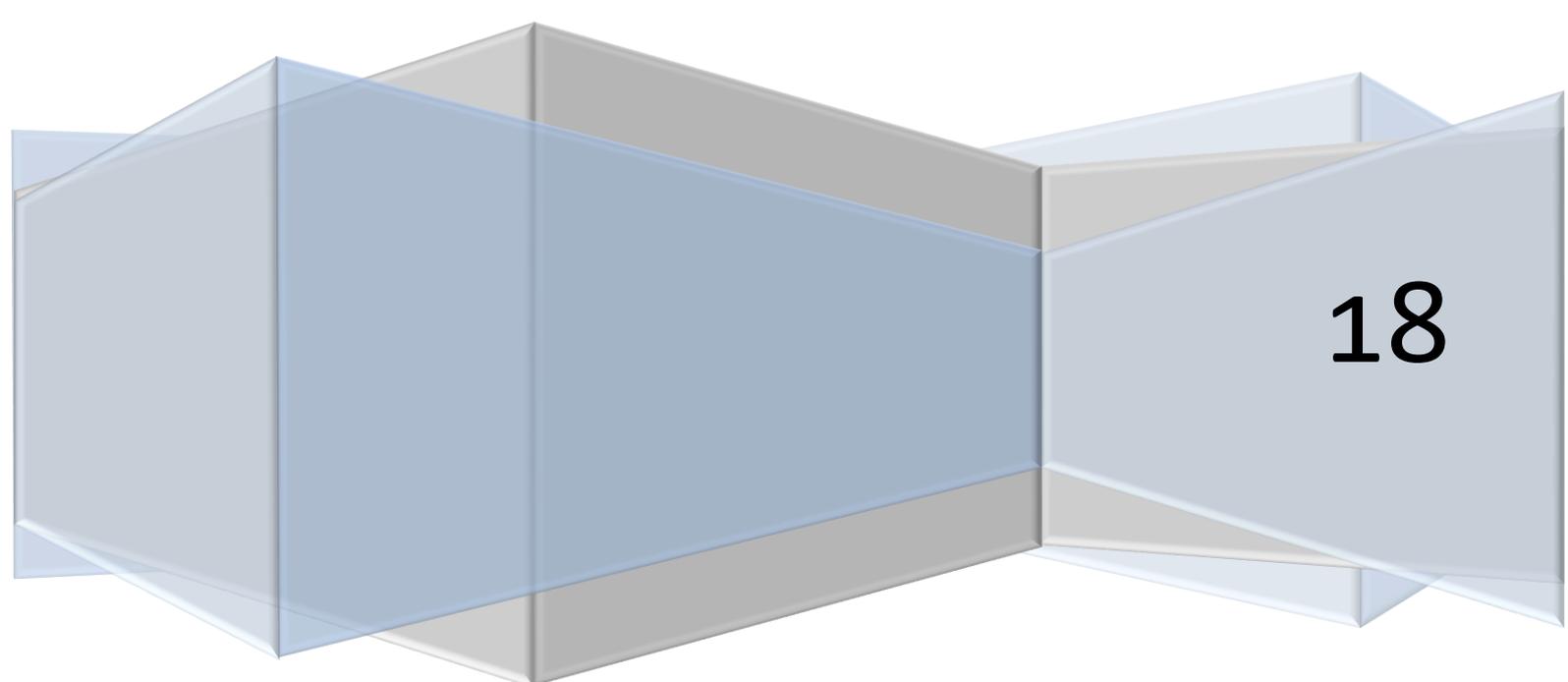


**Ministry of Education, Science and Technological  
Development, Republic of Serbia**

**PROGRESS REPORT ON THE ACTION  
PLAN FOR THE IMPLEMENTATION OF  
THE STRATEGY FOR EDUCATION  
DEVELOPMENT IN SERBIA BY 2020**



**18**

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IMPLEMENTATION OF THE STRATEGY FOR  
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## Summary

The Strategy for Education Development in Serbia by 2020, was adopted at the session of the Republic of Serbia on 25<sup>th</sup> October 2012 and published in the “Official Gazette of RS” no. 107/2012 of 9<sup>th</sup> November 2012. The main objectives set forth by the Strategy with respect to the education development are:

- 1) Increasing the quality** of the process and outcomes of education to the maximum attainable level - arising from scientific knowledge on education and respectable educational practice;
- 2) Increasing the coverage** of population of the Republic of Serbia on all educational levels, from preschool education to lifelong learning;
- 3) Achieving and maintaining the relevance of education**, particularly the one that is fully or partially funded by the public sources, by aligning the educational system structure with immediate and developmental needs of individuals and economic, social, cultural, media, research, educational, public, administrative and other systems;
- 4) Increasing the efficiency** of the use of all the education resources, i.e. completion rate within the stipulated period, with minimum extended duration and reduced dropout rates.

Apart from the main objectives, additional, specific objectives related to the development of each part of the education system have been defined. Specific strategic policies, actions and measures for each part of the system have been established, in order to achieve the planned objectives of education development.

On 31<sup>st</sup> January 2015, the Republic of Serbia Government adopted the Action Plan for the Implementation of the Strategy for Education Development in Serbia by 2020 at the proposal of the Ministry of Education, Science and Technological Development (MoESTD). The Conclusion on the adoption of the Action Plan (along with the text of the Action Plan) were published in the “Official Gazette of RS” no. 16 of 9<sup>th</sup> February 2015.

The Action Plan ensured the implementation of individual activities (actions) defined by objectives and priorities of the Strategy and developed the method of their implementation, deadlines, key actors and facilitators, including the monitoring tools and performance indicators.

This document represents the report on the results of the Action Plan for the implementation of the Strategy, in the period 2015-2018. Its first part provides the Report on the four strategic goals while in the second part, the Report it focuses on the review of the output of the Action Plan per educational levels.

## **Increasing the quality of education**

Despite the notable achievements relating to the introduction of quality assessment system at all educational levels in Serbia in the past ten years, this system still provides insufficient information for bringing any conclusions as regards the quality of educational outcome. Accordingly, the effects of different measures taken to improve the quality of education, may not be presented in the form of measurable indicators of improvement (apart from certain aspects of educational relevance, as the segment of a quality education).

The preschool education pilot project delivered in the period 2015-2018 covered the verification and improvement of the draft new Program Foundation and the concept of their implementation. This has displayed the system's responsibility in changing the significant pillar of the entire preschool education. On the other hand, concerning the issue of a greater program diversification, being one of the priorities of SEDS, there has been no significant progress in this respect, aside from the implementation of innovative projects (e.g. IMPRES, Kindergartens without Borders) paving the way for major changes in this field within the program "Inclusive Preschool Education in Serbia". This is the largest project at this level of education that will be funded by the International Bank for Reconstruction and Development (in the total amount of EUR 47 million). It wouldn't be an exaggeration to say that many activities in the field of preschool education in the past years have had a preparatory character for this grand arrangement that is expected to significantly change the picture of the preschool education, both in terms of quality and coverage.

A key change in the quality improvement plan in the reporting period (2015-2018) is perceived as initiating the changes in the paradigm of teaching and learning at Serbian schools. The new paradigm implies a greater inclination of teaching and learning towards achieving expected learning outcomes and developing competencies (key and inter-curricular ones). To begin with, this orientation is clearly highlighted in the new Law on Foundations of Education System (2017), and further detailed in the National Education Framework (2017). Overall, such orientation has shaped new plans and programs adopted for the first and fifth grade of the primary school and the first grade of the high school, with a plan to round up the curricular reform in all 12 years of general education in the next four years. In the secondary vocational education, for many years, such trend has resulted in the development of curricula that are consistent with the qualification standards, through modernized experimental profiles.

Higher education institutions have the autonomy in the development of study programs. The process of national accreditation of programs is a systemic measure for promoting the quality of study programs. New accreditation standards for study programs were adopted at the end of 2017. Among other, they promote acquiring of both general and vocational competences, as well as the quality, contemporary nature and international consistency of study programs. Higher education institutions of Serbia have been very active in EU programs (TEMPUS and ERAZMUS +) in which they, together with European and regional partners worked on the development and innovation of their study programs.

High quality of teaching staff is of a great value for raising the quality of educational outcomes. The quality of teaching staff is primarily conditional upon the effectiveness of their professional development system. In the reporting period, there were no significant breakthroughs in terms of improving the initial teacher education. Finding a formula that would provide a systemic

development of modern teacher competencies, without undermining the autonomy of the university, after many years, still remains without results. The prevailing method for the innovation of teacher education still relies on individual initiatives (institutions, departments, university teachers) and the participation in international development projects. As of 2015, the system of professional development for teachers has not changed to any significant extent, aside from the innovation of introducing the online training in the legislation. Since then, online trainings have become an increasingly popular form of professional training, often in the organization of state authorities. In the past years, a large number of teachers have attended professional development facilitated by several national initiatives. The most comprehensive initiative of that kind was launched in 2018 and involved the Teacher Training Program for the implementation of outcome oriented learning. By mid-May 2018, 215 trainings were delivered, attended by 6,389 trainees. By the end of 2018, around 20,000 teachers, professional associates and principals are expected to attend the training.

As a part of the initiative to improve the organization and management in relation to textbooks, new laws on textbooks were adopted twice in the period 2015-2018 and the Textbook quality standards (2016) were adopted. The 2015 Law introduced innovations in order to improve the transparency of the process of approving and selecting textbooks and reducing the risk of corruption in the process of selecting the textbooks, thus ensuring the availability of missing textbooks for all categories of students and protecting the family budget. However, in the course of its implementation, it was observed that the procedures were ineffective and that therefore the objectives for which it was adopted were not achieved. Therefore, in April 2018, a new Law on Textbooks was adopted. One of the chief innovations was the possibility of creating and issuing the digital textbooks. The effectiveness of the new law will be monitored in the forthcoming period.

In the quality evaluation made during the reporting period, several important steps have been taken. At the end of this document, there is a revision of the educational institutions' quality framework for all levels of undergraduate education. Streamlining and modernization of standards and procedures of external evaluation have been given a primacy. As of 2016, networks of practitioners have been developed at all levels of undergraduate education aimed at supporting the peers and institutions in improving their work as a form of support to the institutions, following the external evaluation (especially in the event of an unfavourable assessment). The network of practitioners, or advisers - external associates, already has several hundreds of teachers and continuously works on improving their competencies in order to fully respond to expectations. Another pilot model within the system was the networking of educational institutions, i.e. the models of the so-called horizontal learning.

After many years, the national testing was introduced once again, in May 2018. The testing involved representative samples of seventh grade students of primary schools and the third grade of the secondary school – their results will soon provide a more comprehensive picture of the quality of educational outcomes in Serbia. After omitting to participate in the PISA 2015 research, Serbia took part in this research once again, in 2018. Serbia will certainly participate in the research TIMSS 2019, and very likely in another couple of respectable international research exercises. The continuity in obtaining the internationally comparable data on education outcomes is a vital pillar of the quality of education assessment system in Serbia. Another essential novelty is also the

adoption of Curricula for the general and artistic Matura exam (2017) and the Program of vocational Matura and final exams (2018) whereby the legal measures adopted as early as in 2009 finally enabled the application of legal network. In 2020, the final exam will be taken for the first time, while Matura exam will take place in 2021. Another segment of system evaluation has been regulated by the new Law on School Inspection adopted in 2018. This Law was intended to unify all the provisions relating to inspection control, per educational levels, out of individual laws relating to education and lay down the operations, authorizations and assignment of tasks and duties of school inspectors.

Major changes in the system of quality assurance in higher education were introduced in the course of 2017. The new Law on Higher Education laid down the establishment of the National Accreditation Body that would carry out the accreditation, quality assurance of higher education institutions and their departments, evaluation of study program and ensuring the quality in higher education. The Accreditation Commission is an expert body discharging the functions of the former Commission for Accreditation and Quality Assurance. The other more relevant change in the system of quality assurance in the reporting period is the set of new rulebooks on the standards of accreditation for higher school institutions and study programs, self-evaluation and evaluation and external assessment of higher education institutions.

### **Increase of education coverage**

At the preschool education level a notable continuing increase of coverage has been identified, that including the reporting period. The objective set by SEDS by the year 2020, is to achieve a 30% coverage of children aged from six months to 3 years, This objective was close to its achievement considering that in 2016, the coverage 27.6% and the total number of children of this age in nursery schools was even higher in 2017. The coverage of children of this age has significantly increased since the adoption of SEDS – in 2012 it was 15.8%. In 2016, the coverage of children aged three to 5.5 years was 59%, which represents an increase of 3.5 percentage points compared to 2015. These data are also expected to show that the coverage rate was even higher in 2017, considering the increased number of children in the institutions.

The coverage in preparatory preschool programs in Serbia is almost universal – data from 2017 show that the coverage is 98.2%, which is by 3 percentage points higher than in 2015 (95.1%) and 5.5 percentage points higher than in 2012 (92.6%). European Union, as one of the key indicators for the education development until 2020, includes the coverage of children by the completed 4<sup>th</sup> year of age, until their enrolment to compulsory education. In 2016, the average coverage in EU was 95.5% (the set goal was 95%). Based on the available data, it may be concluded that in Serbia, this percentage is around 74%. The data clearly show that the coverage rate of children in Serbia, aged 4+ still significantly lags behind the EU countries. An earlier research (MIKS 2014) shows that the rate of preschool education attendance is still significantly less for children coming from vulnerable groups, whereas they are the group that needs to participate in the preschool education most of all.

Increasing the capacity of state preschool institutions and moreover, the increase in the number of private institutions has induced the increase in the number of children involved in the process of preschool education. The increased enrolment in private preschool institutions can be explained by the incentive measure in the public-private partnership plan - involving private kindergartens

in a system of subsidies in certain cities (the effect of this measure is most evident in Belgrade). The gradual and consistent increase of coverage is also influenced by the measures of inclusive education policy applicable since 2009.

The reasons for the continuingly insufficient coverage of preschool education can be sought in the insufficient spatial capacity for the expected coverage rate of the preschool network, as well as their unequal geographical distribution, including in specific attitudes among the parents. Significant progress is expected in the coming years through the implementation of the project "Inclusive Preschool Education in Serbia" - it is planned, among other, to provide around 17,000 new places for children aged 3-5,5 years in new, renovated or predesignated facilities in at least 30 Serbian cities and municipalities.

The coverage rate of primary education in Serbia is very high (98%), although the assumption is that the actual rate is somewhat lower due to different practices in schools when reporting the number of students. This particularly applies to dropout rates that various expert analyses found to be higher than those officially published. A more reliable monitoring of the dropout is a priority that will be addressed through achieving the full functionality of a single information system in education and introducing a single education number. Since 2013 and by the completion of the new Law on Foundations of Education System, the legislation has been focused on measures that will prevent the dropout (in relation, for example, to the development of a school development plan and individual education plans). The project also develops and conducts pilot exercise on school and local intersectoral approaches for the prevention of dropout.

The coverage rate in secondary education in the school year 2016/2017 was 89.8%, which is by 2.5 percentage points more than in the school year 2011/2012. An earlier research has shown that the coverage rate is significantly lower among the sensitive groups, especially the Roma students. Affirmative action for the enrolment of Roma students in secondary schools have been regulated by appropriate legal framework and they have shown good results. In the school year 2017/18 by implementing the Program of Affirmative Action, 1969 Roma students were enrolled in secondary schools. This number is around five times higher than the one in the school year 2015/2016 with 422 students enrolled. Dropout rates in secondary education are particularly high in three-year vocational education, which is more often attended by students from vulnerable groups. Specific school/local measures for the dropout prevention, the system of providing the credit support or scholarships to students that would be more focused on supporting vulnerable groups, as well as the modernization of secondary education (among other, through increasing its relevance) are directions for further development in this area. Moreover, in line with the SEDS recommendations, the feasibility study for the introduction of the compulsory nature of secondary education is currently being implemented.

SEDS aims to increase enrolment in high schools and proportionally reduce the enrolment in secondary vocational schools. The data show that there were no respective changes in the reporting period. Nearly 65% of students of a given age attended secondary vocational schools in the school year 2016/2017 and 25% of students (out of the coverage of 90%) attended high schools and art schools. SEDS has projected the proportion of 49% of students attending vocational education and 39% attending high schools.

The rate of enrolment at higher education has been increasing for many years already and is very high. In school year 2016/2017, the coverage rate among the population aged between 19 and 24 was 54.2% and compared to 2012, when SEDS was adopted, it was higher by more than 10 percentage points. Availability of higher education to vulnerable groups is also the least of all levels of education. The affirmative actions, such as abolishment of quotas for enrolment of Roma students who pass the entrance exam and legal novelties in the form of introducing studying while working or short cycle higher education studies, are expected to improve the equality in higher education in Serbia.

Serbia's strategic commitment is that by 2020, a minimum of 7% of citizens participate in some form of lifelong learning, while the goal of the EU is to achieve 15% of population aged 25-64 participate in lifelong learning and adult education by 2020. The data show that the EU average in the participation in adult education was 10.9% in 2017, while in Serbia, this participation accounts for 4.4% in 2017, according to the data of the Statistical Office of the Republic of Serbia collected within the Labour Force Survey. In Serbia, primary education is still predominant among the adult population, which emphasizes its compensational and poverty reduction role, whereas the numbers related to the planned and achieved participation indicate that the existing system capacities are not sufficiently utilized.

### **Increased relevance of education**

One of the four goals of the SEDS long-term development is to achieve and maintain the relevance of education by aligning the structure of the education system with the immediate and developmental needs of individuals and the economic, cultural, research, educational, public, administrative and other systems.

Although in the course of 2017, the youth population recorded a moderate growth in employment, the position of young people on the labour market, however, remains unfavourable, with a three-fold lower employment rate compared to the population aged 25 - 64. The unemployment rate among the youth in Serbia of 31.9% recorded in 2017, is among the highest in Europe

One of the crucial measures for increasing the relevance of education in Serbia is the adoption of the Law on the National Qualifications Framework in the beginning of April 2018. The objectives of the National Qualifications Framework in Serbia include, among other, the development of qualifications standards based on the labour market demands and the society requirements as a whole, and ensuring that the entire education system is oriented towards the learning outcomes.

Another important step in increasing the relevance of education is to initiate the renovation of curricula and teaching and learning programs in primary and general secondary education in accordance with the orientation towards the outcomes and the development of competences (key and inter-curricular). Promotion of entrepreneurial spirit, information technologies and strengthening the project teaching are also important steps towards the reform.

In Serbia, for many years already, the system of secondary vocational education has involved the so-called modernized experimental profiles, which, depending on the outcome of such testing, are subsequently introduced into the regular system. The reformed educational profiles have been

developed in cooperation with relevant actors and in close cooperation with the representatives of companies and within these profiles, the ratio of practical and theoretical lessons was changed to the benefit of practical lessons in school cabinets and workshops, but also in the companies. The curricula, both relating to the new and those unchanged profiles, have been developed based on the qualifications standards and since 2010 and until today, 71 curricula have been adopted applying this methodology. This accounts for around one quarter of all educational profiles, attended by 43% of students at secondary vocational schools in the school year 2016/2017. As of 2015, 37 curricula for teaching and learning based on the qualifications standards have been adopted.

By the end of 2017, the Law on Dual Education was adopted reflecting one of the priorities of the education policy in Serbia. The basic idea of dual education is to increase the scope and quality of practical teaching, as well as to involve the companies in the design and implementation of the curricula, ultimately ensuring a higher employability of youth. The full implementation of the LDE has been planned in the school year 2019/2020. In the school year 2017/2018, the total number of enrolled students with 19 educational profiles by the dual model was 1482, while 3077 students enrolled for 43 educational profiles with dual model elements in overall 128 secondary vocational schools and 205 companies. In the school year 2018/2019, 3500 places for students for 33 dual educational profiles will be available at 84 schools (20% of all vocational schools) with over 800 companies that will be involved in dual education.

Another important segment of increasing the relevance of education is related to the enrolment policy, which can still be considered questionable for several reasons. In the school year 2017/2018, the enrolment plan envisaged a reduced number of places in the secondary vocational schools by overall 2.3%, so that the number of available places is adjusted to the demand for certain vocational education profiles. These changes involved the reduction in the quota of offer for profiles attending a four year education in the field of economics, law and administration, and the increase in the quota of craft/three-year education profiles in a number of areas of work (construction 15%, forestry and woodworking 33%, textiles and tanning 47% trade catering and tourism 3%).

The Government of the Republic of Serbia recognized the IT sector as a priority development area and, accordingly, the curricula at 15 faculties have been developed or revised. Consequentially, the quota for students was increased by 700 places in this field. However, the enrolment policy in higher education still does not address the issue of programs that continue to fail in achieving the quotas or where there is a saturation of the market by these profiles.

### **Increased efficiency of the system**

Despite the fact that any comparison of the outcomes of the education system in Serbia and international is generally unfavourable, they are proportionate to, or even above the expected level, considering the invested resources or the country's economic strength. For example, the achievement of students from Serbia at PISA 2012 in mathematics is in line with expectations taking into account the expenditure per student. The ranking of the higher education system (Universitas 21) adjusted to the GDP, ranked Serbia at the third place in 2018 (behind Finland and Great Britain), while in 2017 it took the first place. This drives the conclusion that there are significant capacities in the education system of Serbia that are capable of generating quality in

education and that respective efforts need to be made to recognize these potentials and give additional support to education.

Annually, Serbia invests 5.2% of gross domestic product (GDP) in education, according to the World Bank estimates for 2015. The percentage is almost identical to the average investment in education in OECD countries (5.3%) and is higher than in countries in the region. In absolute figures, the level of funding in Serbia is nevertheless by far lower than in the EU. The investment per student in Serbia is around one third of the amount that is apportioned in the EU.

Due to the demographic decline, total public allotment per student has increased in recent years at all educational levels. However, the efficiency of using these resources is inadequate because the decline in the student population did not follow the reduction in the number of employees and the adjustment of the network of institutions.

In the period since the adoption of the SEDS and the Action Plan for its implementation, no significant steps have been taken in order to change the system of financing of the undergraduate education. Due to fiscal consolidation, which implied a reduction of earnings of civil servants, the focus of activities shifted to changing the salary system in the public sector, including the education.

In the past period there have been no changes in the system of higher education financing, although the system was planned to be regulated by the end of 2016. In early 2018, a Working Group was established, tasked with the development of a platform for the Draft Law on Higher Education Financing.

In early 2018, the Regulation on the Criteria for the Adoption of the Acts on the Network of Public Preschool Institutions and the Network of Primary Schools was adopted, which replaced the corresponding regulation from 2010. The new Law on Foundations of Education System also stipulates that where the local self-governments fail to adopt the acts within the stipulated deadline or they do not comply with the prescribed criteria, the ultimate solution is that they are adopted by the MoESTD. The Regulation on the Criteria for the Adoption of the Acts on the Network of Public Secondary Schools of RS was also adopted and became applicable on March 27<sup>th</sup>, 2018. Also, the field analysis of the network of secondary schools was performed and the drafting of the Act on the network of public secondary schools in the Republic of Serbia and the Decision on the abolition and establishment of new secondary schools, are under way.

Several actions have been initiated in recent years to improve the process of the involvement of employees in educational institutions and this segment has thereby become more transparent and efficient. The engagement of new teachers at schools that is predominantly achieved by hiring the teaching staff from the redundancy lists, resulted in a significant increase in the share of full-time teachers (in February 2017 – around 80%).

Concerning the management system, the new 2017 legal framework strengthened the competencies of the MoESTD in response to the identified inefficiency of different segments of the system. Some of the competencies of the National Education Council and the Council for Vocational Education and Adult Education were passed on under the responsibility of the MoESTD (adoption of curricula and teaching and learning programs, adoption of standards)

whereby the Councils only retained their advisory role. At the local level, the new LFES also laid down a new procedure for the selection of the heads of educational institutions. Instead of the governing body (the school board), that had been responsible for the election of principals, the new legislation transferred these powers to the Minister.

"Dositej" information system of education and science was developed in the previous period, to improve the decision-making process in education. The establishment of a modern and efficient single information system in education has been initiated on several occasions and lasted for many years. The new information system includes a register of institutions and a register of employees, while the establishment of a register of children, students and adults is in progress. This new information system is yet to encounter serious challenges, among other, ensuring the quality of the collected data in order to enable the timely and accurate entry and maintenance of the institutional database. The biggest innovation in the information system of education is the introduction of a Unique Educational Number (UEN). This is the number that accompanies its holder throughout all levels of formal education and is the key for linking all information about a child, student, and adult in the information system. The introduction of the UEN will enable the development of an advanced methodology for collecting and processing education data that have until now, been insufficiently valid, reliable or mutually harmonized.

## Conceptual and methodological notes

- The preparation of the Report on the implementation of the Action Plan for the Strategy for Education Development in the period 2015-2018 has two basic purposes. The first purpose is related to the responsibility of state authorities and other bodies involved in the implementation of the SEDS, primarily the MoESTD, towards the citizens of the Republic of Serbia for achieving the set goals. The second purpose of reporting is related to the establishment of reliable information, findings and conclusions that will serve to further improve the implementation of the Strategy and other development activities in education. Additionally, the Report will provide a comprehensive picture of the situation in the education sector, that will help all the parties interested in providing the financial and technical support to the development of education, to adequately plan and implement such support
- Considering that the majority of actions, equally as the Strategy for Education Development defined to a fixed period, until 2020, this Report should be viewed as the Progress Report on the implementation of the Action Plan of the Strategy for Education Development. It contains no final evaluation statements or judgements.
- The Report contains no recommendations, but rather has the informative purpose, offering a wider understanding of the current situation in the education system and the progress achieved per education objectives and levels. New strategic activities have been planned in the next period for MoESTD and a forum for reviewing potentially new priorities and directions of education policy in Serbia will be launched.
- The actions taken were mentioned in the Report in an attempt to link them to some measurable indicators, where any. In a limited number of cases, however, a causal relationship between actions and some measurable changes can be identified. Such a situation is common in education, and it should be mentioned that almost any more profound changes in education require a lot of time and can rarely be seen in less than four or even eight years. Furthermore, it should be noted that SEDS is a very ambitious document, and that even the Action Plan itself did not quite manage to establish the hierarchy of priorities
- Statistics in education still fails to produce sufficiently reliable data on numerous education aspects, starting from the basic data on education coverage, to the data about the quality of achievements. This issue represented a special challenge with writing this report.
- An additional challenge for the preparation of this Report was a frequent inaccuracy of indicators presented in the text of the SEDS Action Plan, or more specifically, in a number of cases, it provided no numerical values of indicators that could provide a far clearer picture on the level of progress. On the contrary, the AP indicators were often intended only to define what a certain activity should be measured against.

