of literature should be prepared in a foreign language. Higher education institutions from our country should also present their offer at international conferences and meetings, in order to properly present the advantages of studying in Montenegro.

4.4 Strengthening National Office for promoting mobility and international cooperation of higher education institutions

Although the offices for promoting mobility and international cooperation exist at the level of faculties, or higher education institutions, strengthening the National Office, which presently operates as the National Erasmus+ Office, would additionally contribute to increasing mobility, both outgoing and incoming. Its work could include international experts, and representatives of numerous institutions and entities from our country, that might contribute to its effective operation and adequate recognisability in Montenegrin society, i.e. the system of higher education.

4.5 Establishing Agency for Mobility and EU Programmes

Establishing the Agency will contribute significantly to the promotion of the EU programmes and other international programmes in the field of science, education, training

and youth and at the same time greater participation of Montenegro in Erasmus+ programmes. Through the activities of this Agency, Montenegrin public community will be thoroughly informed about programmes offered by EU, as well as opportunities in the field of formal and informal education. By organizing intensive promotional activities citizens of Montenegro will become more aware of the opportunities offered by international mobility programmes. Overall activities of the Agency will contribute to the strengthening of human and democratic potential, social cohesion and competitiveness of Montenegrin society. The Agency will, in addition to publishing calls for offering financial support to participate in mobility programs, have an advisory role for potential users, providing them with professional support in the application procedure.

To make the Agency operational it is necessary to establish legal framework and consider the adoption of law on the Agency for Mobility and EU Programmes which will regulate the status, activities and structure of the Agency as a public institution.

Objective 5: Lifelong Learning

Modern conditions for running a business and current changes in political, economic, socio-cultural and technological environment impose new approaches to education and learning. Bearing in mind the fact that the development of a country and society altogether depend on the efficient use of human resources and investment in human resource development, it is no surprise that the lifelong learning concept has in recent years increasingly gained importance and become one of the key strategic goals of education systems in the countries of the European Union.

Within the European Parliament and the EU Council, the preparation of an integral action programme began in 2004, covering both general education programmes for secondary schools and higher education, and vocational education and adult education programmes, all within the lifelong learning concept. Moreover, it is important to mention the Lisbon Process that promotes access to education within the European education area, through which education policies adapt to global competition, join the creation of entrepreneurial culture, highly specialized workforce, development as national investment, etc.

Lifelong learning concept is becoming a necessary prerequisite for the growth and development of knowledge and skills of human resources in the national economy, and a strategy for lifelong learning represents a key determinant of education process in the 21st century. For this reason, the development of lifelong learning should be identified as one of the most important strategic goals of higher education in Montenegro. Strategy for lifelong learning in Montenegro should define a set of objectives and activities that would lead to their

implementation, timeframe for their implementation, resources for the performance of activities, as well as indicators that would enable to measure the progress and achievement of the defined goals. The mentioned strategy, together with other strategic documents in the field of education, should contribute to development of programmes that are fully compatible with the needs of modern labour markets and social needs of Montenegro and the surroundings.

Low degree of participation in adult education and training in Montenegro may be explained by the lack of good connections between employers, workers and education providers which results in a very passive lifelong learning system, in which stakeholders operate independently, i.e. without established partnership. In that manner education and training providers may implement programmes and enable learners to acquire skills that do not fully reflect the needs of labour market, and employers. Promoting a culture of lifelong learning in Montenegro requires strengthening partnerships, at the same time addressing the challenges related to lack of information on the concept of lifelong learning and the provision of training, lack of incentives for employers and participants in training and possibly inadequate qualifications education providers.

Improving the quality and promoting the importance of lifelong learning should result in greater interest of employees and companies, investing public funds in the development of the concept and supporting training providers.

Regulations related to lifelong learning should be modified, bearing in mind that institutions as autonomous entities may invest in departments for lifelong learning and play an important role in contributing to the development of lifelong learning concept.

5.1 Promoting lifelong learning concept and its importance in the academic and research community

Promoting the concept itself has a key role when it comes to raising awareness about the importance of lifelong learning, whereas the implementation of continuous and organized promotional activities will ensure the successful implementation of the Strategy for Lifelong Learning in Montenegro.

The campaign should be focused on the so-called underrepresented categories of adults belonging to the socially vulnerable group, to provide them with the possibility of education as well.

5.2 Networking with other social partners and the recognition of prior learning in continuous education

In this context, special attention should be devoted to networking with financial institutions in Montenegro with a view to providing loans under favourable conditions for the implementation of lifelong learning programmes.

Extensive networking with various social partners, will also allow easier access to information on new regulations and opportunities for the development of lifelong learning in Montenegro.

Recognition of prior learning is a prerequisite for creating an open and permeable system for lifelong learning in order to facilitate the transition between education levels and different progression paths.

5.3 Strengthening teaching process, research and services provided to society through involvement in lifelong learning activities

This measure is focused on the evaluation of the existing curricula and their modernization with the aim of better harmonisation with the needs of modern labour markets. In addition, it includes the development of education and training concept that is based on a high degree of quality of knowledge, skills and competences, which will influence the reduction of the present supply and demand imbalances in the labour market, as well as the recognition and valuation prior learning.

5.4 Adopting procedures and guidelines for the recognition of non-formal and informal learning, prior learning and assessment procedures

This includes the implementation of lifelong learning activities which relate not only to the recognition of non-formal and informal learning, but also to defining guidelines for the implementation of these programmes and the control of their quality, as well as enrolment procedures, assessment of knowledge and competences, etc. This will establish balance between involvement of universities together with the Government bodies and society through the introduction of transparent procedures.