- In addition to the SEDS AP, this Report covers the progress achieved in the other two Action Plans, in educational segments: Action Plan for exercising the minority rights and the Action Plan for the implementation of the Strategy for Social Inclusion of Roma in the Republic of Serbia.
- In addition to the implementation of the SEDS AP, this Report also covered the results that were obtained in the reporting period, which do not originate directly from the Strategy or the Action Plan. It is also legitimate and expected that the new educational authorities, in addition to adhering to their basic strategic goals and priorities, to set additional priorities in response to socio-economic changes and requirements that have arisen as of the adoption of the Strategy or Action Plan. In that sense, the Report will also contain information relevant for understanding such additional activities and their outcomes.
- The Report covers the period from the beginning of 2015 until the mid-2018.

# Progress Report on the implementation of four objectives of the strategy for education development

## Increasing the quality of education

### Status review

#### Quality of educational outcomes

- **Educational Quality Assurance System in Serbia, at this point, provides data that are insufficient for drawing the conclusion on the quality of educational outcomes.** The present improvement of this system will produce more data and analyses based on such data, to educational authorities and other interested parties.

- **At this point, at the level of preschool education, it is uncommon to have an external evaluation of educational outcomes.** The quality is judged on the basis of expert assessments of the educational process at preschool institutions (or other places where the appropriate programs are implemented), which will be discussed later.

- **At the level of primary education, there is currently one national exam - final exam at the end of primary education.** This is a test done by all students at the end of the eighth grade of primary school, designed so that it has three functions: certification, selection and evaluation. However, the final exam data cannot be used as a measure of the quality of achievement at the national level, without major reservations<sup>1</sup>.

- **The results of the final exam are more informative when it comes to fairness in terms of the quality of educational outcomes.** The comparison of the results stated in the annual reports delivered by the Institute for Education Quality and Evaluation can be based on data provided by administrative districts and municipalities, for boys and girls and for national minorities

- **The results of annual reports of institute for Education Quality and Evaluation<sup>2</sup> on final exams have shown that one third of administrative districts continually encounter underachievement. Aside from lower achievements of students in five districts within the territory of Kosovo and Metohia, that are justified due to a prolonged unfavourable living conditions and poor educational environment, among the least successful are also the students from Bor, Zaječar, Central Banat, and Braničevo districts.** On the other hand, when it comes to the best results at the final exam, they have to be taken with considerable reserve. Students from several administrative districts continuously achieve the best results, although this

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<sup>1</sup> To ensure reliable evaluation of knowledge among students in Serbia from, for example, algebra and functions, there should be more problems in the tests than the final test contains (5). This problem is even more obvious in a combined test where 4 to 5 tasks cover outcomes of entire course.

<sup>2</sup> E.g. Report on results of the final exam at the end of primary education in the school year 2016/2017

could not be expected in the light of the fact that the largest number of municipalities in these districts are classified as underdeveloped or devastated areas. Taking into consideration the aforementioned, as well as the Report on the final exam achievements, the Ministry of Education, Science and Technological Development is continuously working on improving the test procedure in order to prevent situations that may call into question the regularity of the exam and its results.

- **There are no major variations in achievements of students within districts at the final primary education exam, that is, they are within the expected limits.** This statement is also supported by the fact that although the students from developed municipalities are expected to achieve better results, the results of students from municipalities of different development level are rather balanced, except for the most developed municipalities. On the whole, there is a small correlation between students' achievements and the economic development parameters of the municipalities from which they come. However, the extremely high achievements of students in some underdeveloped municipalities should be approached with caution when drawing conclusions and require additional research and analysis.

- **The results of the final exam continuously show that girls are more successful than boys, with the differences higher in the Serbian language test than in mathematics and the combined test.** Such differences in favour of girls were recorded at the republic, as well as at the district level, but also in most municipalities.

- **In accordance with regulations governing students' rights to education, students have the opportunity to choose the language in which they will take the final exam.** As a rule, students choose to take the exam in their mother tongue, or the language they attended at school. This means that the students take the tests in the respective mother tongue, and take the mathematics and the combined tests in the same language.

- **When comparing achievements by age, it is noted that achievements of students of certain national minorities are stable, while in some other, they vary to a greater or lesser extent.** Good achievements on all three tests are continuously achieved by students who complete their final exam in the Croatian language and students taking tests in Albanian language<sup>33</sup>, while the students who pass the final exam in the Ruthenian language continually have poorer results.

- **For the first time since 2004 in Serbia, the national testing of students was carried out, that involved the seventh grade students of primary schools.** The test was conducted in May 2018 on a representative sample of students (about 3,000 students from 148 primary schools) in three subjects: Mathematics, Physics and History. As soon as these are made available, the results of this testing will provide useful information on the level of knowledge of students in Serbia from these three subjects, but also the details about the method and process of learning at schools and factors that influence student achievements (using the anonymous questionnaires for students, teachers and principals)

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<sup>33</sup> In the school year 2016/2017, for the first time, the test was also taken in Bosnian language – the results of students were good.

- **As of 2003, Serbia has regularly participated in the biggest and most influential international research of student achievement - TIMSS (Trends in International Mathematics and Science Study) and PISA (Program for International Student Assessment).** TIMSS conducts the research of student achievements from mathematics and natural sciences in the fourth and eighth grade, while PISA examines the reading, mathematics and science literacy of fifteen year old students<sup>4</sup>. In the last three TIMSS cycles (2011, 2015 and current 2019, the research has been conducted in Serbia in the fourth grade of the primary school<sup>5</sup>.

- **According to the available data produced by the TIMSS research in 2015, the students in Serbia have achieved 518 points from mathematics and take the position above average scale of 500 points.** The achievement of students from Serbia is equal to the one reached by the students from Czech Republic, Bulgaria, Slovenia, Sweden, Cyprus and Germany and is significantly more than the achievements of students from some countries whose gross domestic product is significantly higher, such as Italy, Spain, Croatia and Slovakia. It can be concluded that the achieved accomplishment has been satisfactory, although it should be noted that Serbia is as much as 100 points behind the most successful countries.

- **According to the latest TIMSS data available in 2015, students from Serbia earned 525 points from natural sciences, which is also above the average scale of 500 points.** The achievement of students from Serbia in natural sciences is equal to that achieved by the students from Italy, Netherlands, Spain, Northern Ireland, Australia, Denmark, Germany and Canada, and are better than the results of students from Belgium, Portugal, New Zealand, France, Cyprus and Turkey. The difference to the most successful countries is less than the one in mathematics.

- **TIMSS results in Serbia indicate that 85% of the difference in student achievement can be attributed to individual characteristics, and only 15% of the difference in achievements is considered to occur due to the differences between the schools that students attend.** The results indicate that students coming from more favourable socio-economic environment have better achievements, as well as the students who attended preschool education for a more extensive period and those who acquired better language and numerical competences when enrolling to the first grade of primary school.

- **In 2018, a new PISA research cycle was implemented in Serbia after the opportunity to participate in the PISA cycle of 2015 was missed. This means that the latest results date back in 2012 when students from Serbia achieved results that are significantly below the OECD average.** Compared to OECD countries, the mathematical competence of students from Serbia is lower by around 45 points, which corresponds to the effect of one year of schooling in the OECD countries; reading literacy of students from Serbia is lower by around 50 points, which corresponds to the effect of faintly over one year of education in the OECD countries; the

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<sup>4</sup> A vast majority of students participating in the test attend the first grade of secondary school. Nevertheless, considering the nature of PISA testing (competences) it may be considered to measure the overall developed competences of students during their schooling, which is eight years of primary education and an incomplete year of secondary education.

<sup>5</sup> TIMSS research in Serbia covered only the students attending the classes in Serbian language.

scientific competence of students from Serbia is lower by about 60 points, which corresponds to the effect of 1.5 years of education in OECD countries.

- **The results of the 2012 PISA study show that in Serbia the socio-economic status of students' accounts for around 12% of difference in the mathematical competence level, which is similar to the situation that exists in the OECD countries.** Compared to other countries in the region, the situation in Serbia is similar to that in Croatia and Montenegro, but slightly more favourable than in Romania, Bulgaria and Slovenia. The difference in the average achievement of students per unit of the socio-economic status scale in Serbia in 2012 was 34 points, which is slightly lower than in the OECD countries where this difference is around 40 points.

- **Even though a school assessment should be a good tool to measure the quality of educational achievement, the final exams conducted by the Institute for Education Quality and Evaluation (IEQE) indicate that the practices of evaluating and assessing the student knowledge in primary schools are of questionable quality, which is why they are not taken as a reliable source of data on the quality of educational outcomes at the system level or its different segments.** The reports of the IEQE on the results of the final exam in that have analysed and the school grades, show that an excellent success at the end of the eighth grade is achieved by almost half of the students, while every fifth student has all top grades. There is an anticipated correlation between grades and achievements on the test, but this connection is not high enough, which indicates that there are differences in the requirements that different schools place before students for obtaining the same grade. It is an illustrative finding that, although the average achievement of the holders of the diploma "Vuk Karadžić"<sup>6</sup> is higher than the national average, while in some districts holders of this diploma do not even reach the republic average

- **At the moment, there is no national examination for the secondary education (final or Matura exams), but it is stipulated by legal regulations. In 2017, the General and Artistic Matura Program was introduced and in 2018, the Program of Vocational Matura and Final Examination.** For the first time, the final examination will take place in the school year 2019/2020 and the Matura in the school year 2020/2021.

- **In May 2018, the national testing was conducted for the first time, of the representative sample of the third grade students (covering around 6000 students) at 135 secondary schools, from three subjects: mathematics, physics and history.** The data analysis will provide information on the quality of student achievement at the national level, in the coming period.

- **At the level of higher education, the higher education, each institution is monitoring the competences and academic skills of students achieved through the curricula.** There are no indications, nor measurement of the quality of educational outcomes in higher education, at the national level (other quality indicators will be reviewed subsequently).

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<sup>6</sup> In the school year 2016/2017, each seventh student was awarded with the "Vuk Karadžić" diploma – awarded if a student has top grades from all subjects from fifth to eighth grade of primary school.

## Quality of education process

- **The key source of evaluation and the information on the quality of education process at the level of higher undergraduate education in Serbia is offered by the external evaluation of performance quality of institutions.** Such evaluation delivers the information on the quality of the key segment of this process – the process of teaching and learning, as well as numerous interconnected elements constituting the operation of educational institutions. Aside from external evaluation of institutions, the important role in providing the information on the quality of education process is also provided by different pedagogical research exercises conducted in the country.

### *Preschool education*

- **The aggregate results for 99 preschool institutions evaluated in the last three school years<sup>7</sup> show that the vast majority were classified as the category of institutions having good performance (grades 3 or 4<sup>8</sup>) - the percentage of these institutions in the three school years ranged from 85% to 93 %.** In the school year 2016/2017, nearly half of the preschool institutions received the highest grade. On the other hand, no preschool institution received grade 1.

- **In annual reports on the external evaluation prepared by the IEQE, based on the level of achievement of appropriate standards of the key education quality areas, it may be concluded that educators have adequate professional knowledge and skills for educational work and that the principal space for improvement is seen in the programming of work that will enable optimum advancement in learning and development of children (standard 2.4) and adapting to activities so that they are better adjusted to the needs and interests of children (standard 2.3).** In the preschool institutions evaluated during 2016/2017, it was reported that that these two standards were fully achieved in only 10% of the institutions (while the standard 2.3 has not been achieved by one third of evaluated kindergartens). On the other hand, it is important to note that over 90% of preschool institutions keep up with other quality standards of educational work.

- **According to other expert assessments, however, the quality of educational in preschool institutions is not entirely satisfactory.** It is estimated that the practice of preschool education is of "uneven quality, insufficiently diversified and fails to respond to the needs of children and parents"<sup>9</sup>. The Preschool Education Study in Serbia: Situational Analysis and Recommendations (2016)<sup>10</sup>, points to a number of areas requiring improvement, in order to

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<sup>7</sup> Evaluation of preschool institutions commenced in the school year 2013/2014 and until now, 110 preschool institutions underwent the evaluation.

<sup>8</sup> The general quality of work in an institution may be graded 1, 2, 3 or 4, where 4 is the highest grade (the highest achievement of the standard).

<sup>9</sup> Pavlović Breneselović, D. and Krnjaja Ž. (2017) *Kaleidokop*. The Basics of Diversified Programs of Preschool Education (from the UNICEF Introductory Note in Serbia (2017)). (*Основе диверсификованих програма предшколског васпитања и образовања*).

<sup>10</sup> Baucal A. et al. (2016). Preschool Education in Serbia: situation analysis and recommendations.

enhance the quality of the PE - only a few will be mentioned here: adoption of a new program foundation; de-scholarization of preparatory preschool program and transition to programs based on play and quality of relationships; reforming the initial education of preschool teachers; opening of kindergartens to the local community and better communication with the family; observing the standards on the size of the educational groups in nurseries and kindergartens.

- **A survey among the citizens has shown that over 80% of them consider that preschool institutions provide quality education services<sup>11</sup>.** Citizens see the lack of space, or more specifically, having too large groups, as the biggest problem in the functioning of preschool institutions (58%), followed by the poor condition and obsolescence of equipment and technical aids (31%), followed by poor material position of employees (21%) and the hampering the creativity among the children (19%).

#### *Primary education*

- **The assessment of the overall quality of primary school performance through the external evaluation process in the last three school years indicates that the average grade was 2.8 and 3.** The data indicate that in the school years 2014/15 and 2015/16, around one-third of primary schools have not met the expected quality standards, while in the school year 2016/2017, such conclusion was made for every fifth primary school. In average, out of the schools evaluated in these three school years, around 17% were given the highest grade.

- **The level of achieving quality standards in the area of teaching and learning is relatively uniform among the schools evaluated in the last three school years. The trends in performance levels show a stable pattern.** Primary schools are the most successful in achieving two standards: Teacher implements the appropriate didactic and methodological solutions in class and Teacher creates an encouraging environment in class - almost all schools (over 95%) achieve these quality standards at higher levels. The successful achievement of other standards that follow, are: the Students gain knowledge in class and Teacher efficiently manages the learning process in class, also having a very high rate of schools that successfully implement these standards. More than two thirds of schools have also shown good results in the standard Teacher teaches students different techniques of learning in class.

- **The quality standards of teaching and learning in which schools show the least success are the standards: Teacher adjusts the work in class to the educational needs of the students and Teacher uses evaluation procedures that are in the function of further learning.** More than half of primary schools in Serbia do not have satisfactory quality of teaching in terms of adapting work to the needs of students (they fail to meet this quality standard). Regarding the quality of teaching evaluation, this situation is, in a way, even more problematic. In particular, in the last three years during which this standard has been evaluated, each tenth primary school received a grade 1.

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<sup>11</sup> The position of the population regarding their satisfaction with preschool education services in Serbia: the summary of research results (2017). USAID, European Movement, Center for European Policy.

- **With regard to teaching mathematics, the results of the TIMSS 2015<sup>12</sup> research suggest that traditional, frontal teaching still prevails and that it is organized in such a way to be sufficiently stimulating and encouraging for students.** The results show that "through the frontal teaching of the syllabus to the students, teachers explain to them the method of problem solving and the task of the students is to memorize the rules and techniques applied". The maths teaching according to students and the outcomes is that "most students agree that their teachers are very engaged and encouraging in teaching mathematics." The assumption is that the types of work that we often call traditional (frontal, lecturing) and transmissive are nonetheless delivered in a way that is perceived as encouraging (the students understand teachers' expectations, while the teachers give feedback and actively involve students in class, provide instructions and interesting problems, etc.)

- **In relation to the teaching of natural sciences, based on TIMSS 2015, it can be concluded that "it is also dominated by traditional forms of work - the teacher explicitly explains new contents while students read lessons from textbooks and memorize facts and principles."**<sup>13</sup> The data show that the practice of "presenting experiments by teachers is relatively rare, and that it is even less common for students to plan and implement experiments and research, or work on the ground and outside the classroom. Similarly to the classes of mathematics, it is a relatively rare practice that student work on tests and quizzes or that they work in groups."

- **With regard to the quality of teaching in higher grades of primary school, the research outcome related to the international project: Improving Educational Effectiveness of Primary Schools (IEEPS)" point to the fact that the thinking processes in acquiring the functional and applied knowledge is insufficiently stimulated in mathematics and biology classes, as well as that modern approach to evaluation of students is also rare<sup>14</sup>.** The research has shown that it is relatively rare that: the teacher encourages and praises the efforts of students in class; the teacher connects his/her curriculum with curricula of other courses; the teacher asks the students to say how and where they can apply what they learn in class; the teacher shares with students the good and bad sides of their work; when a student does not understand a question, the teacher puts it differently, so that it becomes clearer and more understandable, etc.

- **The survey among the citizens has shown that almost 80% of them are satisfied with the quality of educational services provided by primary schools<sup>15</sup>.** Compared to other parts of Serbia, the greatest satisfaction with the services of primary schools is reported in Belgrade. The critical problems in the work of primary schools are declared to be the overburdening curriculum (44%), followed by the poor condition and obsolescence of equipment and technical aids (29%), and the obsolescence of curricula (29%) as well as a poor grading system (27%).

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<sup>12</sup> Marušić Jablanović, M., Gutvajn, N. and Jakšić, I. (editors) (2017). TIMSS 2015 in Serbia. Belgrade: Institute for Pedagogical Research.

<sup>13</sup> Ibid.

<sup>14</sup> Policy brief: Improving educational effectiveness of primary schools (2017)

<sup>15</sup> The position of the population regarding their satisfaction with preschool education services in Serbia: the summary of research results (2017). USAID, European Movement, Center for European Policy.

### *Secondary education*

- **The assessment of the overall quality of work in secondary schools through the external evaluation process in the last three school years has shown that 70 to 75% of secondary schools perform well (with obtained grades 3 or 4).** At the same time, this means that 25 to 30% of secondary schools do not meet the quality standards. There is a continuing trend of a greater number of vocational schools receiving the grade 4 compared to general secondary schools, but they also have slightly higher percentage of grades 1 and 2.

- **With regard to the quality of teaching and learning, the results of the external evaluation of the last three school years show that, according to general quality assessments, most of quality standards have been assessed as achieved (with obtained grades 3 or 4).** The standards of didactic and methodological solutions' adequacy and the creation of an encouraging environment in class are achieved in almost all schools.

- **External evaluation has shown that one of the biggest problems with teaching in secondary schools is monitoring the progress in further learning, which was, for example, evaluated as insufficient and inadequate in two thirds of schools in the school year 2016/2017.** Furthermore, the lack of individualized classes and teaching combining different learning techniques was seen as one of the major problems.

- **The analyses of external evaluation of secondary schools show that the teaching is considerably uneven at this level of education.** There are visible differences in the quality of teaching among the schools within individual school administrations as well as among different school administrations.

- **A survey conducted among the citizens showed that 59% of them believe that secondary education in Serbia is good<sup>16</sup>.** Among the respondents of a higher educational level, such attitude is less favourable, as 50% of them find the secondary education to be good. More than one half of respondents disagree that students in primary and secondary schools acquire practical and usable knowledge and skills (57%) or "soft skills" (53%): communication skills, problem solving skills, decision making.

### *Higher education*

- **At the level of higher education, individual reports on external quality assurance of higher education institutions have been published, which until recently had been conducted by the Commission for Accreditation and Quality Assurance.** External quality assurance is carried out in the areas of: teaching, teaching staff, research, student evaluation, textbooks and literature, library and information resources, space and equipment, extracurricular teaching staff, management process and transparency. **However, no summary analysis of the**

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<sup>16</sup> IPSOS/SIPRU- Social Inclusion and Poverty Reduction Unit (2015). Education in Serbia. Position of Citizens on Education in Serbia.

external quality assurance reports have been made, whose findings could point to the status of the quality of higher education at the national level.

- **The position of higher education system and universities in international ranking lists is an increasingly effective indicator of quality, although there is no universal or best ranking system. The presence of Serbian universities on these lists is increasing.** Regarding the higher education system, in the ranking of 50 national higher education systems managed by Universitas 21, in 2018, Serbia was ranked 42<sup>nd</sup>, based on 24 evaluated features, (while in 2017, it was ranked 39<sup>th</sup>). However, when the status is evaluated from the perspective of local economic conditions, in particular the GDP, Serbia is ranked third behind Finland and the United Kingdom (in 2017 it was ranked first).

- **On the prominent Shanghai list, the University of Belgrade takes between 201<sup>st</sup> and 300<sup>th</sup> place, which is the highest ranking so far.** It was listed for the first time in 2012, when it was ranked among the group of universities between 401<sup>st</sup> and 500<sup>th</sup> place. Since 2013, it improved its ranking and was ranked among the group of universities taking positions between the 301<sup>st</sup> and 400<sup>th</sup> place, until 2017, when for the first time, the Universities in Niš, Kragujevac and Novi Sad entered the Shanghai ranking list of the world's universities, among the top 500, in the field of mathematics – they were ranked between 301<sup>st</sup> and 400<sup>th</sup> (Niš) and respectively 401<sup>st</sup> and 500<sup>th</sup> place (Kragujevac and Novi Sad).

- **The University of Belgrade was ranked among the best world universities in 8 out of 46 scientific fields and with two scientific fields in the QS World University Rankings by Subjects for 2017.** In the field of natural and mathematical sciences, the University of Belgrade was ranked 347, among the world universities, while in the field of humanities it was ranked between 401<sup>st</sup> and 450<sup>th</sup> place. On the other hand, the Times Higher Education World University Rankings providing a list of 980 best world universities, ranked the University of Belgrade above 800<sup>th</sup> place in 2017 (in 2016 it was ranked between 601 and 800).

- **The satisfaction with studies provides an important perspective on the quality of studies as seen by the students. According to the latest data collected in 2017, within the European research project EUROSTUDENT, more than one half of the students are satisfied with the quality of teaching, while every sixth student is dissatisfied.** A little less satisfaction is expressed in relation to the organization of studies - 43% of students are satisfied or very satisfied. Three out of five students would recommend their study program to others, whereas each fifth student would not do so. The most unfavourable results are obtained in relation to the students' assessment of the interestedness of teachers in their progress - only one out of four students find that the teachers show such interest.

### **Progress achieved in the reporting period**

#### **Improvement of programs and standards**

- Major issues for increasing the quality of education include that related to the process of innovation and improvement of teaching and learning curricula and the expected outcomes of education. Over the past years, significant development activities were conducted in these areas at the level of undergraduate education. Some of the main regulatory measures are prescribed in the new Law on Foundations of Education System adopted on 29 September 2017.

- **The new LFES, as the element of education quality in the Republic of Serbia determined the key competences for lifelong learning at the legal level for the first time, including the general inter-curricular competences.** These are eight key competences promoted in the EU for more than a decade and 11 inter-curricular competences.

- **The new LFES introduced innovations in the field of programs<sup>17</sup> that will have new programs oriented towards the outcomes and competences, and to a lesser degree to their content, that used to be a customary practice.** In particular, new elements that need to be included in the curricula have been regulated. Aside from objectives per levels of education and learning objectives of courses (elective programs and activities) per classes, it was regulated that the programs include general curricular competences, specific curricular competences, learning outcomes and educational standards (qualifications standards for secondary vocational education - SVE). Instead of obligatory and recommended contents currently in place, the new programs should include key concepts of curricular content. The programs should also contain the instructions for didactic and methodological adjustment for students with developmental disabilities, students with exceptional capacities, education in languages of national minorities and adult education. These legal solutions created the framework for adopting the new curricula for teaching and learning in a comprehensive and inclusive way, chiefly in line with the pedagogical concept of program oriented towards outcomes, as planned by the Strategy for Education Development and the Action Plan.

- **As prescribed by the new LFES, the National Qualifications Framework was adopted on 3<sup>rd</sup> November 2017 in the form of a rulebook.** The National Framework of Education relies on universal values, modern pedagogical principles and priorities of the national Strategy for Education Development. It lays down the standards and development that ensure aspects ensuring the common foundation and approach to a child, student and adult, learning and teaching and understanding of key common elements of the preschool, primary and secondary education. Its purpose is to ensure coherence and functionality of the education system. It should contribute to understanding the interconnectivity of goals, educational standards, competences of students and learning outcomes, with the processes of planning, monitoring, evaluation and other key elements of education in Serbia, such as the underlying values and principles.

- **The curricular approach established by the new legal framework in education was significantly developed in the period 2012-2015 within the IPA 2011 project - Support Human Development and Research - General education and human capital development - *Razvionica*.** Within the project delivered by MoESTD, besides innovating the general basics of learning and teaching in primary schools, general secondary schools and general courses in

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<sup>17</sup> Among other, the term curriculum was changed to teaching and learning program.

vocational schools, significant results were achieved in the field of professional development of teachers (with a special focus on the development of transversal competences), the establishment, equipping and raising the capacity of school-workshops (41 schools across Serbia), and building cooperation between researchers, practitioners and educational authorities.

#### *Preschool education*

- **The adoption of new Foundations of Preschool Education Program will soon take place.** The draft program was developed by the working group of the Institute for Improvement of Education and presented to the public by the end of 2015. The draft was piloted during 2016/2017, through the project *Improving the quality of preschool education through piloting of the draft, further development and finalization of new Foundations of the preschool education program* as a joint initiative of the Ministry of Education, Science and Technological Development, Institute for the Promotion of Education, Institute for Pedagogy and Andragogy and UNICEF.

- **The draft Foundations of Preschool Education represents a conceptual starting point for the development of a program of educational work with children from a nursery age to school.** The new Program is based on a holistic approach oriented towards relationships; they are based on values that shape the development of programs and activities. The goal is to support the well-being of a child, bearing in mind that it is the interaction that initiates, supports and enables the well-being of a child and its achievements. The role and place of Game is emphasized as it constitutes the basis for developing and fulfilling any aspect of the child's welfare. Learning is understood as a transformative process through which a child changes, concurrently changing their understanding of the world, relationships and the community in which they work and live

- **The new concept of preschool education is a breakthrough compared to the existing one,** as it is based on:

- Modern theoretical assumptions of socio-cultural theory of learning and development and sociology of childhood;
- Convention of the Right of the Child and General Comment no. 7 of the UN Committee on the Rights of the Child in Implementing child rights in early childhood;
- Applicable acts on education policy in Serbia – Early Childhood Education and Social Care Development Strategy in the Strategy for Education Development in Serbia by 2020, Law on Preschool Education;
- International acts on education policy and examples of successful foreign practices, primarily respecting the specific context of preschool education in Serbia.

- **The challenge for educational authorities, researchers and practitioners will be to develop a clear strategy for implementing the Foundations of preschool education program.** The main activities of supporting the implementation of the new Program Foundations have been planned within the project *"Inclusive Preschool Education in Serbia"*, to be funded by the International Bank for Reconstruction and Development (in the total amount of EUR 47 million). The loan was signed in May 2017 and ratified by the

National Assembly in November 2017. The overall goal of the Project is to improve the accessibility, quality and fairness of preschool education, especially for children from vulnerable social groups. The second Component of the project Inclusive Preschool Education the support activities for the implementation of the new Foundation of the Preschool Education Program have been planned through the development of training programs and all the accompanying materials for preschool teachers and professional associates for their implementation, including the training for the heads of preschool institutions.

- **Complementary support towards the implementation of new programs for preschool education will be provided through the IPA 2014 project - Towards Lifelong Learning.** One of the three planned outcomes of this project is to support the reform of preschool education as the initial basis for lifelong learning.

- **Although SEDS put a significant emphasis on the diversification of the preschool education program and considering that the Law on Preschool Education allows for this, there is essentially no practical application of diversification, which applies both to the organizational and the programming aspects.** In the light of the new legal changes from 2017 (LFES and LPE), the former names "special and specialized programs" were replaced by more pedagogical terms "different forms and programs". In this way, it is more explicit that the preschool institution, besides the realization of the program of educational work in the whole day, develops other forms and programs. Also, the intention is to motivate the founder of the preschool institution to treat various programs and forms as equally important in achieving the prescribed goals and principles of preschool education and to support their realization. The law also established the standards of direct educational work with children to implement various programs and forms of education (20 hours).

- **A valuable contribution the development of diversified programs in the reporting period<sup>18</sup> was given by the projects Kindergartens without Borders 2 and Kaleidoscope<sup>19</sup> (2014-2016) that delivered a number of new programs and testing of the theoretical basis for the integrated development of preschool education in terms of quality, fairness and program and organizational diversification.** The practice in newly-formed groups has been enhanced by the implementation of an innovative project approach to learning. Such practice has primarily been developed under the programs carried out 5 days a week, for 4 hours. The elements of this approach were implemented in other programs that were developed in cooperation with local partner institutions in the field of science, art and healthy lifestyle.

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<sup>18</sup> Significant activities in the previous period (2011-2014) were also realized within the framework of the Project Improving Preschool Education in Serbia (IMPRES) - a joint project of the Ministry of Education, Science and Technological Development of the Republic of Serbia and the European Union for which the EU allocated EUR 3.75 million of IPA funds designated for Serbia.

<sup>19</sup> Kindergartens without Borders 2 project - quality inclusive preschool education, was implemented in cooperation with the Ministry of Education, Science and Technological Development, UNICEF, CIP Center for Interactive Pedagogy, 10 preschool institutions and local self-governments. As a complement to this project, a scientific and research project Kaleidoscope - a diversification of forms and programs of preschool education was implemented, delivered by the Institute for Pedagogy and Andragogy of the Faculty of Philosophy, University of Belgrade.

### *Preschool education*

- **At the end of 2017, a new Rulebook on the teaching and learning plan for the first cycle of primary education and the teaching and learning program for the first grade of primary education was introduced, to be implemented starting from the school year 2018/2019.** The program has put the emphasis on teaching methods and processes. By instructions and explanations provided in the program and instructions for teaching individual subjects, the clarification given on what programs are oriented towards the outcomes and how to achieve them. This implies that active teaching methods and inter-curricular linking, including the project teaching, have become more often in regular teaching. The project teaching is defined as a form of educational work required by all students. It has been planned as overall 36 hours - once a week for one hour or every other week for two hours, teachers should thematically, together with their students, link the contents of various subjects, with the obligatory use of information and communication technologies.

- **In primary education, starting from the school year 2017/2018, the fifth grade students of primary education will attend an amended and updated curriculum for teaching and learning.** Modifications of the curriculum relate to the introduction of three teaching subjects defined as compulsory, specifically Informatics and Computing, Technique and Technology and Physical and Health Education. In support of the implementation of the reformed teaching and learning curricula, 2618 teachers were trained in the organization of the Institute for Improvement of Education, in implementing the curriculum content of the new subject: Physical and Health Education in the 5<sup>th</sup> grade of primary school. Also, 1,670 teachers were trained in implementing the curriculum content of the new Technique and Technology in the 5<sup>th</sup> grade of primary school. Meanwhile, appropriate new programs for other teaching subjects in the fifth grade have been adopted.

- **In the coming school years, the curricula for teaching and learning in all other grades will be modified, successively, according to the implementation requirements, while following the progress of students attending the first or fifth grade, throughout the classes.** The reform of the teaching and learning curriculum in primary education will continue in the next four school years, when all primary school students will be fully attending the teaching and learning curricula.

- **The support to the implementation of the reformed curricula for teaching and learning is also provided through the professional development of teachers, professional associates and directors, especially in the field of curricula oriented towards the learning outcomes.** In this context, the *Teacher Training Program for the implementation of learning oriented curricula* since April 2018. This is a three-day program (one day is realized as an "online" training) aimed at developing competencies for planning and delivering teaching and learning oriented to outcomes that includes: understanding the new concept of teaching and learning programs; the global, operational planning and preparation for class; methods, techniques and activities focused on learning and outcomes; project teaching; entrepreneurship; monitoring and evaluation of learning. By the mid May 2018, 215 trainings were held for 6,389 participants. The plan is to train around 20,000 teachers, professional associates and principals by the end of 2018.

- **The most recent activities related to the achievement standards are the adoption of the Rulebook on general achievement standards for the end of compulsory education in Bosnian language in 2016<sup>20</sup>, Rulebook on general achievement standards for the end of primary education in a foreign language in 2017<sup>21</sup> and the Rulebook on General achievement standards for the subject Serbian as non-mother tongue for the end of the first and second cycle of compulsory education, general secondary education and primary education for adults, also in 2017<sup>22</sup>.** Their implementation is supported by guides created for teachers, in support of implementing the foreign language standards<sup>23</sup> and standards for Serbian as non-mother tongue<sup>24</sup>. The majority of standards for student achievements at the end of compulsory education (for 10 courses) was adopted in 2010, along with the standards for the completion of compulsory education in mother tongues of national minorities (Albanian, Bulgarian, Hungarian, Romanian, Ruthenian, Slovak and Croatian languages). The National Education Council adopted educational standards for the end of the first cycle of primary education, in 2011. The achievement standards for primary education of adults were adopted in 2013.

#### *Secondary education*

- **At the level of general secondary education, the reform of curricula for teaching and learning in general secondary education has been prepared.** This is the first major change introduced in the last 20 years. The main reform principles are: **electoral character** (greater choice of electoral programs in order to enable a better preparation of students for continuing their education, their choice of profession, as well as a greater student satisfaction with education); **interdisciplinary nature** (overcoming the boundaries of courses by linking different disciplines into meaningful units, aimed at developing the functional knowledge and competencies of students); **gradual progress** with the introduction of innovations (i.e. gradual preparation of schools, teachers and students for the realization implementation of new curricula). Innovation of programs involves the objective of the teaching becoming oriented towards the outcomes and development of competences.

- **The new curricular concept of general secondary education introduces a number of new elective programs:** Modern technologies and entrepreneurship; Applied science; Education for sustainable development; Health and Sports; Basics of Geopolitics; Economy and Business; Methodology of Scientific Research; Language, Media and Culture; Religions and Civilizations; Individual, group and society; Art and Design. Elective programs will be selected in

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<sup>20</sup> Rulebook on general achievement standards for the end of compulsory education in Bosnian language, "Official Gazette of RS – *Prosvetni Glasnik*", no. 13/2016

<sup>21</sup> Rulebook on general achievement standards for the end of primary education in a foreign language, "Official Gazette of RS", no. 78 dated 18 August 2017.

<sup>22</sup> Rulebook on general achievement standards for the course of Serbian as non-mother tongue in the end of the first and second cycle of compulsory education, general secondary education and primary education for adults, published in the "Official Gazette of RS", no. 55/2017 dated 2 June 2017.

<sup>23</sup> Institute for Evaluation of Education (2017). General achievement standards for the end of primary education in a foreign language.

<sup>24</sup> Krajišnik, V. and Zvekić-Dušanović, D. (2017). General Achievement Standards for the Subject Serbian as Non-mother Tongue for the End of the First and Second Cycle of Compulsory Education, General Secondary Education and Primary Education for Adults. Teacher's Handbook. OSCE Mission to Serbia.

the first and third grades and will be taught for two or four years. They will be scheduled in keeping with the school resources and focused on achieving outcomes and developing competencies through various active methods such as the project teaching, research work, and other. According to the new programs, the students will have 33 classes per week (instead of the current 31).

- **Teaching oriented to outcomes is being introduced in general secondary schools in traditional courses as well, specifically, the teaching will be focused on the development of student competences.** This should be also contributed by an increased number of laboratory exercises and the project teaching classes (as set forth by the new teaching and learning plan).

- **Equally as in the case of the reform of curricula in primary education and reform at the general secondary education level, the extensive teacher training is planned to be delivered.** This involves the training in the implementation of teaching focused on learning outcomes and developing competencies; the implementation of an integrated, thematic and interdisciplinary approach to teaching and learning; evaluation and grading.

- **The introduction of special classes in general secondary schools for students with special abilities related to computing and IT, is another aspect of modernization, with these students attending special curricula to acquire secondary general education –** The Rulebook on curriculum for general secondary schools for students with special abilities in computing and informatics<sup>25</sup>.

- **In the school year 2017/2018, the international Matura exam was introduced.** Drafting the Rulebook on the program of international Matura exam is in progress.

- **The reform of secondary vocational education in Serbia since 2003 has been implemented at the initiative of the Ministry of Education with the financial and technical support of the EU that has facilitated the modernization of a large number of educational profiles and/or curricula.**

- **Since 2015, 37 teaching and learning curricula have been adopted, based on the qualifications standards and overall 71 since 2010 (33 profiles have been implemented according to the dual model).** Institute for Improvement of Education has also prepared 66 programs for general education courses for educational profiles in secondary vocational schools.

#### *Higher education*

- **At the level of higher education, the autonomy of universities and other higher education institutions implies, among other, the right to develop study programs.** The program quality assurance is also implemented at the national level, primarily through the process of accreditation of study programs. The Commission for Accreditation and Quality Assurance in the second round of accreditation from 2012 to 2016 granted the accreditation to overall 2054 programs for the enrolment of 111801 students.

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<sup>25</sup> Official Gazette of RS – *Prosvetni glasnik* no. 5/17

- **In August 2017, the Ministry of Education, Science and Technological Development announced the competition titled "Development of Higher Education" for co-financing of projects to support higher education institutions in developing new and innovating the courses of the current study programs.** The amount of co-financing by the Ministry accounted for 85% of direct costs of the project implementation, while the higher education institutions as project implementers co-financed 15% of the direct costs of project implementation. According to the decision of the Minister of Education, Science and Technological Development, the funds were allocated to 67 higher education institutions.

- **The biggest financial instrument for modernizing higher education in Serbia since 2001 is the participation of higher education institutions in the TEMPUS program of the EU.** Higher education institutions from Serbia utilized more project funds than any other country in the region. The reform projects of study programs were predominant, with almost two thirds of the projects respectively funded. Currently, 26 projects for capacity building in higher education, applied for in the period 2015-2017, are being implemented.

#### **Improvement of professional development of teachers**

- **The development strategy of education is of great importance to teacher education, that is, broadly, to their professional development.** According to SEDS, the quality of teachers is "undoubtedly a key factor in the quality of education" and hence a special teacher education strategy has been set up, to be followed by the development of a teacher's career - from the introduction into the teacher's work, through obtaining, renewing and losing licenses, assessment system, monitoring, professional development and to maintaining the reputation of the teaching profession.

- **However, since the adoption of the SEDS, there have been no significant systemic activities in terms of improving initial teacher education, regardless of the future level of education at which they will work as teachers.** Improving the quality of initial education mainly relies on individual engagement, from the level of faculty to individual teachers at higher education institutions. Exceptions are the projects supported by the EU.

- **Proposal for supplementing the standards for accreditation of study programs of the first and second levels of higher education in the field of teacher education,** was prepared in the period 2015-2016 by the thematic working group for teacher education, formed within the framework of Serbia's participation in the EU Open Method of Coordination in education. The proposed supplement to the standards has not been discussed yet.

- **New Accreditation Standards for study programs adopted in 2017 within the standards related to curricula, have also set forth the expectations in terms of duration and implementation of pedagogical practice.** Higher education institutions implementing the pedagogical study programs must provide the pedagogical practise at 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year of studies, in the duration of minimum 90 hours a year. The pedagogical practice at the 5<sup>th</sup> year of studies

lasts 180 hours and brings 6 ECTS. The pedagogical practice is carried out in pedagogical institutions. Higher education institutions that have no pedagogical education in their study programs, whose graduate students are expected to become teachers of vocational courses in secondary schools, must, in line with the Law on Foundations of Education System, acquire the education in psychology, pedagogy and methodical disciplines, acquired at higher education institution during the studies or after graduating with minimum 30 ECTS and 6 ECTS obtained at the practice at pedagogical institutions.

- **As a part of the Support Human Development and Research (*Razvionica*) (2012-2015), significant activities have been achieved with the introduction and/or building capacities of schools/practice facilities, as the teaching basis for the professional development of teachers.** In university centres throughout Serbia, 41 schools (primary and secondary ones) obtained a significant amount of teaching equipment, the mentor-teachers attended intensive training courses, which enabled the students - future teachers, to have the practical training in accordance with modern principles of professional practice, in well-equipped schools, supported by teachers competent for mentoring. **The teachers of Methodics involved in the project, had the opportunity to improve their teaching competencies and organization of professional practice.**

- **In recent years, the projects within the TEMPUS programs of the EU, take a special place in the development of study programs for initial development of teachers – one of the oldest and most successful cooperation programs launched by the EU. It provided a considerable support to the reform of higher education in the neighbouring countries of the EU, primarily in those that are in the process of accession to the European Union, such as Serbia.**

- Four high schools for the education of teachers (in Vršac, Kruševac, Novi Sad and Sremska Mitrovica) worked through the **EU TEMPUS project Harmonization of Teacher Education Curricula in Serbia / TEACH / (2013-2016)** to align the curricula for teacher education in Serbia and reducing significant differences, especially with respect to the acquired competencies of graduated students. This enabled the horizontal and vertical mobility of students, modernization of the curricula and approximation to the standards of teacher education in Europe.

- The Faculties of four state Universities for teacher education, implemented the **Project under EU TEMPUS titled Harmonization and Modernization of the Curriculum for Primary Education Teachers /HAMOC/ (2011-2015)**. This Project delivered the harmonization and modernization as a part of the study program for educating the primary education teachers at the academic, master and doctoral levels and new courses and models were introduced, including the courses for lifelong education for primary education teachers.

- Five state universities participated in the **EU TEMPUS Project titled: Master Program for Subject Teachers /MASTS/ (2010-2014)** in order to develop modern, interdisciplinary master studies (60 ECTS) for the education of future subject teachers in

primary and secondary schools in accordance with the Law on Foundations of Education System of the Republic of Serbia and the Reorganization of Education within the Bologna Process. In accordance with the project goals laid down by the universities in Belgrade, Novi Sad, Niš, Kragujevac and Novi Pazar, the programs for subject teacher education were developed.

- The output of the **EU TEMPUS Project titled: Master Program in Educational Leadership /EDLEAD/ (2013-2017)** were two accredited master programs at the University of Kragujevac and the University of Novi Sad (in cooperation with the University of Belgrade and the University of Nis) and a range of professional development programs for heads of educational institutions and all other educational staff having leadership potentials. All programs are compatible with the prescribed competencies of the heads of educational institutions in Serbia, but also the principles and best practices of similar programs in Europe and worldwide.

- **All TEMPUS projects for capacity building in higher education, and those dedicated to the innovation of study programs, contain elements of mobility and professional development of the involved Higher Education teachers.** By rule, the project consortium also included the renowned European Higher Education Institutions, and national teachers had the opportunity to attend professional development through the cooperation with their European peers and directly acquire knowledge about the latest trends in the teaching and research area.

- **The work on the standards of teacher competencies and their professional development is in progress.** The draft document was initially prepared in the Institute for Improvement of Education and its finalization is carried out through the project Piloting the draft Foundations of Preschool Education (MoESTD, Institute for Improvement of Education and UNICEF). Teacher competence standards were adopted in 2011 and amended meanwhile. The standards for the competencies of heads of the education institutions were adopted in 2013.

- **For the first time, the National Council for Higher Education NCHE prescribed the mandatory minimum criteria for the selection of teachers at higher education institutions (with amendments in 2016 and 2017).** As of October 1<sup>st</sup>, 2017, all universities, both state and private ones, started with their implementation. However, there is still a problem with their formal compliance with the criteria, without observing the actual quality of scientific and pedagogical work.

- **The Ministry of Education, Science and Technological Development of the Republic of Serbia published the Digital Competence Framework - Digital Age Teacher in 2017.** The framework was created with the objective to support teachers of the education system in Serbia in the process of integrating digital content into everyday practice. The document also includes a lists and definitions of the skills, goals and expected outcomes constituting the corpus of digital competences of the teaching profession. Teachers may use this document to assess their own skills and decide on their own practice as well as to identify the next steps of their professional

development. It was created by the Expert Team supporting Serbia's participation in the Open Method of Coordination in education.

- **There were no changes in the introduction of trainee teachers to work, their licensing or professional advancement in the reporting period.** The mentoring system for teacher trainees has been adequately regulated, but the support to its effective implementation was included under priorities of the education policy in the reporting period. This can be partly explained by the fact that teachers have been predominantly hired by being allocated from other schools, for several years. Teacher advancement is also regulated by an adequate legal framework, but the system hasn't been fully implemented yet. The system currently has 450 teachers holding the title of pedagogical advisors, 52 having the title of independent pedagogical advisors and has no teachers in any of the two highest functions.

- **One of the most important novelties in the system of the continuous professional development of teachers was introduced by the Rulebook issued in 2016, which recognized and regulated the delivery of online training.** Since then, online trainings have become an increasingly popular form of professional development, also frequently organized by education authorities. Another significant change relates to the reduced number of points that teachers need to accumulate at professional trainings and conferences in a five years' time - from 120 to 100 points. The analyses have shown that 120 points turned out to be a too high threshold for a large number of educational staff, especially bearing in mind the problems with funding their professional development by many schools and teachers.

- **In the past years, a large number of teachers attended professional development provided by several national initiatives.** The largest among such initiatives was launched in 2018 and relates to the Teacher Training Program for the implementation of curricula oriented towards learning outcomes. By mid-May 2018, 215 trainings were conducted for 6,389 trainees. The plan is to train around 20,000 teachers, professional associates and principals by the end of 2018. The *Razvionica* project (IPA 2011) implemented in 2014 and 2015, provided the training of 13,000 teachers in the new teaching and learning approach. The Institute for Improvement of Education organized the training for over 1500 teachers in acquiring the basic level of digital competences.

- **Strengthening of horizontal support and educational development was in the focus of providing the professional support to teachers within the education system, in the reporting period.** This was implemented through the engagement, training and networking of practitioners having the role of providing the professional support to their peers and strengthening of selected educational institutions in terms of sharing the best practice and experience in successful development of school organization.

- **At the preschool level, a network of practitioners for the support to preschool education was established as a result of a joint initiative of MoESTD, the Institute for Improvement of Education, IEQE, UNICEF and the Institute for Pedagogy and Andragogy of the Faculty of Philosophy, University of Belgrade.** The network of practitioners was established with the aim to contribute to the improvement of the quality and

fairness of preschool education; to provide support to institutions in their further development of different segments of quality and fairness in preschool education; to support the development of quality programs and policies; to support spreading of good innovative practices among institutions; to support the development of inclusive practices in preschool institutions, educational groups, and locally.

- **In 2016, MoESTD organized the competition to select 200 external advisors in the primary and secondary education, to be tasked with providing professional support to educational advisers and their peers in kindergartens and primary and secondary schools.** This should be accompanied by 70 IEQE advisers selected within the project "Improving the quality of the education system of the Republic of Serbia by improving the effectiveness of the system of external evaluation of school performance and the development of horizontal learning between schools" implemented by IEQE, the Centre for Education Policy and UNICEF. Some of these advisers have already been engaged in further networking of schools and helping schools that showed poorer results.

- **An important form of professional support for teachers in their professional development is the production of specialized handbooks and materials, mainly produced through numerous development projects.** Some of the recent publications include: Handbook for Support Programs for Children and Students with Developmental Disabilities; Handbook for Planning, Implementing and Monitoring Measures for Preventing Student Dropouts; Guide for class teachers "A step forward in school and parent cooperation"; How to achieve quality complementary classes; Recognize, promote and disseminate – Stories about Successful Schools; Manual for the inclusion of migrant students in the education system.

#### **Improvement of quality and availability of textbooks**

- **As a part of efforts to improve the situation related to textbooks, new laws on textbooks were adopted twice in the period 2015-2018.** The 2015 Law on Textbooks was adopted first ("Official Gazette of the Republic of Serbia" No. 68/15) and two years later, the new law having the same title – the Law on Textbooks ("Official Gazette of the Republic of Serbia" No. 27/2018).

- **The Law on Textbooks from 2015 had three main objectives: improved transparency of the procedure for approval and selection of textbooks and reducing the risk of corruption in the process of selecting textbooks, ensuring the availability of missing textbooks for all categories of students and the protection of family budget.** In order to achieve these goals, the Law introduced new solutions: new textbooks; laying down the legal grounds for 'free textbooks'; abolishing the license for publishers and introducing new categories of publishers; the new procedure for the selection of textbooks each four years, including the List of approved textbooks; the new way of forming the Catalogue of approved textbooks; introduction of the List of evaluators of textbook drafts; regulating the procedure for determining the suspected conflict of interest; sanctioning corruption during the textbook selection process; establishing the retail price ceiling including the VAT; introducing the bill of exchange as a security instrument used to ensure the availability of textbooks.

- **In line with the Law on Textbooks from 2015, in April 2016, the Quality Standards for Textbooks were adopted.** The Standards refer to the content, pedagogical and psychological, didactic and methodical and language requirements, including art and graphic, as well as the technical completeness of a teaching tool. Each standard is accompanied with indicators that provide their more detailed description.

- **The 2015 Law changed the concept of allocating of free textbooks, so that the support is directed to those groups that require it the most.** The possibility of adopting the decision on funding and/or co-financing the procurement and/or preparation, awarding and supply of textbooks, handbooks and teaching material for students and attendees coming from socially and materially vulnerable families.

- **A new project of the Ministry of Education, Science and Technological Development titled "The Procurement of Textbooks and Other Teaching Materials for Primary School Students" expanded the list of students receiving the textbooks funded from the national budget.** Based on the decision of the Government, aside from the socially vulnerable students (beneficiaries of financial social assistance), this also applies to the disabled students and students with developmental disabilities, who attend the primary education according to the individualized education program, including the students who are the third and every next born child, if the other children are in the school system. In the school year 2017/2018, around 86,000 primary school students received free textbooks, a significant increase compared to the year before, when free textbooks were received by around 45,000 students. In the same year, school libraries that keep a number of textbook sets that can be used by students, were also equipped with new textbooks.

- **In 2016, in order to secure the missing textbooks in languages of national minorities who attend the entire teaching in their mother tongue, the Ministry of Education, Science and Technological Development signed the Memoranda of cooperation on printing the missing textbooks in the language and script of the national minority with the Institute for Textbooks and 8 National Councils of national minorities (Albanian, Bosnian, Slovak, Croatian, Bulgarian, Hungarian, Romanian and Ruthenian national minorities).** This Memorandum sets forth printing of 184 textbooks. By the end of 2017, 61 textbooks were printed, while 26 textbooks are in the press and 31 manuscripts are in the approval phase, 13 are being prepared for approval, and the authors did not submit their manuscripts for 72 textbooks. The textbooks in the languages of national minorities were published in the Catalogue of primary education textbooks approved for the school years 2016/17, 2017/18, 2018/19 and overall 1,521 textbooks are available in the languages of national minorities for preschool, primary and secondary education.

- **During the school year 2017/2018, MoESTD organized a public procurement for the development of textbooks adapted to children with learning disabilities that attend the courses of adapted or modified programs.** 6948 textbook units were adapted to students and provided to them without any charge. Textbook publishers worked in accordance with the

**Rulebook on Textbook Content and/or Format Adaptation**, adopted in May 2017. This rulebook prescribed conditions for the so-called custom textbooks that may be printed in Braille, or printed using a magnified print on the appropriate paper, adapted to the electronic form or adapted for the use of an assistive technology.

- **In 2017, the Ministry of Education, Science and Technological Development published the Assistive Technology Catalogue for the first time.** The Catalogue contains the review of assistive technology devices and equipment, their basic characteristics and purpose. The aim of the publication was to explain the assistive technologies to the interested individuals and groups: parents, teachers, disabled persons, personal escort and pedagogical assistants, including to the organizations and institutions who work with the children having developmental disabilities and the disabled persons.

- **In April 2018, a new Law on Textbooks was adopted. The need to improve, specify and streamline the existing procedures was identified, in order to increase the efficiency of the entire textbook approval process and ensure an improved quality of textbooks.** The new law brought a number of novelties:

- Enabled production and publication of digital textbooks;
- Simplified solutions for registration and approval of textbooks;
- Opened opportunity to procure the textbooks over the school and/or student cooperatives (that will reduce the cost of the textbook supply);
- The census in percentages that a textbook would have to reach in order to be used in school, was abolished;
- The obligation to use selected textbooks for a cycle of four years still remains, but in exceptional cases, it is possible to change the selected textbooks (also when changing the curricula of teaching and learning);
- Forming of the Centre for low circulation textbooks – in the languages of national minorities, textbooks adapted for the children with special needs, low circulation textbooks for secondary vocational schools;
- Introduced obligation for publishers of textbooks that do not publish low-circulation textbooks to participate in providing the funds for the low circulation textbooks in the amount of 2% of generated net revenue out of the sold textbooks in the previous calendar year;
- The lists of evaluators of textbooks were cancelled and the possible proponents were precisely indicated, in order to avoid the conflict of interest and have the process carried out in a most transparent manner.

### **Improvements in the field of quality evaluation**

- **Since 2014, when the third, combined test was introduced, there were no significant changes to the final exam at the end of primary education.** This test contains the tasks from Biology, Geography, History, Physics and Chemistry. The other changes are related to the procedural aspect of the exam, made towards increasing its regularity.

- **In relation to secondary education, at the end of 2017, the General and Artistic Matura Program was adopted, and at the beginning of 2018 the Professional Matura and Final Examination Program was adopted.** Both programs determine the goal, content and structure and other important elements of the Matura examination, and are developed based on the concept of final examinations in secondary education completed and presented in March 2017 by a working group formed by MoESTD. In the period from 2015, Institute for Improvement of Education prepared 31 final/graduate examination programs with the corresponding manual. Students who complete four-year general secondary education, arts education or secondary vocational education will take Matura starting from the school year 2020/2021, while the students who complete a three-year secondary vocational education and training will take the final exam as of the school year 2019/2020. The process of organizing and implementing Matura exams will be implemented through a project funded by the EU IPA 2015 funds.