5.5 Establishing lifelong learning centres at higher education institutions, with the support of relevant institutions and organizations

The implementation of this measure entails the establishment of lifelong learning centres at institutions, which will play a key role in terms of implementation of activities from

the domain of lifelong learning. These centres would continuously work on the development of programmes to improve the competences and skills of educators taking part in education process, development of information and advising system for lifelong learning participants, establishment and development of intensive cooperation with local and international institutions and centres, all with a view to improving the quality of lifelong learning in Montenegro.

Objective 6: Establishing a sustainable funding model

Education funding is one of the key instruments for ensuring and regulating the functioning and the development of education, and investing in knowledge and skills, i.e. human resources is the best development investment. When discussing the amount of investments, it is clear that more funds from the state Budget have to be allocated for education, than the case is now. According to Law on Budget, 16,857,228.10 € have been allocated to the University of Montenegro for 2016.

The existing method of allocating budget funds used for all levels of education is such that it makes the system less efficient than it might be should a change in the allocation mechanism occur. The present system of education funding used for all levels focuses on maintaining the networks of education institutions and not the needs of students, i.e. it is based on input parameters, whereas output parameters are not taken into account. It is necessary to increase the prominence of output parameters in the mechanism for allocating funds, as well as responsiveness to social circumstances of students, with a view to providing greater access to education.

A specific recommendation to decision makers in this regard would be to take the necessary steps to increase the impact of students' material status on the occasions of providing scholarships, accommodation in dormitories, loans and other instruments of support, determining tuition fees, in order to have equal conditions for education and equal opportunities for successful completion.

The strategic goal of Montenegro is to continuously develop effective and high-quality system of higher education and research, which will enhance the social and economic development of Montenegrin society. Reforms of funding are crucial for the modernization of Montenegrin higher education sector, given that the current funding model fails to support efficiency and quality, rewards inefficiency such as excessive number of students enrolled, and has a discouraging effect on research and innovation.

Based on the development of funding mechanisms in OECD countries, as well as international experience, an adequate model for the allocation of public funds in service of higher education in Montenegro should be guided by the following principles: (i) direct connection with national priorities, (ii) understanding the performance criteria, (iii) multiplicity of compatible instruments, (iv) transparency, (v) equality, (vi) allocation of funds in the form of block grants, (vii) stability over time, and (viii) liability.

Montenegro has achieved very positive results in terms of access and equality in the area of higher education. With 52% gross enrolment rate at tertiary education level (as a share in the referential age group), it is among the most successful countries in the region, above, for example, Bulgaria and Macedonia. Achieving this objective involves considerable financial investments. Although the population aging trend will significantly facilitate the achievement of quantitative objectives of growth, with the projected decline in the proportion of young people in the total population from 16.1% to 12.4% by 2021, it is unlikely that all strategic objectives will be achieved, unless sufficient funds are allocated and unless these funds are efficiently used.

The existing system of higher education funding will be altered by introducing the so called programme contracts, which will be associated with the achievement of strategic goals and set up on the principles of transparency, efficiency, quality assurance and social dimension of higher education. Such system of higher education funding rests on the models of good practice in the EU countries, and input and output criteria.

For the purpose of more constructive cooperation and monitoring of development policies, the Government and the University will sign a three-year programme contract. Programme contracts will represent the basis for funding public higher education institutions i.e. the University of Montenegro. Programme contract for the University of Montenegro will include funding of students of the first and the second cycle of studies i.e. bachelor and master's studies, as well as institutes. After amending laws and regulations, the contract may be applied to fund students at private higher education institutions, if there is a clearly identified social need, and if these programs are not carried out at public institutions. The third, PhD cycle might be funded from the budget, if needed, and the subject of the contract. The new funding model will be introduced gradually.

The introduction of performance contracts, which will be concluded between the Government and a public institution, will focus on the quality of the institution's work and enrolment policy, i.e. establishing the need for certain programmes or terminating unsustainable study programmes, research, artistic and professional work, publishing activities, international cooperation and mobility of academic staff and students, number of graduates, quality assurance mechanisms, informing the public community about the work of the

institution, information system. The Ministry will engage an expert to prepare a draft contract, which will include all the essential elements of country's investments and expectations, and obligations of an institution, as well as the dynamics of meeting obligations. Based on the so-called performance of institution, the contract will define funds that will, on one hand, present the guarantee for the efficient fulfilment of obligations under the contract, and on the other hand impose an obligation of the institution to achieve results assumed under the contract with regard to the obtained funds, in accordance with the established dynamics of work, and by transparent spending of those funds.

Introduction of performance contracts between the Government and University of Montenegro, will clearly define mutual obligations as well as the dynamics of fulfilment of obligations and the implementation of activities. Funding all students of undergraduate and master studies at the University of Montenegro will contribute to stability in the funding of the University, better teaching and research conditions, and thereby overall better position of the University on international higher education institution rankings.

As of 2020, students of undergraduate and master studies would acquire the status of budget-funded students upon their enrolment in the first year of studies. Students who fail to meet their obligations in accordance with Law on Higher Education, and lose the status budget-funded students will acquire the status of self-funding students. In order to apply this model it is necessary to provide additional budget funds.

Monitoring the implementation of the Strategy for development of higher education 2016-2020

Action Plan for the implementation of the Strategy for development of higher education 2016-2020 will envisage measures and activities to be undertaken within the specified deadlines for Strategy implementation, institutions responsible for their implementation, as well as measurable indicators.