- **The language of the general, artistic, professional, and final exams is the language in which a student acquired general secondary education.** A student who acquired education in the language of the national minority may choose to take the Matura exam or the final exam, in whole or in part, in Serbian language.

- **For the first time since 2004, during the year 2018, national testing of students - students of the seventh grade of primary school and students of the third grade of secondary schools, was conducted.** The testing was conducted on a representative sample of students from 148 primary schools and 135 secondary schools from three subjects: Mathematics, Physics and History. In the coming period the data analysis will provide very valuable information on the quality of student achievement at the national level.

- **In 2017, pilot testing of four interdisciplinary competences was conducted on a sample of 12 primary and 6 secondary schools, covering the students from the 7<sup>th</sup> grade of primary school and 3<sup>rd</sup> grade of secondary schools (around 1200 students).** This included the following competencies: troubleshooting; digital competence; entrepreneurship and entrepreneurial competences and responsible attitude towards the environment.

- **Serbia regularly participates in the most important international research of student achievements - TIMSS and PISA.** Serbia participated in the latest research cycle TIMSS 2015 and currently participates in the TIMSS 2019 cycle (in 2018, the Institute for Pedagogical Research conducted a test) - the results of the research are expected at the end of 2020. During May 2018, PISA research in Serbia was conducted by the Institute of Psychology in more than 220 secondary schools. For the first time, this research was fully conducted using computers, making Serbia one of the countries that are conducting this research in the most modern way. The results of the PISA 2018 research are expected at the end of 2019. It is planned that Serbia takes part in other important international research. In cooperation with the PISA Council, with the expert and financial support of IEQE, four manuals for schools with examples of good practice for evaluating key competences for lifelong learning have been developed. In 2018, the manuals will become available to schools electronically.

- **After 16 years, in September 2015, a new Rulebook on Student Assessment in Secondary Education was adopted, setting forth the method, procedure and criteria for assessing the success of individual subjects and knowledge and a number of other aspects relevant for student evaluation.** The Rulebook on Student Assessment in Primary Education was passed two years earlier.
- **During 2017 and 2018, IEQE conducted activities to revise the quality standards for the work of educational institutions.** This work has been planned with the objective to improve the quality framework based on experience, after the first round of external evaluation of all educational institutions has been completed. Innovations in this area are the outcome of analyses, engagements of the designated working groups and many years of experience of educational advisers and IEQE with the external evaluation.
- **In the field of quality assurance in higher education, the new 2017 Law on Higher Education provides for the establishment of the National Accreditation Body for the purpose of performing accreditation, quality assurance of higher education institutions and units in their composition, evaluation of study programs and quality assurance in higher education.** The expert body consists of the Accreditation Commission having the same functions as the former Commission for Accreditation and Quality Assurance. At the beginning of May 2018, the Board of Directors of the National Accreditation Body was established.
- **In 2017, at the proposal of the Commission for Accreditation and Quality Assurance, the National Council for Higher Education adopted a set of new regulations on standards for accreditation of higher education institutions and study programs, self-evaluation and evaluation, and external quality assurance of higher education institutions.** It is worth mentioning that follow-up procedures were introduced during the second round of accreditation, several systemic analyses were published and both the employers and students are involved in the quality assurance system.
- **One of the present TEMPUS projects "Development and Implementation System for Performance Evaluation for Serbian HEIs and System" (PESHES) aims at creating a system that would monitor the quality of the outcomes at HEIs, and not only the quality of the input characteristics.** The project aims at further improving accreditation standards, as well as linking higher education with employers in order to obtain the relevant assessment of acquired competencies and develop the systems for ranking programs and institutions.

#### **Improvement of education infrastructure**

- **By the end of 2017, MoESTD raised funds in the amount of EUR 38,958,000 through several different projects and programs, to improve the infrastructure of educational institutions in the Republic of Serbia.** These funds were realized through the "School Modernization Project" - a loan from the European Investment Bank in the amount of EUR 26,289,000 (primary and secondary schools), the Project "Energy Efficiency in Public Buildings" - a loan from the German Development Bank in the amount of EUR 1,671,000 (for

primary and secondary schools) and the Project "Education for social inclusion – a credit granted by the Central European Bank in the amount of EUR 10,998,000 (student homes).

## Increased coverage of education

One of the four main goals of the long-term development of the Strategy for Education Development in Serbia by 2020 is to increase the coverage of the population of the Republic of Serbia at all educational levels, from preschool education to lifelong learning.

### Status report

#### *Preschool education*

- **In relation to the preschool education, progress has been made since the adoption of SEDS, but the current coverage rate is still not satisfactory, aside from the attendance of the compulsory preparatory preschool program.**



Chart taken from the RSO website.

- **The goal set up by SEDS is to increase the coverage to 30% for children aged from six months to three years by 2020. According to the most recent data from the Statistical Office of the Republic of Serbia (SORS) from 2016, this goal is almost achieved - 27.6% of children of this age attend PE (45,234 children).** In 2012 when the SEDS was adopted, the coverage of children was lower by 8.6 percentage points (31,450 children). In 2017, the coverage has not been calculated yet, but the percentage will be even higher and close to the target value of 30%. Namely, in 2016, 45,234 children of this age were attending the PE, while in 2017 their number was 48,788.

- **In 2016, the coverage of children aged from three to five was 59%.** This is an increase by 3.5 percentage points compared to 2015. The 2017 coverage has still not been calculated, but it will probably be higher, given that 4,000 children more were included in the PE compared to 2016 (2017 - 101,628 children, 2016 - 97,262 children). SEDS hasn't identified specific target values for the coverage of children of this age.

- **The coverage of children by preparatory preschool programs is almost complete, being one of the goals set forth by the SEDS.** In 2017, it covered 98.2%, which is by 5.6

percentage points more than in 2012, when the SEDS was adopted. The smallest coverage is recorded in the region of Belgrade and it is 95%, while in Vojvodina it is almost 100%.

PRESCHOOL EDUCATION			
Indicator	Baseline value (2012)	Target value 2020	The latest reported value
Coverage of children aged from six months to 3 years (number of children)	19%	30%	27.6% (2016)
Coverage of children aged 3 to 5.5 years	55.5% (2015)	/	59% (2016)
Coverage at preparatory preschool programs	92.6%	100%	98.2% (2017)

- **The coverage of children with preschool education from the age of 4 until the enrolment in the compulsory education in Serbia is around 74% (2016).** This indicator is one of the key indicators used by the European Union to monitor the achievement of the goals set for 2020 in the field of education. The goal is that by 2020, 95% of children of this age attend preschool education - in 2016 the coverage was 95.5%.

- **There are significant differences between municipalities in terms of enrolment in preschool education, which correlates to the degree of socio-economic development of municipalities (wealthier municipalities are more likely to have higher enrolment rates than less affluent municipalities)** <sup>26</sup>. RSO data from 2016 show that in 16 municipalities, enrolment of children below the age of three is above 40%, and in 24 municipalities it is below 10%. Similar data are also obtained for the coverage rates for children aged between 3 and 5.5 years. In 74 municipalities, the enrolment rate is above 60%, while in 16 municipalities it is less than 30%.

- **The rate of children from Roma settlements in Serbia attending the PE is the lowest.** The MIKS 2014<sup>27</sup> study has shown that among children aged 36-59 months coming from Roma settlements, 6% of them attend organized early childhood educational programs. Out of the number of children of the appropriate age, 63% of them attend or attended preparatory preschool programs. A regional survey on the position of Roma in the Western Balkans shows that only around 17% of Roma children aged 3-6 years attend PE<sup>28</sup> (2017 data).

- **The data suggest that during the reporting period there was no increase in the number of children not covered by regular programs delivered at preschool institutions, and attended special and/or specialized programs - in 2017, this number is only slightly over 1500 children.** As one of the goals in increasing the coverage of the PE, SEDS had defined the increase of access to diversified programs and services.

<sup>26</sup> Baucal, A. and associates (2016). Preschool education in Serbia: situational analysis and recommendations (stated data refer to 2015)

<sup>27</sup> Statistical Office of the Republic of Serbia and UNICEF (2014). Research on multiple indicators of the position of women and children in Serbia 2014 and Research of multiple indicators of the position of women and children in Roma settlements in Serbia 2014, Final Report. Belgrade, Serbia: Statistical Office of the Republic of Serbia and UNICEF.

<sup>28</sup> 2017 UNDP-WB-EC Regional Roma Survey

- **According to the data of the SORS<sup>29</sup>, the coverage of primary education in Serbia is almost complete.** In the school year 2016/2017, 97.9% of children of the legally prescribed age, were enrolled in primary schools. This means that the minimum target set by SEDS is practically achieved - 98% (ideally, the coverage would be 100% given that primary education is compulsory). The SEDS also aims to ensure that dropout in primary education does not exceed 5% per generation. Projections based on the data provided by the RSO point to the conclusion that the dropout is within these limits. The methodology for calculating the number of dropouts is, however, not optimal (the difference in the number of students at the beginning and at the end of the school year), and the practice of registering the number of students by the institutions is rather unreliable, thus resulting in having no valid data on the dropout rate from the primary education system.

PRIMARY EDUCATION			
Indicator	Baseline value 2011/2012	Target value SEDS 2020	The latest reported value (2016/2017)
Primary education coverage ratio	95,3%	minimum 98%	97,9%

- **The results of the MIKS 2014 study also point to an almost universal coverage of basic education among the general population, however, at the same time, 15% of Roma children of appropriate age are outside the education system.** The regional survey on the situation of Roma in the Western Balkans from 2017 shows similar results - 84% of children from Roma settlements attend primary education.

- **According to the RSO data from the beginning of the school year 2017/2018, primary schools (or classes) for students with disabilities account for 0.9% of the total primary school age population (overall 4760 students).** This places Serbia among the countries with the smallest percentage of students who attend primary education outside common primary schools.

- **According to the data of the RSO reported for the school year 2016/2017, the rate of continuing the education from primary to secondary schools is 99.3% and shows a stable trend over the years.** This is a percentage that is higher than the one forecasted by SEDS which was, the minimum of having 95% of students who have finished primary school, enrol in one of the secondary schools. According to the MIKS study, the rate of transition to secondary school for students from Roma settlements is 62.2%.

- **The coverage of secondary education in the school year 2016/2017 almost reached 90%, according to the data of the RSO.** SEDS has set the goal of minimum 88% of the generation enrolled in secondary education<sup>30</sup>. According to the MIKS 2014 study, secondary

<sup>29</sup> The coverage of education is the ratio of the number of students enrolled in a certain level of education and the appropriate age group for that level of education.

<sup>30</sup> These are different, but comparable indicators for the needs of making conclusions on the coverage rates.

schools are attended by 22% of children from Roma settlements of appropriate secondary school age.

- **SEDS aims to increase enrolment in general secondary schools and proportionally, reduce the enrolment in secondary vocational schools. The data show that there were no changes in this respect.** Secondary vocational schools in the school year 2016/2017 were enrolled by nearly 65% of students of an appropriate age, while 25% of students (out of the 90% coverage) attended general secondary schools and art schools. SEDS envisaged 49% of students in VET and 39% in general secondary schools.

<b>SECONDARY EDUCATION</b>			
<b>Indicator</b>	<b>Baseline value 2011/2012</b>	<b>Target value SEDS 2020</b>	<b>The latest reported value (2016/2017)</b>
Coverage ratio in secondary education	87.2%	88%	89.8%
Coverage ratio in secondary vocational education - four-year profile	52.7%	39%	55.4%
Coverage ratio in secondary vocational education - three-year profile	11.9%	10%	9.5%
Coverage ratio in general and artistic secondary education	22.7%	39%	24.9%

- **The rate of continuing the education from secondary to higher education in the school year 2016/2017 was 64%<sup>31</sup>.** This is a decline in the rate of continuing the education compared to the school year 2011/2012 and accounts for the declined rate among students who completed vocational education.

- **The rate of continuing education in the school year 2016/2017 and those who finished general secondary school was 91.8%, while the percentage of students who completed four-year secondary vocational schools was 55.3%.** The goal of SEDS was to reach the rate of 95% for general secondary schools by the year 2020, and for students who completed four-year secondary vocational schools, to reach between 40% and 50%, as a potential result of the planned redistribution between general and vocational secondary education.

- **The rate includes higher education of the population aged between 19 and 24, in the school year 2016/2017, that reached 54.2% and compared to 2012, when the SEDS was adopted, it is higher by more than 10 percentage points.** SEDS did not specify the target values in this segment.

- **The RSO data show that in 2017, the participation of persons having completed the higher education, aged between 30 and 34 was 29.9% representing an increase by around**

<sup>31</sup> The indicator was calculated as the number of freshmen who completed high school the same year when they enrolled higher education in relation to the number of high school students who completed the school in the same year.

**5 percentage points compared to the year 2011/2012.** SEDS projections were that by 2020, there are minimum 38.5% of citizens having university degree, aged between 30 and 34 (and later, minimum 40%).

<b>HIGHER EDUCATION</b>			
<b>Indicator</b>	<b>Baseline value 2011/2012</b>	<b>Target value SEDS 2020</b>	<b>The latest reported value (2016/2017)</b>
Rate of continuing the studies from secondary to higher education	70.5%	/ <sup>32</sup>	64%
Rate of continuing the studies at higher education of those who completed the four-year secondary vocational profiles	63.7%	40-50%	55.3%
Enrolment rate in higher education by students who completed general secondary schools	86.9%	95%	91.8%
Coverage rate by higher education (among the population 19-24)	43.6%	/	54.2%
Share of persons having university degree among the population (30-34) <sup>33</sup>	24.7%	35-38.5%	29.9%

- **The rate of continuing the education at Master Academic Studies in the school year 2016/2017, was 27.3%<sup>34</sup>, while the continuation rate of studying at PhD studies was 27.6%<sup>35</sup>.** In both cases, the rate was increased by 3 and/or 7 percentage points compared to the school year 2011/2012<sup>36</sup>.

- **The number of PhD students completing the studies per million inhabitants in the school year 2016/2017 was 218, which is twice as much as the figure recorded in 2011/2012.** SEDS has projected 200 new PhD graduates by 2020 annually (ending of studies within the stipulated deadline).

- **With respect to adult education, data from the Labour Force Survey from 2017 showed that 4.4% of persons aged 25 to 64 were covered by some of the adult education programs and lifelong learning, within four weeks following the survey.** The SEDS set a goal of having at least 7% of the population covered by some of the adult education or lifelong learning programs.

<sup>32</sup> The goal set by the SROS is that at least 50% of the institutions of higher education are enrolled, and most probably 55% of the generation. This kind of indicator is not available.

<sup>33</sup> As an important indicator SROS established the completion rate of higher education, within the prescribed period, or with one year of delay - such indicator is not calculated in the official statistics.

<sup>34</sup> This was calculated as the ratio of the number of students enrolled in the first year of study last year in relation to the number of students who enrolled in the second degree in the reporting year

<sup>35</sup> This is calculated as the ratio of the number of students enrolled in the second year of studies last year, compared to the number of students who enrolled in the third degree in the reporting year

<sup>36</sup> SROS accordingly mentions another type of indicators, as the quantitative ones: around 50% of students who complete basic academic studies continue their studies at Master Academic Studies while at least 10% of students who complete Master Academic Studies continue to study at PhD studies.

- **The Adult Education Survey conducted in 2016 showed that almost 20% of adults participated in some form of education/training within 12 months preceding the survey.** Compared to 2011, when the previous Adult Education Survey was conducted, this is an increase by 3.3 percentage points.

<b>ADULT EDUCATION</b>			
<b>Indicator</b>	<b>Baseline value 2011</b>	<b>Target value 2020</b>	<b>The latest reported value</b>
Percentage of population covered by any of adult education programs or lifelong learning programs (4 weeks following the survey)	3.5%	7%	4.4% (2017)
Percentage of population covered by any of adult education programs or lifelong learning programs (within 12 months preceding the survey)	16.5%	/	19.8% (2016)

### **Progress achieved in the reporting period**

- **Increased capacity of state preschool institutions and increased number of private institutions has also affected the increase in the number of children involved in the process of preschool education.** Compared to 2015, when there were 192,005 children in the PE system, in 2018 this number was by 10% higher, reaching 212,719. Overall growth can generally be attributed to the increased enrolment in private institutions (by almost 14,000 more than in 2015) compared to the enrolment in state institutions (over 7,000 children more than in 2015).

- **Increased enrolment in private preschool institutions can be explained by the incentive measure in the public-private partnership plan - involving private kindergartens in a system of subsidies in certain cities.** This was a predominant trend in Belgrade where the increase in the number of children in private institutions reached more than 10,000 compared to 2015. Moreover, the data for 2018 show that 11,067 children were enrolled over the threshold number across the country, and 7,887 children were not enrolled because of the lack of capacities.

- **The new Law on Financial Assistance to the Families with Children ("Official Gazette of the Republic of Serbia", no. 113/2017) significantly improved the support to including the children from vulnerable social groups in the PE system, through the reimbursement of the costs of their stay in preschool institutions, for children being the beneficiaries of financial social assistance.** Children of preschool age being the beneficiaries of financial social assistance are entitled to reimbursement of expenses for staying in preschool institutions (PE), who received the Verification Decision of the ministry responsible for education, on the amount of the participation of the beneficiaries in the price of the service established by the decision of the local self-government unit. Also, this law regulates the covering the costs of stay of the children from materially deprived families in the PI. Children of preschool age from materially deprived families, depending on the financial standing of a family, are entitled to an allowance for the costs of the stay in a preschool institution, based on the Verification Decision

of the ministry responsible for education. The method and conditions for cost recovery have been defined by the competent authority of the local self-government unit.

- **The Ministry of Education, Science and Technological Development has been intensively working recently on the preparatory phase of the project "Inclusive Preschool Education in Serbia", to be funded from the loan granted by the International Bank for Reconstruction and Development (in the total amount of EUR 47 million) .** The loan was signed in May 2017 and ratified by the National Assembly in November 2017. The overall goal of the Project is to improve the accessibility, quality and fairness of preschool education, especially for children coming from vulnerable social groups. It has been planned, among other, to provide around 17,000 new places for children aged 3 to 5.5 years in new, renovated or predesignated facilities in at least 30 cities and municipalities in the Republic of Serbia.
- **The Inclusive Preschool Education Project is intended to provide subsidies to local governments to ensure that the most vulnerable families get priority in the enrolment of their children aged 3-5.5 in preschool education programs, free of charge.** Grants for at least 30 municipalities will make it possible for the most vulnerable and economically deprived families and their children to have access to community-based programs and services (within the health, education, social protection) designed for children and parents.
- **Although SEDS put a significant emphasis on the diversification of the preschool education program as an important element for improving the inclusiveness, fairness and quality of the PE and the enabling legal framework in place, in reality, there is no fundamental application of diversification, both in terms of organizational and program aspects.** Local governments haven't taken on responsibility for the development of short-term high quality diversified programs in the preschool education. On the one hand, local governments are facing the challenges of additional funding (and employment) that the expansion of the offer of various programs would result in and on the other hand, the diversification of the program is not sufficiently perceived as an important way to increase the coverage and fairness of the PE. An important part in this respect is the currently unregulated issue of program accreditation and consequentially, many programs in kindergartens, sports centres and other educational institutions are not covered by the national quality assurance system in preschool education<sup>37</sup>.
- **In the period 2014-2016, the project: "Kindergartens without borders 2 - quality inclusive preschool education."<sup>38</sup> was implemented** The project refurbished and equipped 11 new premises in 10 local self-governments, 20 educational groups with 436 children in half-day programs were opened (5x4 hours). The total coverage of children by different special and specialized programs is 888 children, of whom 78% of children belong to one of the vulnerable categories or several vulnerable categories at the same time"

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<sup>37</sup> Baucal, A. et al (2016). Preschool education in Serbia: situation analysis and recommendations

<sup>38</sup> The project was implemented in cooperation with MoESTD, UNICEF, Center for Interactive Pedagogy, 10 preschool institutions and local self-governments: Odzaci, Smederevo, Cukarica / Belgrade, Loznica, Krupanj, Cacak, Nova Varos, Sjenica, Bojnik and Leskovac.

- **At the beginning of 2017, the project "Kindergartens without Borders 3 - Support to Improving the System of Social Care for Children and Preschool Education at the Local Level" was launched and it is being implemented in three preschool institutions in Belgrade and Zrenjanin.** The objective of this project phase is to explore the real modalities of an improved coverage of children with quality short-term programs, in order to respond to the specific needs of children and families in urban areas. Urban areas offer greater opportunities for cooperation with various institutions and experts in the field of science, culture, arts and sports that may significantly enrich the program offer for preschool children.
- **Improved education of students at all levels has significantly contributed to the establishment of the Social Inclusion Group (in April 2015) within the MoESTD (as of 2017 this group changed its name to: the Group for Minority Education, Social Inclusion and Protection against Violence and Discrimination).** During the reporting period, the Group prepared the subordinate legislation - several bylaws and professional guidelines from its domain of activities; they worked on improving the competencies of employees in educational institutions and employees of the MoESTD in relation to the quality inclusive education; they worked on promoting the inter-sectoral cooperation through the establishment of a Joint Body for the Support to Social Inclusion; they supported the work and coordinated the monitoring the work of inter-sectoral commissions for assessing the requirements with regard to additional educational, health and social support to children and students; they provided immediate support to educational institutions, children, students and their parents through the work of the info-line for parents, as well as the work of the Network for Inclusive Education. Other important activities of this unit are highlighted at the appropriate places in this report.
- **The work of pedagogical assistants contributed to the increase in the coverage of Roma children in education.** There are currently 175 pedagogical assistants in the education system – 35 of them in preschool institutions and the remaining ones working in primary schools. Their number is currently insufficient, and in the next period 50 new pedagogical assistants will be hired. MoESTD also works on the description of their jobs, the preparation of the network of pedagogical assistants and instruments for measuring their results through the subordinate legislation.
- **Affirmative actions for enrolment of Roma students in secondary schools have been regulated by an appropriate legal framework and have shown good results.** Following the adoption of the "Rules on criteria and procedure for the enrolment of students - members of the Roma national minority in secondary schools under more favourable conditions, to achieve full equality" in February 2016, that in 2017 became part of the "Rulebook on enrolment in secondary schools" the process of systemic regulation of this kind of support has been completed. In the school year 2017/18, 1969 Roma students were enrolled in secondary schools, in line with the Affirmative Action Program. This is close to five times as high as in the school year 2015/2016, when 422 students were enrolled<sup>39</sup>.

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<sup>39</sup> Cekic Markovic, J. (2016). Analysis of the application of affirmative actions in the field of education of Roma men and women and recommendations for improving the measures. Team for Social Inclusion and Poverty Reduction

- **Rulebook on enrolment in secondary schools has set forth several affirmative actions:**
  - The number of points that students of Roma nationality obtain on the basis of school achievement and at the final exam, is increased by 30% of the number of points that they miss to 100 points.
  - As for the students living in the families who are beneficiaries of financial social assistance, their number of points obtained on the basis of school achievement and at the final exam, will be increased by 35% of the number of points that they miss to 100 points.
  - Primary schools, starting from the seventh grade, are obliged to notify the parents, or other legal representatives of the students of the Roma national minority about the criteria and procedure for the enrolment of students in secondary schools under more favourable conditions.
  - The same affirmative actions are also envisaged for students who completed the primary education program for adults, following the model of functional primary adult education.
  
- **The project "Together to Secondary School - Support to children from vulnerable groups in transition to secondary school", includes the pilot process of collaborative planning and the support is provided to students from vulnerable groups in transition to secondary school level<sup>40</sup>. The project is implemented in 10 selected primary schools located in the territory of municipalities/cities where there is an increased need for intervention that is intended to improve the transition of students to secondary schools.**
  
- **In order to achieve full equality in education for students who, due to their developmental or other disabilities require additional educational support in the school year 2017/2018, the Guidelines for adapting the entrance exam for secondary schools was adopted, for students who need additional educational support.** This document provides guidance on how to accommodate the space and the conditions for their taking the entrance exam, adapting the tests, the wording of tasks and other written material, as well as other types of tasks.
  
- **In the academic year 2016/2017, 182 students of Roma nationality, 88 boys and 94 girls were enrolled at higher education institutions, while in the academic year 2017/2018, 153 students were enrolled, 71 boys and 82 girls. In the school year 2017/2018, 462 Roma students attend the higher education institutions in Serbia.** Compared to available data for the school year 2010/2011, there is a significant increase, when 204 Roma of both gender attended higher education. However, this is still eight times less than the number of students than would represent a proportionate share of Roma in the general population (according to the 2011 Census).
  
- **Enrolment to a higher education institution based on the Affirmative Action Program for the enrolment of members of the Roma national minority within the quota approved by the Government Decision for this affirmative action can be achieved by a**

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<sup>40</sup> Partners in the implementation of the project Pestaloci Children's Foundation and the Center for Education Policy

**student who passed the entrance exam.** Candidates who passed the entrance exam/the exam testing their interests and abilities are ranked on a special ranking list, out of which the higher education institution enrolls the maximum number of candidates approved by the Government Decision for this affirmative action. Candidates who are not enrolled in this way are ranked with other candidates for regular budget allocations. When enrolling for studies that last several years, students enrolled through the Affirmative Action Program in the education system, having the status of students financed from the budget, will keep their budget status if they achieve 36 ECTS. **At the meeting of the Coordination Body for Monitoring the Implementation of the Strategy for Social Inclusion of Roma in April 2018, a decision was adopted to abolish the quota for enrolment of Roma community members to colleges and faculties.**

- **In recent years, additional attention has been dedicated to preventing students from dropping out of the education system.** The amendments to the law made in 2013, imposed the obligation to schools to incorporate actions into their development plans, to prevent dropouts. The new LFES from 2017 laid down that the school would provide additional support to children and students who are at risk of early dropout, that is, ensure the development, adoption and implementation of the individual education plan. LFES also regulates the obligation of the school (and deadlines) that, if the student does not attend classes, the parents should be notified, and in case of their inadequate response, also notify the local self-government and the competent social welfare service.

- **New approaches are being developed and piloted in order to prevent students from dropping out of education.** Within the project "Prevention of dropouts of students from the educational system of the Republic of Serbia"<sup>41</sup>, mechanisms for early identification of children at risk of dropout, response and implementation of preventive measures and intervention at the school level, have been developed. The focus is also being strengthened to the local integrated, inter-sectoral approach to preventing student dropouts, developed in cooperation with international and civil society organizations.

- Out of the total number of student loans and scholarships MoESTD allocates up to 10% for students from vulnerable social groups. The major criterion for granting loans and scholarships is otherwise achieved during schooling. **At the end of 2017, the Regulation on amendments to the rules on student loans and scholarships was adopted, which established milder criteria for granting scholarships and loans to members of vulnerable social groups.** Based on the Contest for granting student loans and scholarships in the school year 2017/18, 303 scholarships for students of Roma nationality were approved.

- **After having completed the competition for which Roma High School students had the right to apply, with an average of 2.5 - 3.5, the Roma Education Fund, in cooperation with the MoESTD, approved 500 scholarships in the school year 2017/18.** The scholarship program continues the activities of the European Support Roma Inclusion Project funded by the EU and implemented by the OSCE mission to Serbia. One of the results of scholarships for high

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<sup>41</sup> Partners in the implementation of UNICEF Project, Center for Education Policy, MoESTD

school students was to reduce student dropouts to 7% (with an initial 50% before applying the program).

- **During the school year 2016/17, a total number of 711 students, returnees following the readmission - 369 girls and 342 boys were enrolled in the primary schools on the territory of the Republic of Serbia.** Primary schools generally apply facilitated school enrolment procedures and engage teams for previous knowledge assessment and include children in full-time education. Thus, children enrolled during the school year under the Readmission Agreement are often not treated as returnees, but after a month they become full-time students. Additionally, if the child returns in the course of the same school year, the school does not treat them as a newly-enrolled students, but they remain in the same class. Thus, a student does not lose a year and is given an additional support in mastering the curriculum and making up for the missed classes. During the school year 2016/17, a total of 15 students - returnees for readmission, 6 girls and 9 boys, were enrolled in secondary schools within the territory of the Republic of Serbia.

- **The Republic of Serbia reacted to the refugee crisis by providing opportunities for education to refugee and asylum seekers.** During the school year 2016/2017, 101 students in 6 primary schools were included in the educational system of the Republic of Serbia, while in the school year 2017/2018, 503 students were enrolled in 45 primary schools, and 83 were provided the educational support in transit centres. In the current school year, 95% of refugee children of primary school age living in refugee centres have been covered.

- **In order to include children of refugees and asylum seekers in the education system, a number of have been initiated.** A Working Group was established in the Ministry of Education, Science and Technological Development, tasked with providing support to the education of refugee students and asylum seekers in the institutions of the education system. The coordination of activities with other state institutions and international and non-governmental organizations has also been improved. Expert Instructions for the inclusion of refugees/asylum seekers in the Education System have been drawn up, illustrating the procedures for the inclusion of students, providing support and monitoring. Several cycles of professional training for educational employees were organized, in providing their support to learning of children of migrants. A School Handbook was prepared for the implementation of Expert Guidelines for the Inclusion of refugees/asylum seekers in the Education System, as well as a Language Support Manual developed by the team coming from the Faculty of Philology, University of Belgrade, in cooperation with the Faculty of Philosophy in Serbia. An online platform (REMIS - Refugee and Migrant Education in Serbia) was developed, containing all the relevant information related to the education of children of migrants and refugees. A proposal of the MADAD 2 project has been prepared for the European Commission, which supports and promotes the process of including the students in the education system. Finally, the amendments to the legal framework of 2017 enabled the systemic inclusion of migrants and asylum seeker students into the Serbian education system.

## Improvement of Relevance

One of the four goals of the long-term development defined in the Strategy for Education Development in Serbia (SEDS) is to achieve and maintain relevance of education by aligning the structure of education with immediate and development needs of individuals as well as of economic, cultural, research, educational, public, administrative and other systems.

### State of Affairs

- **Satisfying educational needs of individuals as well as social and economic environment, in accordance with the modern understanding, is embodied in placing the focus in education and learning on development of competencies that will ensure desired benefits both on individual and social plane.** The achieved level of competencies should thus contribute to economic growth and success in employment, but also to improvement of human health, life quality and their social and civic engagement.

- **Competencies needed for successful life in modern society cover a wide range of knowledge, skills, values and attitudes and they can be conceptualized in several different ways.** On the one hand, the key and transversal, inter-curricular competencies, hold an important place, on the other hand, more narrow competences, such as curricular competencies and specific competencies needed for particular profession, are crucial. The relevance of education is measured in how well the system defines educational outcomes in relation to competencies needed for 21<sup>st</sup> Century and how successful is the educational process in achievement of these outcomes.

- **Considering that the system of education in Serbia has recently placed focus on development of competencies, system of quality assessment has not placed followed suit in placing focus on competencies measurement, although some first activities are implemented to this respect (such as experimental assessment of some inter-curricular competencies).**

- **Prominent role in measurement of competencies is given to the participation of Serbia in international PISA study, same as in EU countries, because the monitoring of the achievement of key strategic goals in education is carried out precisely through PISA results.** In addition to key competencies in mathematics, science and reading – some additional (transversal, inter-curricular) competencies are measured in this research. In the cycle starting from 2012, problem solving competency is assessed, while in the cycle from 2018 the so-called global competencies, financial and ICT literacy will be assessed.

- **In PISA 2012 study the students from Serbia had a significantly higher average score in problem solving competency than in other three competencies (mathematics, science and reading)<sup>42</sup>.** When it comes to problem solving, students in Serbia were more successful than in other domains by approximately 25-30 points which is equivalent to half a year of schooling in OECD countries. When we take only European countries, the highest level of development of competencies is noted in students in Finland, Great Britain, Estonia, France and

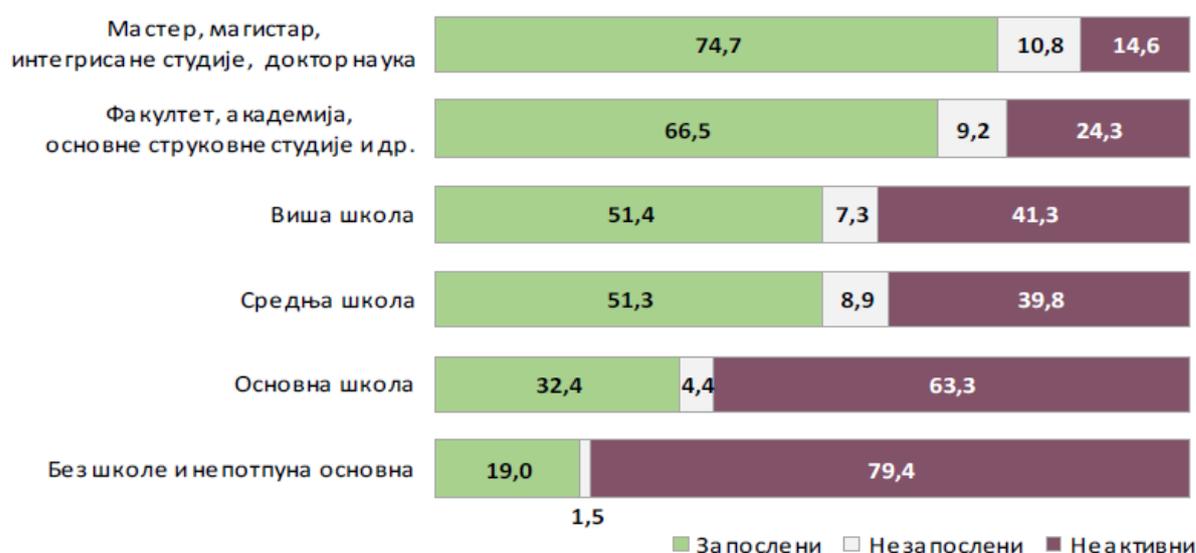
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<sup>42</sup> Pavlovic-Babic, D. and Baucal, A. (2013). PISA 2012 in Serbia: Preliminary Results. Institute of Psychology

Holland. The students from Serbia have shown similar level of development of competences as their peers from Spain, Slovenia and Croatia. When we compare students from Serbia with students from other European countries we note that their average achievement is higher than in case of students from Hungary, Cyprus, Montenegro and Bulgaria.

- Valid indicators of relevance of education in the economic sphere are derived from data on external efficiency in labour market, that is, from different private and social gains arising from different level and type of education. It is assumed that these data primarily refer to completed secondary and higher education.

- In accordance with the Survey on Labour Force from 2017<sup>43</sup>, employment rate in Serbia is raising significantly with the completion of the highest level of education (save for the rate of employment that is almost identical for secondary schools and colleges).** The employment rate varies from 19% (for those without any education or with incomplete primary school education) to 75% (for those with the highest level of education). Amongst the population with completed secondary school education, the employment rate is 51%. The rates of inactive population are reversed.



Source: Statistical Office of the Republic of Serbia (2018). Survey on Labour Force in the Republic of Serbia

- The labour market in Serbia is unable to take in young graduates within reasonable time period, considering that the data show that the transitional period from school to first stable/satisfactory employment on average lasts almost two years (23.4 months)<sup>44</sup>.** The duration of transition to first stable/satisfactory employment is reduced by half for young people with university education (15-29 years) when compared with the young people with secondary

<sup>43</sup> Statistical Office of the Republic of Serbia (2018). Survey on labour force in the Republic of Serbia, 2017.

<sup>44</sup> Marjanovic, D. (2016). Transition of young women and men on labour market in the Republic of Serbia, International Labour Organization, Geneva.

education, and it lasts on average 11.7 months as opposed to 24.3 months. In case of young people with primary education it takes on average 41 months to complete this transition.

- **In 2017, in the category of young people from 15 to 24 years of age, the employment rose slightly (by 5 100 individuals or 3.5%), this rise was equally distributed among both sexes<sup>45</sup>. The position of youth on the labour market is, however, still unfavourable, considering that they make only 5.5% of total number of the employed.** Reduction in numbers of population and increase in employment in this age category has resulted in the fall in unemployment by 9.6 % and fall of inactivity by 2.7 %. The unemployment rate in young people has fallen by 3% percentage points and now amounts to 31.9%.

- **In comparison with the population aged from 25 to 64, young population (15-24) is in rather unfavourable situation on the labour market, with three time's lower employment rate.** The employment rate of young people amounted to 20.9% in 2017, which is an increase in comparison to 2015 when the employment rate was 16.6%. The employment rate of population aged from 25 to 64 was 64.3% in 2017.

- **The unemployment rate of young people in Serbia in 2017 (31.9%) was amongst the highest in Europe.** On the EU level, the unemployment rate for young people was 16.1% in January 2018, with significant variations between the countries (from 2% in Switzerland to 45% in Greece). Only Greece and Spain have a higher unemployment rate in young population than Serbia, whereas in Italy this rate is practically the same as in Serbia<sup>46</sup>.

- **Particularly vulnerable group are the young persons (15-24) who are “Not in Education, Employment, or Training” (NEET), and they made 17.2% (127.000 youths) in Serbia in 2017. That is 2.7 percentage points less than in 2015 (NEET – 19.9%).** Half of the total number of the young people who belong to this group is made of unemployed and half of the inactive. The NEET in European Union is 10.9 % on average with existing variations between the countries (from Holland with 4% to Italy with 20.1%)<sup>47</sup>. The average NEET in Serbia is closer to the group of countries whose NEET is between 15% and 16%: Rumania, Greece, Bulgaria and Croatia.

- **The EUROSTUDENT VI study<sup>48</sup> from 2017 shows that 46% of students believes that they are well prepared for national labour markets, whereas 14.5% believes they are not.** It is indicative that 21% of students answered that they were not able to assess whether they were well prepared for labour market or not. Self-assessments of preparedness for international labour market paints a less favourable picture (32% believes they are well prepared, and 21% that they are not - 29.5% cannot offer such an assessment).

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<sup>45</sup> Republic Statistical Office (2018). Survey on Labour Force in the Republic of Serbia, 2017.

<sup>46</sup> EUROSTAT data

<sup>47</sup> EUROSTAT data

<sup>48</sup> Eurostudent.eu

- **The research of the Association of Employers of Serbia<sup>49</sup> shows that 38% employers believes that the young persons (up to 30 years of age) do not possess appropriate professional knowledge and wider competencies, whereas the 62% of employers has positive opinion on their competencies.** The same research shows that 48% of young people believes that the knowledge they have acquired through their formal education does not satisfy the needs of practical work, whereas 45% believes that it partly does.

- **Employers more often organize trainings to make up for shortcomings in education of young persons, then they do advanced trainings supposed to transform young persons into top managers, engineers and experts<sup>50</sup>.** Research show that 72% of employers organize trainings and professional development for young employees, most of which are professional training courses, then communication and cooperation training and ICT training. When it comes to secondary vocational education there is cooperation between education and industry as well as practical education, but it is not properly implemented and expected results in relation to competencies are not achieved, thus leaving the secondary school graduates ill prepared to immediately start working in real work environment.

- **Those parameters from the labour market referring to young persons are on the one hand consequence of the state of the affairs in the industry and on the other hand of some characteristics of the system of education, in particular, secondary vocational education and higher education.** The problems lie in relevance of educational profiles, quality of programme, level of professional practice, enrolment policy and readiness and capacities of all parties to work on alignment of offer and demand in terms of qualifications and competencies. The result of this is that the industry is facing problems of shortage of competent personnel, that is, the personnel whose qualifications reflect acquisition of needed competencies.

- **Relevance of education must be considered also in the light of individual and social outcomes outside of economic sphere, in segments such as social activism of youth, health, life style, values and attitudes. Research<sup>51</sup> show some alarming patterns in youth (15-29) in Serbia.**

- *Widespread risky behaviour* – c. 45% of young people regularly consumes alcohol, same percentage regularly or occasionally consumes cigarettes, 15% consumes marihuana, and 33% never uses contraceptives. Almost every forth young man (24%) engages in some form of violence in the course of a year (most often aggression towards peers in bars and clubs, neighbourhood, school and sport events). Risky behaviour often results in a vicious circle – youth that has at least engaged once in physical violence during a year at the same time more often smoke, consume alcohol and marihuana.

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<sup>49</sup> Ristic, Z., Rajic, D., Pavlovic, Lj. (2013). Better Employment Conditions for Youth, the Association of Serbian Employers

<sup>50</sup> Ristic, Z., Rajic, D., Pavlovic, Lj. (2013). Better Employment Conditions for Youth, the Association of Serbian Employers

<sup>51</sup> Tomanovic, S. and Stanojevic, D. (2015). Young in Serbia 2015. State of Affairs Observations, Beliefs and Hopes. Friedrich Ebert Stiftung, SeConS; ninamedia Research (2016). Research of Youth Awareness and Activism in the Republic of Serbia

- *Low level of social activism* - 76% of young persons has never volunteered, only 7% are the members of some association, 7% has participated in organization of cultural events, 6% in public works in their local community.
- *Unconcern for politics* (national, regional, global). Even third of young persons is completely unconcerned about political events in the country. C. 40% of young people aged between 20 and 24 has not voted once at elections (on any level).
- *Prevalence of social distance* – besides ethnic distance, the distance towards people of different sexual orientation is the most prominent.

- **In spite of unemployment or risky employment, financial and housing dependence, exclusion from decision-making process and alienation from political sphere, young persons' individual perceptions of their own future are optimistic; and the level of satisfaction with life is rather high.** Findings on good intergenerational and primary social relations and practices and their importance for young people in Serbia probably serve as a mechanism to bridge the gap between the structurally risky objective reality and their subjective experience<sup>52</sup>.

#### Progress achieved in the reporting period

##### *National qualifications framework*

- **One of the most important measures for improvement of relevance of education in Serbia is the adoption of the Law on National Qualifications Framework in the beginning of April 2018.** The goals of the National Qualifications Framework in Serbia, amongst other are the development of qualifications standards based on the needs of the labour market and the society as a whole as well as ensuring that the entire education is oriented on learning outcomes building the competencies which are defined by the standard of a given qualification, as well as the affirmation of the importance of key, general and inter-curricular competencies for lifelong learning. Qualifications are classified in National Qualifications Framework in Serbia (NQFS) in eight levels and four sublevels, and, in accordance with their type, they are classified into general, professional, academic and expert qualifications. In this law a qualification classification system CLASSNQFS is established aligned with the International Standard Classification of Education. The Law also provides for the establishment of the NQFS Council as an advisory body providing recommendations on the process of planning and development of human potential in accordance with public policies in the area of life-long learning, employment, career guidance and counselling. The Law on National Qualification Framework also provides for establishment of special agency for qualifications, whose goal would be the quality assurance on all levels of development and implementation of the National Qualification Framework in Serbia.

- **Sectoral councils provided for in the Law on NQF are important tool for ensuring relevance of qualifications on labour market.** The sectoral councils are expert and advisory

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<sup>52</sup> Tomanovic, S. and Stanojevic, D. (2015). Young People in Serbia, 2015. State of Affairs, Observations, Beliefs and Hopes. Friedrich Ebert Stiftung, SeConS

bodies established in the form of partnership, whose main function is to determine the demand for qualifications on the labour market in the Republic of Serbia, through dialogue and immediate cooperation of the representatives of the labour and education domains. This cooperation is facilitated by the composition of such councils. .

- **A unique database of all qualifications in the Republic of Serbia as well as the website dedicated to NQFS (<http://noks.mpn.gov.rs>) have been established within the Ministry of Education, Science and Technological Development.** 125 qualifications have been entered into this database, of which 71 with the qualifications standard. Entry of new qualification is ongoing.

#### *Education and learning focused on development of competencies*

- **The part of the new legal framework that is regulating quality of education, that is, the principles of developing new curricula, pays significant attention to development of competencies.** The new Law on Foundations of the Education System (LFES), as one of the elements of securing the quality of education in the Republic of Serbia, for the first time defines the competencies that are key for life-long learning as well as inter-curricular competencies on the level of the law.

- **New LFES underlines the importance of eight competencies key for life-long learning:** 1) communication in mother tongue, 2) communication in foreign language, 3) mathematical, scientific and technological competencies, 4) digital competencies, 5) learning to learn, 6) social and civic competencies, 7) sense of initiative and entrepreneurship and 8) cultural awareness and articulation.

- **Another innovation in the LFES is the definition of general inter-curricular competencies as an element securing the quality of education.** The purpose of this particular focus on inter-curricular and key competencies is a more dynamic and engaged combination of knowledge, skills and attitudes relevant for different real contexts in which those skills are functionally applied. General inter-curricular competencies: are based on key competencies, are developed through different courses, are applicable in different situations and contexts in which different problems and tasks need to be solved, are necessary for all students for their personal accomplishment and development as well as for engagement in social activities and for employment and they make good foundation for life-long learning.

- **The LFES defines 11 general inter-curricular competencies that are acquired by students by the end of compulsory primary and secondary education:** 1) competency for life-long learning; 2) communication; 3) work with data and information; 4) digital competency; 5) problem solving; 6) cooperation 7) responsible participation in a democratic society; 8) responsible attitude toward health; 9) responsible attitude toward environment; 10) aesthetic competency and 11) initiative and entrepreneurial competency.

- **Another important innovation is that the new LFES provides that education and learning plans must contain also general curricular competencies, specific curricular competencies, learning outcomes and educational standards (i.e., qualification standards for secondary vocational education).** These changes foreground competencies and outcomes, which should in turn ensure higher relevance of new education and learning plans and programmes.

- **In the new Standards for Accreditation of Study Programmes adopted in 2017, it is clearly underlined that the description of qualifications based on study programmes must be aligned with the particular level of the national qualification framework.** Learning outcomes are described in accordance with outcome descriptors referred to in the national qualification framework, proposed by the National Council for Higher Education and adopted by the Ministry of Education, Science and Technological Development. Earlier, the standard has been defined, specifying that the student successfully completing study programme acquires general curricular and specific curricular competencies that serve as the basis for quality performance of professional, scientific and artistic activity.

*Innovating educational and learning curricula*

- **Improved relevance of new curricula in primary education is accomplished, amongst other things, by introduction of compulsory status of the course “IT and computer sciences”.** Innovation in the first cycle of primary education is compulsory application of project teaching (36 class hours on annual level) which develops knowledge and competencies by means of planning, research, team work by means of curricular and inter-curricular linking of content and by means of using ICT in those project activities.

- **New curricular concept of general secondary school education introduces a series of new elective programmes, very relevant for economic and social sphere (for instance, modern technologies and entrepreneurship; education for sustainable development; health and sports; economy and business).** The programmes will be focused on achievement of outcomes and development of competencies by means of different active methods, such as project teaching, research works and so on.

- **Innovation in the system is the introduction of new classes in general secondary schools for students specially gifted for computer sciences and maths (IT classes).** Since school year 2017/2018, the IT departments have been set up in eight general secondary schools, and for school year. 2018/2019, 52 state and 6 private general secondary schools have applied for setting up of such IT classes. The students have shown a great interest, over 2500 of them have applied for entrance exam (almost five times more applications than in the last year). Depending on the results of the entrance exam, it is possible that, in the next year, three IT classes in languages of national minorities will be set up, considering that 76 students members of Hungarian and Slovak national minority have applied. Students in IT classes will study in accordance with a specialized programme in groups with maximum 20 students.

- **Digital literacy, programming and database skills that the students will acquire in general secondary school IT classes will be a key for their future development.** In addition

to high enrolment rate into the IT related Colleges, the graduates of these classes can also continue studies in other domains and thus clear the path for digitalization in agriculture, health and energy sector. Furthermore, thanks to their competencies, these students can join innovative start-up companies immediately after graduation. This is one of the ways in which the educational system is trying to answer to the needs of the labour market. Namely, in accordance with the data of the National Bank of Serbia, ICT sector is one of the sectors with the best prospects, with annual growth in export of 20% in the last decade. Currently, Serbia has a deficit of 15.000 IT experts, so development of IT sector is one of the priorities of the Government of the Republic of Serbia.

- **Curricula in secondary vocational education are developed on the grounds of qualification standards and so far 71 curricula have been developed and adopted on the grounds of this methodology since 2010. This amounts to quarter of all educational profiles, attended by 43% of students in vocational secondary schools in 2016/2017. In the period since 2015, 37 curricula based on qualifications standards have been adopted.** Qualification standard is a document defined on national level containing a set of data describing qualification in detail. It represents a basis for development of educational/training programmes and for assessment of the level of acquired competencies and achievement of learning outcome for each qualification.

- **On the level of higher education, the introduction of vocational master and opening of possibilities for short-cycle programmes in the new Law on Higher Education, together with good need assessment and quality control, could significantly improve employability of university graduates.** In accordance with the new Rulebook on Standards for Accreditation of Study Programmes (2017), professional practice in duration of at least 180 class hours, that is, 90 class hours per year is an integral part of the curricula of vocational master study programme. This practice is realized in companies or public institutions. The work on master thesis in vocational studies is a project that is supposed to solve a practical problem. In accordance with the New Law on Higher Education, short study programme can be executed in the scope from 30 to 60 ECTS. Erasmus + project PT&SCHE (Part-time & short-cycle studies in higher education) is currently implemented and it refers to introduction of short-cycle study programmes in IT sphere. The goals of the project are in accordance with the Strategy of Development of Education in Serbia which refers to increase in coverage in higher education and increase of relevance of higher education in the labour market.

- **The concept of the national model of student practice is currently drafted, that will allow young people to gain practical experience in companies during their studies which will then be valued as their first work experience.** New Standards for Accreditation of Study Programmes foresee professional practice and practical work (in addition to vocational master study) also as integral part of study programs for graduate and master studies in the area of technical-technological sciences in duration of minimum 90 class-hours. It is important to emphasise in this area that the National Council for Higher Education adopted in 2015 the reminder for student professional practice. As a part of carrier centres the Universities offer to employers' cooperation which is realized primarily in the shape of offer of practice and carrier guidance activities. Students also have at their service the portal [www.studentskapraksa.com](http://www.studentskapraksa.com) which

represents unique database of offer and demand of student professional practice for students of the University of Belgrade, University of Novi Sad, University of Kragujevac and the University of Nis.

- **Development of entrepreneurial spirit in children and young persons plays a prominent role in teaching and learning curricula.** Part of the new course in primary education “technics and technology” will be dedicated to development of entrepreneurial spirit as an inter-curricular competency. Entrepreneurship is a compulsory course in each of new teaching and learning curricula and in secondary vocational education, grounded on outcomes and qualification standard. At the same time some universities want to initiate programmes for entrepreneurship and some already offer selected courses even on the master studies level. However, although development of entrepreneurship is placed high on the list of priorities in terms of development of competitiveness and relevance of higher education, it has not been properly realized yet.

- **“Student enterprise” programme is used as an extracurricular activity in over 200 vocational secondary schools.** Student enterprise allows students to acquire skills in market economy and entrepreneurship through programmes of *Dostignuća Mladih* organization and to run their enterprises from their establishment to drafting of reports and closing of the enterprise. The students are guided by teacher mentors who have been trained by the above organization which is accredited by the Institute for Advancement of Education.

#### *Enrolment policy*

- **Another important segment in improvement of the relevance of education is related to enrolment policy, which can still be considered problematic for various reasons, but which is however being aligned accordingly.** During school year 2017/2018, the enrolment plan has brought about reduction in the number of places in vocational secondary schools by 2.3%, so that the offered number of places would be aligned with the demand for certain number of professional educational profiles. These changes imply smaller quotas in relation to profiles in four year studies in the domain of economy, law and administration, and increase in quotas in relation to craft/three-year educational profiles in great number of areas (construction 15%, forestry and wood processing 33%, textile and leather industry 47%, trade, hospitality and tourism 3%).

- **Considering that in Serbia there is still no methodology for regular assessment of labour market, involvement of employers and bodies relevant for the labour world is the way to better plan enrolment policy in vocational secondary school and school network and to identify and plan qualifications in accordance with the needs of the labour market.** However, in the last two years and within the framework of development of dual education in Serbia, regular regional meetings are organized through Standing Conference of Towns and Municipalities (SCTM), and the model of joint declaration on municipal/town plan of student enrolment has been drafted and signed by the schools, municipalities/towns and the Chamber of Commerce of Serbia. Participation of employers is facilitated on different level of decision making process. The Institute for Advancement of Education and the Chamber of Commerce of Serbia

have signed the Memorandum of Cooperation in relation to qualification planning. Further reforms of the teaching and learning curricula will increase the level of participation of employers in their realization – in practical education and in final exams – in case of 33 profiles which are based on qualification standards, the representatives of employers are members of examination panels on final exams.

- **The Government of the Republic of Serbia has recognized the IT sector as the priority area for development and accordingly study programmes have been developed and revised in 15 university colleges.** In that way, student quota has been increased in this area by 700 places. However, enrolment policy still does not solve the problem of programmes which cannot meet the quota or where market is saturated with such profile.

#### *Dual education*

- **At the end of 2017, the Law on Dual Education has been adopted as an expression of one of the priority goals of the educational policy in Serbia.** The main idea behind dual education implies acquisition of theoretical knowledge in school and practical in companies in real working environment, bearing in mind that the schools cannot keep up with the speed of technological changes occurring on the market. By increasing the scope and quality of practical training as well as by means of involving the industry in the process of drafting curricula, a system is created in which a qualification truly represents acquired competencies, which in turn will result in greater employability of young persons. In that way, the industry, by investing in education, invests in their future employees and solves their staffing problems in the long run.

- **Full application of the Law on Dual Education is foreseen for school year 2019/2020.** For the mentioned law to have full and unhindered application, the following rulebooks have been drafted which are currently in the process of adoption: the Rulebook on Programme of Instructor Training and Conditions for Taking of Instructor Exam; Rulebook on the Manner of Allocation of Students for the On-the-Spot Training; Rulebook on Conditions and the Manner of Work, Activities and Composition of the Team for Career Guidance and Counselling.

- **The enrolment plan for dual education has been completed by 81% which is a considerable increase in comparison with the previous period in which the craft educational profiles, mostly three-year programmes, remained poorly filled in at the end of the enrolment period.** In the school year 2017/2018, the total number of enrolled students in 19 educational profiles developed in accordance with the dual model was 1482 and additional 3077 of students who enrolled in some of the 43 educational profiles with elements of dual model in total of 128 vocational secondary schools and 205 companies. In school year 2018/2019, 3500 places will be available for students in 33 educational profiles in accordance with the dual model in 84 schools (20% of all vocational schools) with involvement of over 800 companies in dual education.

*Other measures for improvement of relevance of education in relation to the economic sphere*

- **In April 2018, the Rulebook on Student Cooperatives has been adopted, regulating area of importance for improvement of relevance of education in Serbia.** Student cooperative can carry out production, trade and service activity, that is, carry out community and humanitarian services. The activity of student cooperative is a part of educational work and its goal is to enable students to master basic elements of the processes of production and service provision; to provide professional guidance and develop entrepreneurial spirit; to create and foster positive attitude towards the work and creation; to instil work habits; raise awareness of collective work, cooperation and mutual assistance and solidarity; as well as to contribute to organization and development of school, local community and living environment.

- **In the period from September 2016 to October 2017, working group headed by the Institute for Advancement of Education, prepared the Proposal Standards for Career Guidance and Counselling Services. The Standards have been adopted in the course of 2018.** The objective of these standards is to serve, for benefit of different target groups and in different sectors, as the basis for planning, development, evaluation and improvement of career guidance and counselling services. In the last ten years those have become more represented - starting from professional orientation in primary schools, to youth office activities and career guidance and counselling in the institutions of higher education.

- **Since 2017/2018, the Ministry of Education, Science and Technological Development has initiated a pilot project “Integration of financial literacy in the education system of the Republic of Serbia” – FinPis with the support of company Visa for South East Europe.** The project implies integration of financial literacy into educational work and programme by means of creation of an environment enabling development of functional skills in this area, but also programmes/courses through which financial literacy will be integrated and developed as an inter-curricular competence. 39 schools and six preschool institutions have been involved in the project in order to ensure relevance and efficiency of the programme before financial literacy becomes part of the education system on the national level. The Ministry of Education, Science and Technological Development and the Institute for Advancement of Education have published a manual for teachers in financial literacy (March 2018).

- **Strengthening of the potential for innovations on all levels of studies is recognised in the Strategy of Research for Development of Innovations by 2020 (adopted in March y 2016).** Several innovation centres have been opened, business incubators and centres for transfer of technologies. The number of new companies established by the students is not known, and no significant raise in number of such companies has been noticed, nor the increase in cooperation between institutions of higher education and industry in view of development of innovations<sup>53</sup>. The new Law on Innovation Activity and the law on Scientific and Research Activity have been adopted which are meant to create better legal framework for development of innovations. Erasmus+ project IF4TM (Institutional framework for development of the third mission of universities in Serbia) has been initiated whose primary goals is to develop and implement the third

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<sup>53</sup> Report on existing strategies and laws of the Republic of Serbia referring to dimensions of the third mission, Project „Institutional framework for development of third mission on universities of Serbia “, UKG

mission in addition to existing two missions related to education and research. This third mission is made up of three pillars of development: technology and innovation, continuous learning and socially responsible behaviour of universities.

- **New Law on Higher Education foresees closer cooperation between education and industry even in the sense of coordination of goals and policies.** The Law provides for the two members of the National Council for Higher Education to be elected on the proposal of the Chamber of Commerce of Serbia and for the two members of the Steering Committee of the National Accreditation Body to be elected on proposal of the Chamber of Commerce of Serbia. Furthermore, the National Council should hold meetings at least twice a year with the Chamber of Commerce of Serbia, that is, once a year with the National Education Council, Council for Professional Development and Adult Education and other professional associations in view of discussing issues from its competence and defining priorities in implementation of the higher education policy.

*Measures in view of increase of positive social outcomes of education*

**Increase of the relevance of education from the point of view of development of positive social outcomes in regulatory context is reflected in explication of key and inter-curricular competencies in the new Law on foundations of education system.** Amongst new key competencies that the new Law on Foundations of Education System foregrounds are social and civic competencies and cultural awareness and articulation. The Law on Foundations of Education System defines 11 general inter-curricular competencies that need to be acquired by the end of compulsory primary and secondary education and which are all of crucial importance for the achievement of positive social outcomes: 1) competency for life-long learning; 2) communication; 3) work with data and information; 4) digital competency; 5) problem-solving; 6) cooperation; 7) responsible participation in democratic society; 8) responsible attitude towards health; 9) responsible attitude towards environment; 10) aesthetic competency and 11) initiative and entrepreneurial competency.

**Improvement of relevance of new teaching and learning curricula is reflected in innovations that are focused on development of positive social outcomes of education.** In primary education, special role is given to health education (as a part of the course “physical education and health education”). Within this course, students will learn about healthy life styles, appropriate and healthy alimentation etc. New curricular concept of general secondary school education introduces a series of new elective programmes, some of which are particularly relevant in this context: education for sustainable development; health and sports; introduction to geopolitics; language, media and culture; religions and civilization; individual, group and society; arts and design.

**The Ministry of Education, Science and Technological Development has undertaken important activities in the recent period in view of prevention of violence in schools.** Several tens of thousands of students, teachers and parents have attended numerous trainings as a part of the following activities: strengthening capacities of schools for identification and reaction to incidents of child and young people trafficking; strengthening capacities of schools for prevention of digital violence; strengthening capacities of schools for prevention of violence in

sports activities; prevention of gender based violence; prevention of violence and discrimination in schools in multicultural environments; strengthening system of support to parents, students and teachers in protection of students from violence in schools (SOS telephone line for reporting violence).

**Encouraging democratic culture in schools is a project (2017-2019) that is designed to improve quality of education by means of encouraging democratic culture, through application of anti-discriminatory approaches which are based on standards and practices of the Council of Europe.** Main activities of the project cover application of competencies framework for democratic culture and human rights education in a school, as well as mutual learning between schools participating in the project – 20 primary and secondary schools in total.

#### *International cooperation in education*

- **The process of accreditation of the Foundation Tempus, as an organization in charge of decentralized implementation of the programme, is ongoing. It is expected for this process to end in 2018 and for Serbia to become full member of Erasmus+ programme starting from next year.** This means that the Republic of Serbia will participate in programme Erasmus+ under same terms and same possibilities as EU member states starting from 2019.

- **Higher education institutions working with young persons have drawn more resources through projects than all other countries in the region.** The projects implemented by schools, preschool institutions, CSOs and organizations working with the young people have been financed through pilot calls for projects conducted within the framework of preparatory measures. In the reporting period, over 400 projects have been funded. Furthermore, the participation of the Republic of Serbia in all available networks and platforms has been achieved (for instance, eTwinning, EPALE...) Serbia has become full member of the European Agency for Special Needs and Inclusive Education.

- **In the reporting period, the Republic of Serbia has participated upon invitation of the European Commission in an open coordination method– a mechanism of the EU for establishment of cooperation between member states in areas in competence of member states (the so-called soft legislation).** Through representatives, the Republic of Serbia has participated in six thematic working groups in the area of education: **adult education, modernization of higher education, schools policies, secondary vocational education, transversal skills, digital and online learning**

## Increasing the efficiency

Efficiency of education system is usually perceived through the point of view of internal efficiency, most often from the point of view of completion rate of different levels of education and from the point of view of use of the resources engaged in the system (human, financial and material resources).

### State of Affairs

#### *Completion rates in education*

- **Primary completion rate on national level was 94.8% in accordance with last available data in school year 2015/2016, which is a slight decline in comparison with the usual rate of over 96% (for instance, 2011/2012 – 96.6%, 2014/2015 – 96.5%)<sup>54</sup>.** In accordance with the methodology of the Statistical Office of the Republic of Serbia, this rate is calculated as a ratio of the number of students who have completed the final year of a given level of education and the age group foreseen to complete that level of education. The Strategy of Development of Education in Serbia sets as a goal that minimum 93% of a generation completes primary school – it is an indicator that monitors a generation, which is not quite comparable with a completion rate calculated in this manner. MIX 2014 Study<sup>55</sup> shows that the primary completion rate is 93.4%. This research provides also an estimate that 98% of children who have enrolled in first grade of primary school actually complete the primary school in the end.

- **Primary completion rate in children living in Roma settlements in accordance with the data of the MIX 2014 Study is 64%.** Percentage of children from Roma settlements who have enrolled in first grade and eventually complete primary school is 77%.

- **Secondary completion rate on national level was 90.1% in accordance with last available data in school year 2015/2016.** In comparison with the school year 2011/2012 when the SEDS was adopted, it presents an increase of 7 percentage points. Strategy sets as a goal that the 95% of those enrolled in four-year secondary vocational education and general secondary education actually complete secondary school. This also implies monitoring on the level of the generation, which is not the methodology that is used currently in education.

- **Share of university graduates in population 30-34 years in 2016 amounted to 29.9%, which is an increase of over 5 percentage points in comparison to 2012.** The SEDS sets as a goal that the share of university graduates in a generation will amount to at least 35%<sup>56</sup> from 2020. With this rate of growth of university graduates, this goal will be achieved within the set deadline. The SEDS also sets as quantitative indicator of the efficiency of the system that at least 200 doctorandi complete PhD studies per million inhabitants within the prescribed deadline. Statistics

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<sup>54</sup> Data of the Statistical Office of the Republic of Serbia.

<sup>55</sup> Statistical Office of the Republic of Serbia and the UNICEF (2014). Study of multiple indicators of the position of women and children in Serbia 2014 and Study of multiple indicators of the position of women and children in Roma settlements in Serbia 2014, Final Report, Belgrade, Serbia, Statistical Office of the Republic of Serbia and UNICEF.

<sup>56</sup> Strategy of Development of Education in Serbia as indicator of efficiency mentions also completion rates for higher education, within deadline or with one year of delay – such indicator is, however, not calculated in official statistics.

offers only data on the annual number of PhD graduates (irrespective of the deadline for completion) – in school year 2016/2017 it was 218 new doctors of science per one million of inhabitants, which is double in comparison to 5 years ago (in school year 2011/2012 this number was 103.6).

#### *Financing of education*

- **Serbia invests annually 5.2% of gross domestic product in education, in accordance with the estimates of the World Bank from 2015.** The percentage is almost identical to the average of investment in education in OECD countries (5.3%) and is higher than in other countries in the Region. Same as in other countries, education sector is the biggest public sector judging from the level of financing – 16% of the budget is spent on it.

- **In absolute amounts the level of financing in Serbia is significantly lower than in EU.** Investment in Serbia per student is one third of the amount allocated in EU.

- **Total public expenditure per student has risen in the recent years on all levels of education, mostly as a consequence of reduction of student population.** These funds, however, have not been invested in development of education, but have been used for financing the existing number of employees.

- **Financing of pre-university education is shared responsibility of republic and local level, whereas the biggest item financed from the republic budget are salaries of teachers and other employees in primary and secondary schools.** Over 90% of budget funds is allocated for these purposes.

- **Local self-administration units finance costs of maintenance and running costs, and on the level of pre-school education, also the salaries of employees.** Municipalities allocated between 15% and 20% of their budgets on education – up to 10% goes on pre-school education, whereas the rest goes on maintenance and running costs<sup>57</sup>.

- **The biggest share of the funds from the republic budget intended for education is allocated for primary education, then for higher and secondary education.** 42% of total expenditure for education from the republic level is allocated for primary education, 25% for higher education, 22% for secondary education and 9% for research and development.

- **The system of financing primary and secondary education is based on input values.** The number of teaching and non-teaching staff is determined in relation to the number of classes. Considering that the demographic trends are unfavourable, the school directors are fighting to maintain and get approval for classes, so that they could keep the current numbers or have the least possible reduction in numbers.

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<sup>57</sup> World Bank: Preliminary Findings of the Functional Review and Options for Reforms

- **Existing system of financing higher education has significant shortcomings which do not allow it to become an effective instrument for improvement of quality and equity of higher education**<sup>58</sup>. Financing of higher education institutions from the budget has not been essentially changed for a number of years and it is regulated on the level of Regulation<sup>59</sup> essentially based on the same principles as the Regulation from 1992). Same as financing of other levels, financing of higher education takes as key input values: number and structure of employees, number of government-funded students, square meters of the premises and the number of buildings etc. Differences in own funds (primarily from scholarships) are significant and their share in total funds for higher education varies from few percentage to 80%.

#### *Network of institutions*

- **Network of educational institution in Serbia is not aligned with the changed demographic situation, that is, with the significant decline in number of children/students, or with the specificities on different levels of education (preschool level, secondary vocational education)**. In that sense, ill adapted network of institutions contributes to reduced efficiency of the overall system of education.

- **Network of pre-school institutions are characterised by insufficient capacities in terms of space for the expected coverage rate and by an uneven geographical distribution**<sup>60</sup>. Great differences in the sense of capacities of preschool institutions are visible in municipalities with different level of socio-economic development – in richer municipalities there are more preschool institutions, and average number of children in one facility is higher. There is also great difference when it comes to number of groups in different preschool institutions – which number is higher in institutions located in the administrative centre of the municipality than in the settlements outside of the administrative centre.

- **Big demographic decline in Serbia has resulted in reduction of the number of students, but not in proportionate reduction of primary schools**. In comparison with 2000, in school year 2017/2018 there were 22% students less and 20% of classes less<sup>61</sup>, but only 7% less of schools (regular and satellite units). Average size of classes remained unchanged – c. 22 students in a class. Data from school year 2015/2106 show that 49.2% of elementary schools in Serbia have had 400 or less students, and those were not the only schools on the territory of the local self-government unit. Small size schools are most frequent in Vojvodina, followed by Central Serbia and finally the City of Belgrade. Satellite units of primary schools attended by students of different age are less frequent in Vojvodina and Belgrade than in other parts of Serbia.

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<sup>58</sup> Babin, M. and Lazetic, P. (2009). Financing of unintegrated university in Serbia – institutional case study, Financing of Higher Education in South-East Europe: Albania, Montenegro, Croatia, Slovenia and Serbia. Centre for Educational Policy.

<sup>59</sup> Regulation on Normatives and Standards of the Work in the Universities and Faculties for Activities Financed from the Budget (The Official Gazette of the RS, No. 15/2002, 100/2004, 26/2005, 38/2007 and 110/2007).

<sup>60</sup> Baucal, A. and associates (2016). Preschool Education in Serbia: situational analysis and recommendations.

<sup>61</sup> Number of classes is significantly reduced in school year upon adoption of expert instruction of the Ministry of Education wherein the criteria for determining the minimum number of students per department have been defined for the first time in the system of financing.

- **Network of primary schools that is unaligned with the demographic decline causes two main difficulties. First, there is a high number of small primary schools in central city areas. Second, in some distant rural areas, the education in regional school is organized in so-called “combined classes” in which children attending different classes are grouped in one class taught by one teacher<sup>62</sup>.** Teaching and learning in such classrooms presents a challenge and is generally of lower quality than in ordinary structure of the classroom.

- **Reduction of the number of students in secondary education has not been followed by the reduction of the number of classes in schools.** In comparison to year 2000, the number of students in school year 2017/2018 is reduced by 23%, number of classes by 11.5%, and the number of schools has grown by almost 7%. The consequence of this is the reduction in the average number of students per class, from 28.6 in 2000 to 24.9 in 2018. On average a school is attended by 488 students.

- **Network of secondary schools is not aligned with the trends of enrolment and wishes of students, so there are great discrepancies in the usage of space.** There is big number of schools with surplus of space: on the other hand, general secondary schools and several types of vocational secondary schools suffer from shortage of space.

- **Network of higher education institutions has expanded in the recent years in an unsystematically.** The number of higher education units without the status of legal person outside of the seat of institution, where in some of them, allegedly, only teaching and examinations take place (indicating existence of corruption)<sup>63</sup> has increased significantly.

#### *Number of teachers*

- **Significant reduction in the number of students since the beginning of the century was followed by increase in the number of teachers in primary and secondary schools.** While the number of students has declined by c. 22%, the number of teachers in primary education in school year 2014/2015 increased by c.17% in comparison to school year 2000/2001, and in secondary education the number of teachers increased by c. 25% in comparison to a decade and a half ago.

- **Circa 80% of teachers employed in primary and secondary schools work full time<sup>64</sup>, which is significant increase in comparison to 2012 when there was c. 60% of teachers with full teaching load.** In primary and secondary education there are 70.000 teachers, which is 70% of all employees in primary and secondary schools. Circa one quarter of all teachers are employed for fixed term.

- **The number of government-funded students in higher education per number of teachers varies from 3 to 25, which is aligned with the standards of other countries.**

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<sup>62</sup> Feasibility study of the optimization of the school network and the activity of mapping schools in Serbia, 2017.

<sup>63</sup> National Council for Higher Education of the Republic of Serbia (2017). Report on the work of the National Council for Higher Education of the Republic of Serbia for period from April 2016 – March 2017.

<sup>64</sup> Data refer to February 2017.

However, when the number of self-financed students is added to this number, this ratio in some university colleges comes to a considerable figure posing serious threat to quality of teaching.

- **Even though the results of the education system of Serbia are unsatisfactory in international context, they are on expected level or even above that if we take into account the resources invested in it.** For instance, the accomplishments of Serbian students on PISA 2012 from math were as expected if the amount of money spent on student is taken into consideration. On the rank list of the higher education systems (Universitas 21) taking into consideration the GDP, Serbia took third place in 2018 (Behind Finland and United Kingdom), whereas Serbia took first place in 2017.

#### Progress achieved in the reporting period

#### *Financing of education*

- **In the period since the adoption of the Strategy SEDS and its Action Plan, no significant steps have been made in order to change the system of pre-tertiary education.** In both documents, new model of financing per student is foreseen. Due to fiscal consolidation which implied reduction of personal income of public sector employees, the focus has been shifted to the changes in the public sector salary system, which includes education as well.

- **In the previous period there were no changes in the system of higher education financing, even though it was planned to streamline the system by the end of 2016.** In the beginning of 2018, Working Group for drafting of the platform for the draft law on financing of higher education was established. The main course of change should allow for the performance model of financing universities<sup>65</sup> (i.e., in accordance with the realized goals and achieved results of a particular higher education institution in a particular period) and should not be based on the number of enrolled students.

- **As a part of activities of reform of the system of salaries in the public sector, a catalogue of work posts in education sector has been prepared which is an integral part of the overall Catalogue of Work Posts in Public Services and Other Public Sector Organizations, provided for in the Law on Public Sector Employees Salary System adopted in 2016.** Catalogue contains the list of work posts, general/typical job description, necessary qualifications /education and additional skills/ examinations / work experience. Total of 116 work posts from education sector have been inventoried in this Catalogue; work posts in the preschool, primary and secondary education; work posts in the area of student standard of living; work posts in higher education; work posts in the organizations that are monitoring and developing the system of pre-tertiary education). The next step in this process is to determine the salary bracket and coefficients, which should, amongst other things, clearly describe the above-the-average achievement for a particular post.

#### *Network of institutions*

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<sup>65</sup> Programme of the Government of the Republic of Serbia of the candidate for the prime minister Ana Brnabic

- **The LFES from 2017 introduced new solutions in relation to the network of public preschool institutions and public primary schools.** It prescribes that the enactments on networks of public preschool institutions and networks of public primary schools shall be adopted by the local self-government units on the basis of criteria established by the Government of the Republic of Serbia. These enactments are defined as planning documents in which spatial plan is determined in accordance with the type and structure, and not as documents describing merely state of affairs. The local self-government units have a deadline of one year to adopt those enactments from the day of establishment of criteria. In case local self-government units fail to adopt those enactments within the deadline or those enactments are not in accordance with the prescribed criteria, the Ministry of Education, Science and Technological Development shall adopt such documents as a last resort.

- **In the beginning of 2018, the Regulation on Criteria for Adoption of Enactments on Network of Public Preschool Institutions and Enactments on Network of Primary Schools was adopted, replacing the relevant Regulation from 2010.** Amongst most important innovations is the obligation of local self-government units to draft an analysis containing a development plan of the network based on the trends of natural growth of the student population, as well as migration movements in local self-government units for public preschool institutions for period of five years and for public primary schools for a period of four or eight years.

- **During 2017, the Feasibility Study for the Optimization of the School Network and the Activity of School Mapping in Serbia was prepared.** Based on the analysis of the legal framework and statistical data, different models of optimization have been proposed, whereas the final goal of this new pre-tertiary school network is to improve its efficiency and effectiveness without losing sight of the quality and equity of education that is, preventing possible negative effects on equity.

- **In the middle of March 2018, the Regulation on Criteria for Adoption of Enactment on Network of Public Secondary Schools was adopted.** Nine criteria have been defined: economic, criteria of equality, availability, organizational, status, demographic, cultural and optimization criteria. Defined criteria allow for creation of optimized network of secondary schools, merger of small schools into one institution (minimum number of students has been set to be conditionally 200), and creation of educational centres. A fieldwork analysis of the network of secondary schools has been prepared and the Enactment on Network of Public Secondary Schools in Serbia is being prepared as well as the Decision on Dismantling Old and Founding of New Secondary Schools (38 secondary schools in 19 pairs in horizontal optimization).

#### *Monitoring the recruitment of employees*

- **In last years, several measures have been undertaken in view of better monitoring of the procedure of recruiting employees in education institutions thus making this segment more efficient and transparent. Those activities have led to significant increase in the share of teachers with full teaching load (in February 2017 – c. 80%).** In 2015, Special collective agreement for employees in primary and secondary schools has been concluded which prescribes that when somebody becomes redundant in one in school, he or she will have an

advantage when vacancy is filled in another school. The employment takes place based on the procedure of takeover of the employee and the open competition, and permanent employment takes place only if take-over could not have been effected. Special collective agreement determines the order of takeover of the employees.

- **Since 2015, the Central Working Group has been established to monitor recruitment of staff in educational institutions, as well as the sub-WGs on the level of school administrations.** Sub-working groups are established for purpose of operational proceedings and monitoring the recruitment of employees and they comprise of representatives of school administrations, competent advisors in charge of financial-material affairs and representative of relevant trade unions in education area.

- **Special collective agreement for employees in primary and secondary schools provides for the obligation and procedure of drafting the list of employees who have become entirely or partially redundant and employees who have entered into employment contract without full teaching load, as well as the list of vacancies.** These lists serve for the directors of schools that have a vacancy to know that there are available human resources, but also for the individuals and trade unions to check if their rights have been respected.

- **Publication of those lists as well as other personnel data from schools ensures timely information for the public as well as the transparency of the work of schools and the Ministry of Education, Science and Technological Development.** Information on redundancies, employees without full teaching load and the vacancies are submitted by updating personnel data in the central database of employees on the education information system "Dositej". Data from the information system of the Ministry are published on the website <http://liste.mpn.gov.rs/>. Furthermore, on the website of the Ministry, one can find decisions on take-over of employees, decisions on public competitions announcements and decisions on selection of candidates.

#### *System management and unique education information system*

- **New legal framework from 2017 has strengthened certain competences of the Ministry of Education, Science and Technological Development as a response to observed inefficiency of the system in different segments.** Certain competences of the National Education Council and the Council for Professional Development and adult Educations were transferred to the competence of the Ministry (adoption of teaching and learning curricula, different educational standards), thus the councils were able to preserve their advisory role. In addition to more precise profiling of jobs in the institutes (Institute for Advancement of Education and Institute for Education Quality and Evaluation), the law allows the Ministry to set up the commission for drafting of bylaws, if the institutes in charge of their drafting or participating in their drafting, fail to submit them within deadline or submit documents that are not in accordance with the requirements defined by the minister. In case of failure to comply with the order of the minister or in case of untimely compliance on the part of the institute, that is the council, the minister may propose to the Government dismissal of the director of the institute, that is, its president and/or member of the competent council.

- **The new LFES defines the procedure of election of directors of education institutions.** Instead of management body (school board) that has been competent for election of the director so far, in the new solution, this has become a competence of the minister, who bases his or her decision on the grounds of reasoned list of candidates meeting the requirements and the proposal of the candidate submitted by the management body on the basis of the procedure previously carried out in accordance with the law.

- **In view of increased efficiency of the system, the new LFES pays more attention to accountability.** This implies determining the responsibility of the education institution bodies, employees, parents and students, as a consequence of breach of legal prohibitions. Another novelty are provisions on objection to grades and consequences for the teacher who makes mistakes when evaluating students.

- **In the previous period, information system for education and science “Dositej” has been developed in view of advancing the decision-making process in education.** The establishment of modern, efficient and unique information system for education has been attempted several times and the whole process took many years. In new information system the register of children, students and adults has been established. This new system is facing many challenges, amongst other, ensuring timely and precise entry of data into the database on the part of the institution and its maintenance.

- **The biggest news in the information system for education is introduction of the unique education number (UEN).** That is the number that follows its bearer through all levels of formal education and represents a key for connecting all data on child, student or adult in the information system. Different issues related to the UEN will be regulated in appropriate bylaw. Introduction of the UEN will allow for advanced methodologies of collection of data in education, which have been insufficiently valid, reliable and aligned so far.

- **In the previous period, the Ministry of Education, Science and Technological Development has introduced the practice of making available to public many data in its possession as a part of the open data initiative (<http://opendata.mpn.gov.rs/>).** All those who are interested can find the published tables representing excerpts from the register on website of the Ministry and the data can be downloaded in different format. In 2016, the Ministry of Education, Science and Technological Development supported the project of the Team for Social Inclusion and Reduction of Poverty of the Government of the Republic of Serbia, the “Programme for creation of educational policies on the basis of data and results” which allows researchers to use open data in their research.

## Priorities in 2018

### Priorities on the level of preschool education

- Adoption of new Grounds for Preschool Education and Creation of Conditions for their Successful Implementation;
- Further strengthening of the Network of Practitioners for Support to Preschool Education;
- Beginning of realization of the Project „Inclusive Preschool Education “
  - Drafting of training programmes and realization of first training for employees in the preschool institutions,
  - Drafting of bylaws: rulebooks regulating records and documentation about the educational work, rulebook on the work of the model institution and possibly rulebook regulating implementation of different programmes in preschool institutions.

### Priorities on the level of primary education

- Adoption of education and teaching curricular for those classes in primary schools for which such programmes have not been adopted yet;
- Development of entrepreneurial competencies as inter-curricular competencies;
- Professional development of teachers, preschool teachers and other expert associates in view of application of new education and teaching curricula;
- Adoption of bylaws based on the Law on Primary Education;
- Approval of textbooks, that is, sets of textbooks, in accordance with new education and teaching curricular;
- Realization of the project: Free Textbooks;
- Realization of the Project *Educational Content through Digital Textbook/Digital Classroom*, the purpose of which is to improve of education by means of introduction of new technologies and to support the teacher in introducing innovations in educational work, and which implies training of 2000 of teachers to work with modern technology and modern e-textbooks, equipping 2000 classrooms/laboratories with modern equipment for digital education and fast internet, as well as with appropriate digital content.

### Priorities in general secondary education and artistic education

- Reform of general secondary school education;
- Introduction of IBO programme of International Baccalaureate in several general secondary schools in Serbia;

- Improvement of quality of entrance exam for specialized and general secondary schools, artistic schools and bilingual schools.

#### **Priorities in secondary vocational education**

- The beginning of application of bigger number of new educational profiles in schools. For all those profiles **qualification standards, outcome-based teaching and learning curricula and modern spatial standards, standards in relation to equipment and teaching aids and type of professional qualification of teachers, of expert associates and assistant teachers, have been created.**
- Further modernization of professional education through modernization of profiles, professional development of teachers and equipping vocational schools in cooperation with the Institute for Advancement of Education, regional chambers of commerce, municipalities and schools.
- Achievement of goal to **increase the enrolment rate of students in the profiles which are based on qualification standard in school year 2018/19 to 80% out of total number of enrolments in vocational education,** and to increase it to 100% by 2021, which would mean that all students enrolled in vocational schools are learning in accordance with modern, up-to-date educational programmes.

#### **Priorities in dual entrepreneurial education**

- Adoption of the rulebooks and bylaws related to in the Law on Dual Education;
- Informing schools and companies about the content of the rulebook;
- Increasing the coverage of schools, students and companies with dual education;
- Realization of activities in view of promotion and visibility of dual education on national level;
- Modernization and creation of new educational profiles for dual education model that will be aligned with the labour market needs;
- Initial activities in view of setting up analytical system for monitoring and evaluation of dual and entrepreneurial education;
- Initial activities in view of drafting of master plan that will serve as the tool for monitoring the introduction of dual education;
- Organizing conferences, panels and trainings of schools on dual education, career guidance and counselling and entrepreneurial education;
- Organizing round tables and informative meetings in view of providing support to dual education in schools;

## **Priorities for development of inclusive education**

- Adoption and implementation of the Action Plan for Inclusive Education for 2018-2020.
- Work on bylaws advancing the area of inclusive education (the Rulebook on Requirements for Determining the Right on Individual Educational Plan, its Implementation and Evaluation; the Rulebook on Additional Education, Health and Social Support to Child or Student; the Rulebook on Criteria and Standards for Provision of Additional Support in Education of Children, Students and Adults with Developmental Difficulties and Disabilities in Preschool Groups or Other Schools and Family; the Rulebook on Requirements for Obtaining Status of Resource Centre, Organizing Work and Revocation of the Status).
- Establishing the system of early identification of students in risk of abandoning education and of children in high risk of not being included in education and development of the system of prevention, intervention and compensation in case of early drop out.
- Improvement of the system of additional support in education of children, students and adults from vulnerable groups through development of the centre for assistive technology, provision of adapted textbooks and other teaching aids, increasing the number and efficiency of education assistants as well as development of integrated services in local community.
- Establishment of the system of monitoring of the inclusive education process on national, local and the level of institutions.
- Further development of competencies in inclusive education of employees in educational institutions through various training programmes.

## **Priorities in the area of education of members of national minorities**

- Securing conditions for improvement of teacher competencies (4.400) who teach in the languages of national minorities:
  - Drafting of the training programmes in 2018 which will be realized in 2019 in cooperation with the Institute for Advancement of Education, Educational Institute of Vojvodina and University Colleges (as a measure within the framework of the Sector Budget Support);
  - Preparation of bilateral memorandums of cooperation with the ministries in charge of education in ethnic homelands, containing activities related to providing support for training of teachers in Serbia;
  - In accordance with the signed trilateral memorandums, the Ministry of Education, Science and Technological Development continues to coordinate and monitor activities of publication and printing of missing textbooks for national minorities whose education is entirely in minority language (104 textbooks printed out, out of 184), with special emphasis on textbooks in Albanian language, as well as textbooks used for teaching course “mother tongue with elements of national culture”;

- Improving the availability of education for Roma students and reduction of attrition by means of:
  - Expanding the network of educational assistants and improving their competencies;
  - Continuation of support in realization of elective course “Roma language with elements of national culture”.

### **Priorities in education of migrants**

- Increase the compulsory education coverage by including children from collective centres and transit centres into compulsory preparatory preschool programme;
- Expanding the scope of inclusion of young migrants in the system of secondary education in school year 2018/2019 in accordance with possibilities of institutions, in view of securing needed qualifications for migrants:
  - Formal way – through school system, enrolling into certain educational programme as a regular student wherever there is a place after enrolment period (if younger than 17); as external student (if older than 17);
  - Through informal system of training at publicly recognized organizer of adult education activities at the same time finding the source of financing.
- Realization of activities foreseen by the Project MADAD 2 (funded by the European Commission) will allow the following to take place in 2018:
  - Drafting of standard and teaching curricula for Serbian as foreign language;
  - Support to schools in which student migrants are included through allocation of grants (up to 6 000 Euros per school);
  - Strengthening professional capacities of teachers in view of improving migrant student education.

### **Priorities on the level of higher education**

- Implementation of the Law on Higher Education;
- Further improvement of the system of verification and assurance of quality in higher education;
- Financing higher education on new grounds – development of platforms;
- Cooperation between higher education institutions and real sector;
- Improvement of information system in higher education;
- Signing of the memorandum between the Government of the Republic of Serbia and the Government of the Republic of France on the status of French School in Belgrade;
- Improvement of the relationship between the Republic of Serbia and other countries through promotion of the system of higher education, cultural, scientific and other potentials of the Republic of Serbia, fostering cooperation between universities and

scientific and technical cooperation by means of awarding scholarships, and on the basis of international bilateral agreements;

- Establishing the alliance for NQFs and Agency for Qualification in accordance with the Law on National Qualifications Framework of the Republic of Serbia;
- Establishing cooperation with the Statistical Office of the Republic of Serbia in view of defining and improving framework for monitoring education and key indicators and define entry variables for information system based on the indicators;
- Establish cooperation with the Institute for Education Quality and Evaluation in view of defining key indicators in education for purpose of preparation of appropriate reports for school administrations, institutions and public;
- Establish cooperation with school administrations in view of including quantitative indicators in the analysis of the quality of work of institutions and together with the Analytical Unit of the Institute for Education Quality and Evaluation prepare reports that would serve to those institutions for purpose of self-assessment;
- Continue cooperation with the Republic Secretariat for Public Policies and Agency for Business Registers;

#### **Priority in education of adults**

- Improvement of formal education of adults (primary education of adults, secondary education of adults), external secondary education for older than 17 years, and retraining, additional education and specialization;
- Improvement of informal education of adults;
- Improvement of the process of “accreditation and verification” – obtaining status of publically recognized organizer of adult educational activities;
- Recognition of previous learning – Adoption of the Rulebook on Recognition of Previous Learning
- Career guidance and counselling;

## Reports on Progress in accordance with Educational Levels

### Preschool Education

#### Basic information on current state of affairs

It is not usual that there is external evaluation of education results on preschool education level. The quality is judged on the basis of expert assessments of the educational process taking place in preschool institutions (or other places where appropriate programmes are realized). For the level of pre-tertiary education in Serbia, main form of evaluation and provision of information on **education quality** is a system of external evaluation of the quality of institution's work. Evaluation of preschool institutions started from 2013/2014. The framework for the work quality of preschool institution is seen from the perspective of seven areas in total, through 29 standards, and the level of their achievement is assessed on the scale from 1 to 4 on the grounds of 137 indicators. In the procedure of external evaluation on the bases of consensual evaluation of the team, the level of achievement of each standard is assessed, where levels 1 and 2 represent failure to achieve standard, and levels 3 and 4 represent achieved standard. Overall quality of the work of the institution can be evaluated with 1, 2, 3 or 4 where 4 represent the highest mark. The evaluations are performed on the basis of two criteria. First criteria is a percentage of achieved standards which are key for evaluation (key and selected), and the other criteria is total percentage of achieved standards in relation to total number of standards.

So far, 110 preschool institutions have been evaluated. Summary results for 99 preschool institutions evaluated during the last three school years show that majority belongs to the category of institutions working well (grades 3 and 4) – in total, the percentage of these institutions is between 85% and 93%. In school year 2016/2017, nearly half of evaluated preschool institutions were given highest mark. On the other hand, none of the preschool institutions has received mark 1.

		2014/2015	2015/2016	2016/2017
Evaluation of overall quality of the work of institutions	Mark 4	39,4%	43,3%	46,2%
	Mark 3	45,5%	50,0%	46,2%
	Mark 2	15,2%	6,7%	7,7%
	Mark 1	0%	0%	0%
Average overall evaluation		3,2	3,4	3,4
Average evaluation on 10 key standards		3,2	3,3	3,2
Number of evaluated institutions		33	30	26

In annual reports obtained from external evaluation prepared by the Institute for Education Quality and Evaluation (IEQE), on the grounds of accomplishment of relevant standards from the area that are key for educational work quality, it is concluded that the preschool teachers possess appropriate knowledge and skills needed for education, and that the main areas for improvement are related to programming of work in such a way that would allow optimum

progress in teaching of children and for their development (standard 2.4) and adjustment of activities so that they reflect better the needs and interests of children (standard 2.3). In the course of evaluation of preschool institutions in 2016/2017, we obtained data that those two standards have been accomplished only in 10% of institutions (whereas standard 2.3 has not been accomplished in third of evaluated kindergartens). On the other hand, important data is that over 90% of preschool institutions achieve other standards of education quality.

In accordance with other expert evaluations, however, the quality of education in preschool institutions is not quite satisfactory. Their opinion is that the practice of preschool education “is of an uneven quality, insufficiently diversified and does not answer to the needs of children and parents”. In the study the Preschool Education in Serbia: Situational Analysis and Recommendations (2016) high number of areas have been emphasised as in need of improvement so to reach a standard – here we have singled out only few: adoption of new foundations for programmes; de-schooling of preparatory preschool programme and shift towards programmes based on play and quality of relationship; reform of initial education of preschool teachers; opening the doors of the kindergarten to the local community and better communication with the family; respect for the standards related to size of nursery and kindergarten groups.

Survey of the citizen opinion show that over 80% of citizens believes that preschool institutions offer quality educational services. As the biggest problems in preschool institutions, the citizens emphasise the lack of space, that is, oversized groups (58%), followed by poor conditions and outdated equipment and technology (31%), and followed by poor financial status of the employees (21%) and thwarting of the children creativity (19%).

On the level of the **coverage of preschool education**, we have achieved progress since the adoption of the SEDS, but the current rate of coverage is still not satisfactory, save for the part related to compulsory preparatory preschool programme.

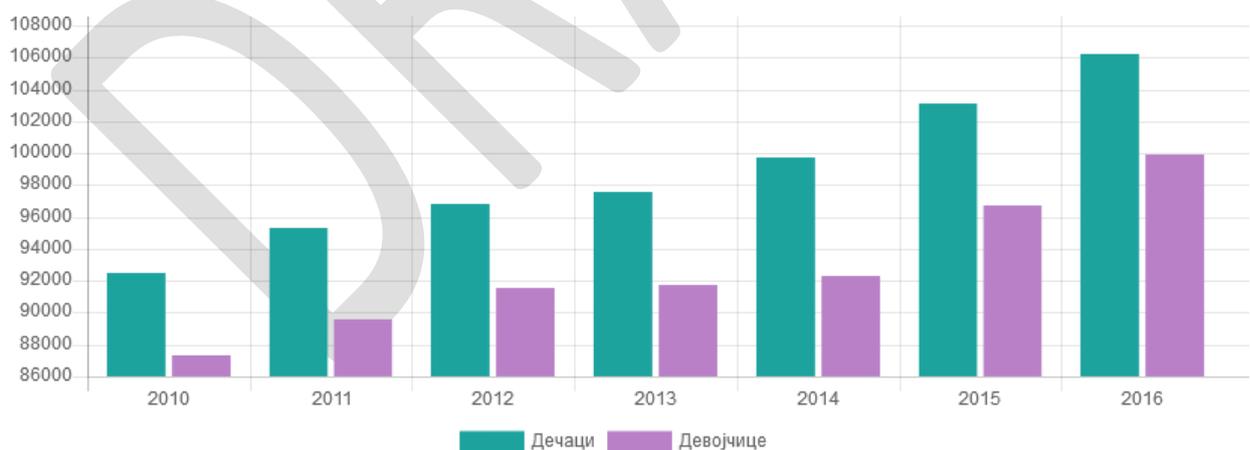


Diagram taken over from the website of the Statistical Office of the Republic of Serbia.

SEDS has set as a goal for the coverage related to children from age of 6 months to 3 years to be increased to 30% before 2020. The most recent data of the Statistical Office from 2016 shows that the goal is almost reached – 27.6% of children of this age attend preschool education (45.234). Coverage of children in 2012 when the SEDS was adopted was smaller by 8.6 percentage points (31.450). The coverage has not been calculated yet for 2017, but the percentage will be even higher

and close to the target value 30%. Namely, in 2016, 45.234 children of this age attended preschool education, whereas that number in 2017 is 48.788.

Coverage of children from three to five years of age in 2016 was 59%. It is an increase of 3.5 percentage points in comparison to 2015. The coverage for 2017 has still not been calculated, but will probably be higher considering that over 4000 children more have been covered by preschool education than in 2016. (2017 - 101.628 children; 2016 – 97262 children). The SEDS has not defined specific target values for coverage of children of this age.

The coverage target of children in preparatory preschool programme is almost fulfilled, which is one of the goals set in SEDS. In 2017, the coverage was 98.2%, which is by 5.6 percentage points higher than in 2012, when SEDS had been adopted. The least coverage is in Belgrade region and it amounts to 95%, whereas in Vojvodina in amounts to almost 100%.

PRESCHOOL EDUCATION			
Indicator	Baseline value (2012)	Target value 2020	The latest reported value
<b>Coverage of children from 6 months to 3 years of age (number of children)</b>	19%	30%	27.6% (2016)
<b>Coverage of children from 3 to 5.5 years of age</b>	55.5% (2015)	/	59% (2016)
<b>Coverage in preparatory preschool programme</b>	92.6%	100%	98.2% (2017. r.)

Coverage of children from 4 years of age to start of compulsory education is 74% in Serbia (2016). This indicator is one of the key used by the EU to monitor the fulfilment of goals set for 2020 in the area of education. The goal is that by 2020, 95% children of this age attend preschool education - in 2016, the coverage was 95.5%.

There are significant differences between municipalities in terms of coverage in preschool education and this reflects to a great extent the degree of socio-economic development of municipalities (richer municipalities often have greater enrolment rate than poorer municipalities)<sup>66</sup>. Statistical Office data from 2016, show that in 16 municipalities the enrolment of children younger than three years was bigger than 40%, whereas in 24 municipalities it is below 10%. Similar data are obtained for coverage rates for children aged between 3 and 5.5. In 74 municipalities the enrolment rate is higher than 60%, whereas in 16 municipalities it is less than 30%.

In accordance with the findings of the MIX 2014 study, the main reasons why children from 36 to 59 months of age do not attend preschool institutions is the received opinion that children need not go to the kindergarten because someone at home can take care of them (66%). The problems of access are the reason for nonattendance for 38% of children of 35–59 months of age. High price of service is an obstacle for children from Belgrade region (34%) and town settlements (21%),

<sup>66</sup> Baucal, A. and associates (2016). Preschool Education in Serbia: situational analysis and recommendations (data refer to 2015)

whereas the lack of place/physical capacities of institution is more often the reason for children from Vojvodina (21%) and for children from the poorest households (17%).

Children from Roma settlements in Serbia for the most part are excluded from preschool education. The MIX 2014<sup>67</sup> study shows that among the children of 36–59 months of age from Roma settlements, 6% attends organized educational programmes in the early childhood. 63% of children of appropriate age attends or has attended preparatory preschool programme. Regional research on position of Roma people in the Western Balkan shows that only 17% of children from Roma settlements of 3 to 6 years of age attend preschool education<sup>68</sup> (data relate to 2017).

The MIX 2014 study shows that the main reason why children from Roma settlements do not attend educational programmes in early childhood (save for Preparatory Preschool Programme) is the opinion that someone at home can take care of them (44%). The problems of access are the reason for nonattendance of 43% of children, whereas the high prices of service (24%) and exceedingly high other expenses (22%) represent the main obstacles for attendance in preschool programme for children from Roma settlements. The main reasons why children from Roma settlements do not attend preparatory preschool programme are financial problems (31%). The biggest one of them are costs of wardrobe, hygiene and food for children. The problems of access are the second largest group of problems for attendance of preparatory preschool programme (29%) – as main reasons the distance of the institution and fact that child does not have necessary documents are reported. Besides, 7% of parents answered that they did not know that the Preparatory Preschool Programme was mandatory, 6% believes that child will not learn important things there, and 32% of parents responded that the reason for non-attendance of the Preparatory Preschool Programme are other reasons.

Data point to the conclusion that in the reporting period there has not been an increase of children that are not covered by the regular preschool institution programme, but attend special/specialized programmes– in 2017; this number was little over 1500 children. The SEDS sets as one of the goals in terms of increase of preschool education coverage, the increase of access to diversified programmes and services.

The network of preschool institution is characterised by insufficient special capacities needed for expected coverage rate and uneven geographical distribution. Great differences are notable in the sense of quality of preschool institutions in municipalities with different degree of socio-economic development. In richer municipalities there are more preschool institution and the average number of children in group is bigger. Also there is big difference when it comes to the number of children in preschool group in different preschool institutions facilities– that number is bigger in facilities located in administrative centre of the municipality than in the settlements outside of the administrative centre.

### **Progress achieved in the reporting period**

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<sup>67</sup> Statistical Office of the Republic of Serbia and the UNICEF (2014). Study of multiple indicators of the position of women and children in Serbia 2014 and Study of multiple indicators of the position of women and children in Roma settlements in Serbia 2014, Final Report, Belgrade, Serbia, Statistical Office of the Republic of Serbia and UNICEF.

<sup>68</sup> 2017 UNDP-WB-EC Regional Roma Survey

Drafting and adoption of the foundations of the preschool education is one of the most important actions defined in the Action Plan for the SEDS (PU-PS04). Soon new Foundations of Preschool Education Programmes will be adopted. The draft Foundations was developed by the Institute for Advancement of Education and was presented to the public at the end of 2015. The draft was implemented as a pilot during 2016/2017, through the Project “Improvement of Preschool Education Quality” piloting the Draft, further development and finalization of new foundations of the preschool education programmes are expected as joint initiative of the MoESTD, Institution for Advancement of Education, Institute for Pedagogy and Andragogy and the UNICEF.

The proposal of the Foundations of the Preschool Educational Programme represents unique conceptual starting point for development of the educational programme for working with children, from nursery age to beginning of schooling. New Foundations are based on holistic approach focused on relationships: based on values, directing the development of programmes and activities. The goal is to support children welfare, and what drives, supports and creates conditions for children welfare are relationships. The place and role of game is emphasised as the basis for development and expression of all dimensions of children welfare. Learning is understood as transformative process through which the child changes itself, changes its understanding of the world, its relationships, and therefore the community in which it acts and lives.

New conception of preschool education represents a step forward in relation to existing one because it is based on:

- Modern theoretical notions of socio-cultural theory of learning and development and sociology of childhood;
- Convention on the Rights of the Child and the General Commentary 7 of the UN Committee in charge of the rights of the child and exercise of the right of the child in early childhood;
- Current educational policy documents in Serbia – the Strategy of Development of Preschool Education and Social Care in the SEDS until 2020, Law on Preschool Education;
- International documents on educational policy and examples of foreign practice of conceiving preschool education, taking into consideration specific context of preschool education in Serbia.

The challenge for educational authorities, researchers and practitioners is development of clear strategy for implementation of the Foundations of the Preschool Education Programme. The main activities related to implementation of new Programme Foundations are planned within the framework of the Project “Inclusive Preschool Education in Serbia” which will be financed from the loan of the International Bank for Reconstruction and Development (in total amount of 47 million Euros). The loan was signed in May 2017 and ratified in the National Assembly in November 2017. The overall goal of the Project is to improve availability, quality and equity of preschool education, in particular in relation to children from vulnerable groups. Within the framework of the second component of the Project, activity related to support to implementation of the Preschool Education Programme Foundations will be developed through development of the training programme and all accompanying material for preschool teachers and expert associates, including the training for directors of preschool institutions.

Additional support to the implementation of new Preschool Education Programme Foundations will be provided through IPA 2014 project - Towards Lifelong Learning. One of the three planned results of this project is to provide support to the reform of preschool education as grounds for lifelong learning.

Development of the system of accreditation of preschool educational programmes and institutions is seen as important strategic orientation/measure in the SEDS and the AP that should provide significant contribution to raising quality of preschool education. Two actions are dedicated to this in the Action Plan (PU-PS05) as well as the process of accreditation itself (PU-PS06). Currently only the institution verification system functions as the only procedure providing approval for preschool educational activities. Earlier analysis have shown that it is an dispersed model in which different aspects are regulated in different rulebooks and which is oriented on formal accomplishment of structural requirements in quantitative sense, but not in qualitative sense. In that sense, this process does not present a good ground for securing quality preschool education. During 2015, within the framework of the project "Kindergartens without Frontiers 2 – Quality Inclusive Preschool Education in Serbia ", an analysis of accreditation of preschool education programme was carried out, in which recommendations and guidelines for introduction of the system of accreditation of preschool education institution and programmes, were provided. The Law on Amendments to the Law on Preschool Education from 2017 failed to introduce innovations in respect of accreditations of preschool education institutions and programmes. At this moment, other priorities, when it comes to development of preschool education, are foregrounded.

The Action Plan for the SEDS foregrounds another segment of quality assurance – definition and adoption of the quality standards (PU-PS03). Experiences in the use of quality standards on the occasion of evaluating the work of preschool institutions point to the need to carry out the revision of certain standards and indicators of quality in preschool institutions and to improvement of the quality assurance framework. The need to adapt the quality framework and quality assurance to the specificities of preschool education and to strengthen support to institutions in improvement of work quality, has been identified. The IEQE has initiated the Project "Improvement of the Framework for Evaluation of Quality of Preschool Educational Institutions in cooperation with the UNICEF Belgrade. During 2017, the proposal for revised standards and indicators for evaluation of preschool institutions was prepared – it consists of 16 revised quality standards and 74 revised quality indicators. In 2018, the work to that respect continues by means of evaluation and piloting of new methodology. Furthermore, in the upcoming period, following activities will be realized: strengthening of capacities of external evaluators for their tasks of evaluating preschool educational institutions by means of trainings in the area of preschool pedagogy, specificities of the preschool institutions' work and specificities of the procedure of their evaluation; drafting of a unique evaluation manual intended for external evaluators and employees in preschool institutions; support to preschool institutions in the process of self-evaluation by help of trained expert associates of the MoESTD and the IEQE and school education advisors as well as advisors in charge of preschool institutions.

To that respect the established Network of Practitioners for Support to Preschool Education will have very important role. This network was a result of joint initiative of the MoESTD, IAE, IEQE, UNICEF and the Institute for Pedagogy and Andragogy of the Faculty of Philosophy of the

University of Belgrade. The Network of Practitioners has been established with a goal to contribute to improvement of the quality and equity of preschool education; to provide support to institutions in view of further development of different segments of quality and equity in preschool education; to support development of quality programmes and policies; to support sharing of good innovative practice between institutions; to provide support to the development of inclusive practice in preschool institutions, preschool groups, as well as on local level.

Within second component of the Project “Inclusive Preschool Education”, activities have been planned in view of improvement of the system of, by means of:

- Development of information system for monitoring quality of preschool education;
- Analysis and revision of the preschool education quality evaluation, including procedures and responsibilities in terms of self-evaluation and external evaluation etc. (in cooperation with key institutions, primarily with the Institute for Education Quality and Evaluation)
- Training of employees in the preschool administrations and decision makers in view of strengthening their capacities for self-evaluation and external evaluation of the quality of preschool education.

In addition to improvement of the quality of preschool education, the Action Plan for the SEDS places an emphasis on increase of coverage, in particular of children from three to five years of age, with more equity in such coverage (PU-PS07) and introduction of at least half-day preschool programme in duration of one school year for all children in the age between three and five (PU-PS02). Increasing the capacities of state preschool institutions and increase in number of private institutions will result in increase of the number of children included in the process of preschool education. In comparison to 2015, when there were 192,005 children in preschool system, in 2018, that number rose by 10% to amount to 212,719. Total growth for the most part can be explained by increased enrolment into private institutions (14,000 more than in 2015), then by enrolment into state institutions (c.7,000 children more than in 2015).

Increased enrolment into private preschool institutions can be explained by simulative measure in the sphere of public-private partnership – which included private kindergartens into the system of subventions in certain towns: primarily in Belgrade, where we have the growth in enrolment of children in private institutions by more than 10,000 in comparison to 2015. Nevertheless, data for 2018 show that 11,067 children have been enrolled on top of the norm, and 7,887 have not been enrolled due to the fact that capacities of the facilities were fully used.

In the previous period, the MoESTD has worked intensively on preparatory activities of the Project “Inclusive Preschool Education in Serbia” which will be financed from the loan of the International Bank for Reconstruction and Development in total amount of 47 million Euros). The loan was signed in May 2017 and ratified in the National Assembly in November 2017. The overall goal of the Project is to improve availability, quality and equity of preschool education, in particular in relation to children from vulnerable groups. Amongst other things, through this project it is planned to secure c. 17,000 new places for children in the age between 2 and 5.5 in new, reconstructed facilities in minimum 30 towns and municipalities in the Republic of Serbia.

Through Project “Inclusive Preschool Education”, securing of subsidies to local self-government units has been planned to ensure that the most vulnerable families get priority and free enrolment

of their children in the age between 3 and 5.5 in preschool education programmes. Grants will enable that the most vulnerable and economically disadvantaged families and their children gain access to programmes and services in the community (within the health, education and social protection sector), intended for children and parents.

Although the SEDS has placed an important emphasis on diversification of the preschool education programme as an important course of action in view of development of inclusiveness, equity and quality of the preschool education programme and at same time enabled by the current legal framework, in practice this diversification is not actually applied, neither in organizational aspect not in programmatic. Local self-administrations have not assumed responsibility for development of short and high quality diversified programmes for preschool education. On the one hand, local self-governments are facing challenges of additional financing (and employment) which would be brought about by the expansion of the offer, on the other hand, the diversification of the programme is not sufficiently perceived as an important way of increasing coverage and equity of preschool education. The biggest problem to this respect is the lack of regulation of the process of programme accreditation, so that many programmes in kindergartens, sport centres and other educational institutions are not covered by the national system of quality assurance in preschool education.

When it comes to new legal changes (the LFES and ZPE), old names "special and specialized programmes" have been replaced by pedagogically more appropriate terms "different forms and programmes". In that way it is pointed out more explicitly that the preschool institution, save for implementation of the educational programme which activity is taking whole day, develops also other forms and programmes. Furthermore, intention is to motivate the founder of the preschool institution to treat different programmes and forms as equally important for achievement of set goals and principles of preschool education and to support their realization. The Law has also specified the norm for direct educational goals related to work with children in view of realization of different programmes and forms (20 hours).

In the period from 2014 to 2016, Project: „Kindergartens without Frontiers 2 – Quality Inclusive Preschool Education” was realized. By means of project, 11 new premises and 10 local self-governments have been adapted and equipped, 20 preschool groups with 436 children in half-day programmes (5x4 hours) have been opened. The coverage of children with different special and specialized programmes amounts to 888 children, of which 78% of children belonging to some of the categories of vulnerability or to several categories simultaneously.

In the beginning of 2017, the Project " Kindergartens without Frontiers 3 – Support to Improvement of the System of Social Care for the Children and Preschool Education on Local Level” has been initiated, which is realized in three preschool institutions in Belgrade and Zrenjanin. The goal of this phase of the project is to investigate real modalities of bigger coverage of children with shorter and quality programmes as response to specific needs of children and families in urban environment. The urban environments offer better possibilities for cooperation with different institutions and experts in the area of science, culture and arts and sports which can significantly enrich the programmatic offer for the children of preschool age.

The work of educational assistants has contributed to increase of coverage of Roma children in the education. In the education system there are currently 175 educational assistants – in preschool institution there are 35, whereas the rest are hired in primary schools. Their current number is insufficient, so in the upcoming period, 50 new educational assistants will be hired. The MoESTD is also working on drafting their job descriptions, on preparing the network of educational assistants and instruments for measurement of their results, in the shape of the bylaw.

Creation of the local system of social care for the children and preschool education (PU-PS08) should be seen as the outcome of reform activities in the preschool education. In accordance with the existing regulation, the competence of the MoESTD in realization of preschool education has been defined (the Law on Ministries, Law on Basis of the Education System). Accordingly, it is necessary to raise the issue of competences of identified responsible authorities in the domain of creation of local system of social care for children and preschool education. The concept of the system of social care for the children and preschool education is not clearly presented on the level of the strategic document, same as the mechanisms for establishment of better coordination of different sectors in the system are not clearly defined in the form of a regulation. Nevertheless, certain activities are realized to this respect. So, through already mentioned Project “Kindergartens without Frontiers 3”, amongst other things, measures are undertaken in view of improvement and harmonization of the local level legislation with the national legal and strategic framework for quality inclusive preschool education and in view of establishment of local partnerships that should contribute to the improvement of the exchange of knowledge and to advocacy of early inclusion of children in preschool education, in particular, the children from vulnerable groups from two selected towns/three city municipalities and preschool institutions..

Action Plan for the SEDS provides for harmonization of legal framework for social care and preschool education with the SEDS (PU-PS01) as a special action. Seven years after adoption of the Law on Preschool Education in 2010, amendments to this Law have been adopted in November 2017, in order to, amongst other things; harmonize its provisions with the new LFES. Adoption of new regulation has created grounds for drafting of bylaws which should regulate different issues of preschool education. The Rulebook on Conditions and Manner for Provision of Care and for Preventive Health Protection of Children in Preschool Institution (The Official Gazette of the RS, No 112/17) has been adopted. This rulebook is adopted jointly by the minister of education and minister of health. Proposal Rulebook on Conditions and Manner of Implementing Alimentation in Preschool Institutions has been submitted to the Ministry of Health for opinion and further procedure of adoption.

#### **Tabular overview of realization of the AP of the SEDS**

<b>Action</b>	<b>Realized</b>	<b>Partially</b>	<b>Not realized</b>	<b>Deadline 2018+</b>
PU-PS01 - Harmonization of laws and by-laws governing social care and preschool education with the SEDS		✓		No
PU-PS02 – Introduction of minimum half-day preschool programme in				

duration of one school year for all children in the age between three and five and a half		✓		✓
PU-PS03 – Defining and adoption of quality standards		✓		No
PU-PS04 – Drafting and adoption of foundations for the preschool education programme II		✓		No
PU-PS05 – Establishment of the body for accreditation of preschool institutions and programmes			✓	No
PU-PS06 – Accreditation of preschool institution and programmes			✓	✓
PU-PS07 – Increase coverage of children in age between three and five and half and increase equity in coverage		✓		✓
PU-PS08 – Creation of local system of social care for children and preschool education		✓		No

## Primary Education

### Basic information on the current situation

The only national examination of students' achievements in primary education in which all students participate is the final exam at the end of compulsory education. This exam has three functions: certification, selection, and evaluation. Mixing different functions of the final exam creates such requests in designing of the test and the results analysis, that the evaluative function of the final exam becomes questionable and the final exam data is rarely published as a measure of the achievement quality at the national level.

The tests at the final exam have tasks to check the achievement of educational standards defined at three levels of achievement - basic, intermediate and advanced level. These levels describe the requirements of different difficulty, cognitive complexity and the scope of knowledge, from simple to complex. The tasks from the basic level are basic course knowledge and skills, that is, functional and transfer knowledge and skills necessary, both in life and for the continuation of learning. It is expected that almost all students (and at least 80% of them) will achieve this level. Although the tasks can vary from year to year, as on other levels, so that the tests vary by difficulty, it is assumed that greater consensus exists on tasks at the basic level of achievement and that the variations in the difficulty of these tasks are smaller. In this sense, the percentage of students that correctly solve all the tasks from the basic level may be useful information. On the other hand, the question how many students do not solve any task at an advanced level is also interesting. Information presented for Serbian language and Mathematics for students who passed the final exam in the Serbian language for the school year 2016/2017 shows that almost every fourth student succeeds in solving all the tasks from the basic level (10 tasks) in both subjects, so there is virtually no difference at this level. However, the difference is visible at an advanced level - far more students fail to solve a single task from an advanced level in Mathematics than in Serbian language.

Subject	2016/2017	
	Percentage of students who have successfully solved all the tasks at the basic level	Percentage of students who have not successfully solved <u>a single</u> tasks at the advanced level
Serbian language	23.6%	16.4%
Mathematics	24.5%	68.9%

The results of the final exam are more informative when it comes to fairness regarding the quality of educational outcomes. Comparison of the results in the reports published annually by the Institute for the Evaluation of the Quality of Education (IEQE) can be based on data provided for the level of administrative districts and municipalities, for boys and girls and for national minorities. The results of the IEQE annual reports on final exams show that one third of administrative districts have achievement below the average. In addition to the lower achievements of students from five districts in Kosovo and Metohija, for which many years of unfavourable living conditions and educational context should be taken into consideration, among the least successful students are students from Bor, Zajecar, middle Banat and Branicevo District.

On the other hand, when it comes to the best results at the final exam, they need to be taken with considerable reservation. Students from several administrative districts continuously achieve the best results, although this could not be expected in the light of the fact that the largest number of municipalities in these districts is classified as underdeveloped or devastated areas. Based on this, as well as the report on the completion of the final exam, the Ministry of Education, Science and Technological Development is continuously working on improving the examination procedure in order to prevent situations that question the regularity of the exam and its results. There is no significant variation in the achievement of students within a district at the final exam at the end of primary education, that is, they range within the expected limits. Findings that, although students from developed municipalities are expected to have better achievements, the results of students from municipalities at different level of development are fairly balanced, except for the most developed municipalities support this. On the whole, there is a poor correlation between student achievement and the economic development parameters of the municipalities from which students come. However, the exceptionally high achievements of students in some underdeveloped municipalities point to caution when it comes to these conclusions and require further research and analysis.

The results of the final exam continuously show that girls are more successful than boys, where the differences are greater in the Serbian language test than in the Mathematics test and the combined test. The differences in favour of girls were recorded at the national, as well as at the district level, but also in the majority of municipalities.

In accordance with regulations governing students' rights to education, students have the opportunity to choose the language in which they will take the final exam. As a rule, students choose to take the exam in their native language, or in the language they have taken in school. This means that the students solve the test in their native language, and they do the math test and the combined test in the same language. By comparing the achievement by age, it is noted that the achievement of students from certain national minorities are stable, while in some others they oscillate to a greater or lesser extent. Good achievements on all three tests are continuously achieved by students who do the final exam in the Croatian language and students who do it in Albanian language, while the students who pass the final exam in the Ruthenian language continuously achieve poor results.

The national testing of students was carried out in Serbia for the first time since 2004, and it was done with students of the seventh grade of primary school. The test was conducted in May 2018 on a representative sample of students (about 3,000 students from 148 primary schools) in three subjects: Mathematics, Physics and History. Once available, the results of this testing will provide useful information on the level of knowledge in these three subjects of students in Serbia, but also information on how and in what way is learned at school and which factors influence the student education achievements (based on anonymous questionnaire for students and teachers).

Since 2003, Serbia has been a regular participant in two of the largest and most influential international researches of student achievements - TIMSS (Trends in International Mathematics and Science Study) and PISA (Program for International Student Assessment). TIMSS studies the achievements of students in mathematics and in natural sciences in grades four and eight, and PISA reading, mathematics and science literacy of fifteen-year-olds.

A study in the fourth grade of primary school has been conducted in Serbia in the last three TIMSS cycles (2011, 2015 and the current 2019)<sup>69</sup>. According to the latest available data from the study conducted in 2015, Serbia is above the scale of 500 points with 518 points achieved in mathematics. The achievement of our country is the same as that of the Czech Republic, Bulgaria, Slovenia, Sweden, Cyprus and Germany and it is significantly higher than the achievement of Italy, Spain, Croatia and Slovakia - many European countries with a gross domestic product that is significantly higher than the gross domestic product of our country. We can conclude that the achieved results are satisfactory, although we should bear in mind that the most successful countries have achieved 100 points more than our country<sup>70</sup>. By the results achieved in natural sciences, students from Serbia are equal to students from Italy, the Netherlands, Spain, Northern Ireland, Australia, Denmark, Germany and Canada, and they have achieved better results than the students from Belgium, Portugal, New Zealand, France, Cyprus and Turkey. The difference from the most successful countries is smaller than in mathematics.

The TIMSS study results in Serbia show that 85% of the difference in student achievement can be attributed to students' individual characteristics, and that only 15% of the difference in achievements stems from the differences between the schools that students attend. The results show that better achievements are made by students from families of better socio-economic status, students who have attended pre-school education and students who have gained better language and numeracy competencies before enrolling in the first grade of primary school.

A new cycle of PISA study started in Serbia in 2018, after Serbia missed out on the opportunity to participate in the PISA cycle in 2015. This means that the latest results are from 2012 when students from Serbia achieved results that are significantly below the OECD average. Compared to the OECD countries, the mathematics competence of students from Serbia is lower by around 45 points, which corresponds to the effect of one year of schooling in the OECD countries; the reading literacy of students from Serbia is lower by around 50 points, which corresponds to the effect of just over a year of education in the OECD countries; the sciences competence of students from Serbia is lower by around 60 points, which corresponds to the effect of 1.5 years of education in the OECD countries.

Although school assessment should be a good measure of the quality of educational achievement, the final exams analysis conducted by the IEQE indicates that the practices of evaluating and assessing students' knowledge in primary schools are of questionable quality, which is why they are not taken as a reliable source of data on the quality of educational outcomes at the level of the system or its various segments. The IEQE reports on the final exams results that analyse the school grades also show that an excellent average at the end of the eighth grade is achieved by almost half of the students, while every fifth student has all top grades. There is an expected direction of correlation between the grades and the test results, but this correlation is not high enough, which indicates that there are differences in the requirements that different schools place before their students for the same grade. Although the average achievement of the holders of the "Vuk

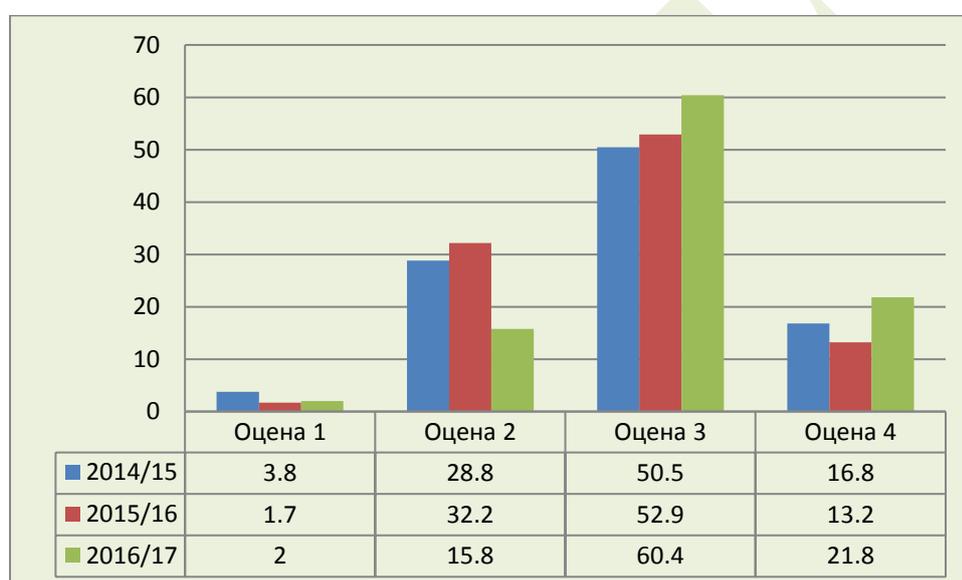
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<sup>69</sup> Only students attending lessons in Serbian language took part in the study.

<sup>70</sup> Marusic Jablanovic M., Gutvajin N. and Jaksic I. (editors) (2017), TIMSS 2015 in Serbia. Belgrade: Institute for Educational Research (IPI).

Karadzic" diploma<sup>71</sup> (straight 5 students) is higher than the national average, in some districts certain holders of the "Vuk Karadzic" diploma do not even reach the national average is an illustrative finding.

The most important system instrument for assessing the quality of the educational and educational process is the external assessment of educational institutions. The quality of work of primary schools is assessed on the basis of 30 quality standards related to the seven key areas of school work: the Curriculum and the Annual Work Plan, Teaching and Learning, Educational Achievements of Students, Student Support, Ethics, Work Organization and Management and Resources. The overall quality of the institution's work can be rated with grades 1, 2, 3 or 4, 4 being the highest grade. Figure 2 indicates that the most common grade is 3, followed by grade 2, then grade 4 and finally the lowest grade 1. The average grade in the school years 2014/15 and 2015/16 was 2.8, and in 2016/17, the average grade was 3.

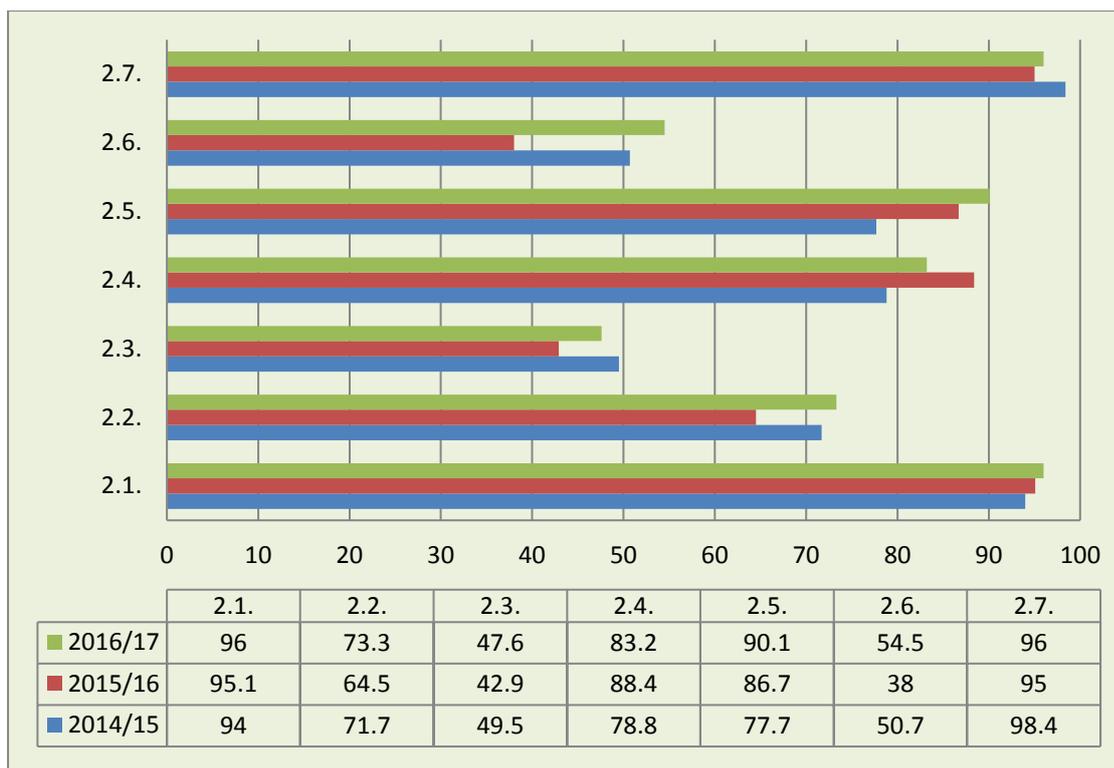


One of the seven areas of quality of the assessed institution is the Teaching and Learning. During the process of external evaluation of the school, educational advisers directly follow the teaching process that involves lessons of at least 40% of teachers. The chart below shows the percentages of schools that have achieved the seven quality standards in the field of Teaching and Learning at levels 3 and 4 (highest levels of achievement<sup>72</sup>) in the last three school years<sup>73</sup>.

<sup>71</sup> In the school year 2016/2017, every seventh student was the holder of the "Vuk Karadžić" diploma, which is awarded if the student has excellent grades in all subjects from the fifth to the eighth grade.

<sup>72</sup> In the external evaluation procedure, based on a harmonised team assessment, the level of performance for each individual standard is determined, where levels 1 and 2 indicate the unachieved standard, and levels 3 and 4 indicate the achieved standard.

<sup>73</sup> In the school year 2016/17, 110 schools were evaluated, in the school year 2015/16, 128 schools were evaluated, and in the school year 2014/15. 188 schools were evaluated.



The level of achieving quality standards is relatively uniform between the schools that were evaluated in these three school years. The trends in performance levels show a stable pattern. Primary schools are the most successful in achieving two standards: 2.1. The teacher applies the appropriate didactic-methodical solutions when delivering lessons and 2.7. The teacher creates a stimulating work atmosphere in class - almost all schools (over 95%) achieve these quality standards at higher levels. These standards follow by success levels: 2.4. Students gain knowledge in class and 2.5. The teacher efficiently manages the learning process in class with very high percentages of schools that successfully achieve these standards. More than two thirds of schools show good results in standard 2.2. The teacher teaches students using different teaching techniques in class. The teaching and learning quality standards of that are the most demanding for schools are the standards 2.3. The teacher adapts the work in class to the educational needs of the students and 2.6. The teacher uses assessment methods that are in the function of further learning. The above chart shows that more than half of primary schools in Serbia do not have the satisfactory quality of teaching in terms of adapting the work to the needs of students (does not meet this quality standard). Regarding the quality of assessment quality in class, the situation is in a certain way even more problematic. Namely, this is the standard for which each tenth primary school has been evaluated with 1 in the last three years.

Data on the quality of teaching and learning in primary schools in Serbia can be found in two international projects. Given that these are surveys that were carried out on representative school samples, it can be considered that the findings of these surveys apply to the whole system. First of all, in the previously mentioned TIMSS 2015 study on the fourth-grade students, besides performance tests, students and their teachers are asked questions, which, inter alia, measure some aspects of the quality of teaching and learning. When it comes to teaching mathematics, data “indicate the dominance of traditional practices - teachers explain the matter to the students in the frontal way of work, the way to solve tasks, and the task of the students is to remember the rules

and procedures... It is common practice that students, individually or in a group, following the guidance given to them by the teacher, work on tasks, while the practice of the whole class working together is less common in such a way. It is noticeable that students work on tasks without teacher guidance, or while the teacher deals with "other obligations" is a rare practice in TIMSS classes. Written exams or quizzes are rarely used in teaching and group work is also seldom (homogeneous or heterogeneous according to student abilities)<sup>74</sup>. The students gave their opinion on the teaching of mathematics and the picture is "that the majority of students agree that their teachers are very engaged and supportive in teaching mathematics." The assumption is that "the working methods that we often refer to as traditional (frontal, lecturing) and transmissive are still organised in a way that students perceive them as supportive (that they understand teachers' expectations, that the teachers give feedback, that actively involve students during lessons, that they give instructions and interesting tasks, etc.)".

When it comes to the results of the TIMSS 2015 study in relation to the teaching of natural sciences it can be concluded that "the traditional forms of work also dominate - the teacher explicitly explains the new contents, students read lessons from textbooks and memorize facts and principles. The practice of presenting experiments by the teachers is relatively rare, while in practice it is even less common for students to plan and execute experiments and research, as well as to work in the field and outside the classroom. Similar to teaching of mathematics, student work on tests and quizzes and in groups is a relatively rare practice."

The second project providing information about the characteristics of teaching in primary education, this time at the level of subject teaching, is a research and development project *Improving the Educational Effectiveness of Primary Schools (2013-2017)*, implemented on a sample of 125 primary schools, or 5,476 seventh grade students. The students had the opportunity to assess two subjects (mathematics and biology) using questionnaires. The results indicate that when teaching mathematics and biology, insufficient attention is paid to the acquisition of functional and applicable knowledge, that the use of students' higher thinking processes are not sufficiently engaged in the teaching process and that modern approaches to assessing the acquired knowledge are also rare<sup>75</sup>. The study has shown that the following are relatively rare in classrooms: during the lesson, the teacher encourages and praises the work of students; the teacher connects the content from one subject with the content from other subjects; the teacher asks the students to state how and where they can apply what they have learned in the lessons; the teacher tells the students what are the good, and what are the bad sides of their work; when a student does not understand the question, the teacher articulates it in a different way, so that it becomes clearer and more understandable, etc.

A poll of citizens' opinion shows that almost 80% of citizens are satisfied with the quality of educational services provided by primary schools<sup>76</sup>. Compared to other parts of Serbia, the greatest satisfaction with the services provided by the primary schools is visible in Belgrade. The citizens identify overwhelming curricula (44%), the poor condition and obsolescence of the equipment

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<sup>74</sup> Marusic Jablanovic M., Gutvajn N. and Jaksic I. (editors) (2017), TIMSS 2015 in Serbia. Belgrade: Institute for Educational Research (IPI).

<sup>75</sup> Policy brief: Improving educational effectiveness of primary schools (2017)

<sup>76</sup> Citizens' views on satisfaction with pre-school and primary education services in Serbia: Summary of research results (2017). USAID, European Movement, European Policy Center.

and technology (29%), as well as outdated curriculum (29%) and bad assessment system (27%) as the biggest problems in the work of primary schools

**The coverage of basic education** in Serbia is almost complete according to the data of the SEDS<sup>77</sup>. In school year 2016/2017, 97.9% of the children were enrolled in primary school at the age predicted by the law as school age. Thus, the minimum target value from the SEDS is practically achieved - 98% (ideally, the coverage would be 100%, given that primary education is mandatory). SEDS also aims to ensure that dropout from primary education to be no higher than 5% of the generation. Projections based on the data provided by the SEDS point to the conclusion that the dropout figures are within that scope. However, the methodology for calculating the dropout figures is not optimal (the difference in the number of students at the beginning and at the end of the school year), nor is the practice of registering the number of students by the institutions quite reliable, so that there is no valid data on the dropout rate from the primary education system .

PRIMARY EDUCATION			
Indicator	Baseline value 2011/2012	Target value SEDS 2020	The latest reported value (2016/2017)
Primary education coverage rate	95.3%	minimum 98%	97.9%

The results of the MICS 2014 study also point to an almost universal coverage of primary education. Of the total number of children in Serbia who are at primary school age, 97% of children attended the first grade of primary school. The highest number of primary school age children attended school (either primary or secondary) - the adjusted net attendance rate was 98.5%. At the level of the entire population, the main 4% of children from the poorest quintile of the well-being index were outside of the education system.

The results of the MICS 2014 study show that most of the children from the Roma settlements at primary school age attend school (85%), while 15% of children at primary school age are not in the education system. A regional survey on the situation of Roma in the Western Balkans from 2017 shows similar data - 84% of children from Roma settlements attend primary education. According to the MICS 2014 study, lower attendance is present in children living in households of the poorest quintile of well-being (66%), as opposed to children living in the households of the richest quintile of well-being (97%). The percentage of children outside the system is high in children aged 6 (31%), which indicates that many Roma children enrol in school on time. This percentage is lower in children aged 7-9, which corresponds to the second, third and fourth grade of primary school. As children move to higher grades, the percentage of children outside the education system is again higher.

The completion rate of primary education at the national level according to the latest available data in the school year 2015/2016 was 94.8%, which is a small drop compared to the usual rate of over

<sup>77</sup> The coverage of education is the ratio of the number of students enrolled in a certain level of education and the appropriate age group for that level of education.

96% (e.g. 2011/2012 - 96.6%, 2014/2015 - 96.5%). According to the SEDS methodology, this rate is calculated as the ratio of the number of students who have completed the final grade of a certain level of education and the age group of the age foreseen for completion of a certain level of education. The SEDS sets as a goal a minimum of 93% of the generation to complete the primary school – this is an indicator that follows the generation, which is not completely comparable with this calculated school completion rate. The MICS 2014 survey shows that the completion rate for the primary school is 93.4%. This survey, based on the collected data, provides an assessment that 98% of children enrolled in the first grade eventually reach the last grade of primary school.

According to the MIKS 2014 data, the primary school completion rate for children living in Roma settlements is 64%. The percentage of children from Roma settlements who have enrolled in the first grade and reaches the last grade of primary school is 77%.

The network of educational institutions in Serbia does not comply with the changed demographic picture, that is, with the significant drop in the number of children/students, and in this sense inadequate network of institutions contributes to the **lower efficiency of the entire education system**. The large demographic decline in Serbia was reflected in the decrease in the number of students, but not in a proportional decrease in the number of schools in primary education. Compared to 2000, in school year 2017/2018 in primary education there were 22% students less and 20% classes less, but only 7% schools less (main and branches). The average size of the classes remained unchanged - around 22 students per class. Data from school year 2015/2106 show that 400 or less students attend 49.2% of primary schools in Serbia, and as a rule they are not the only schools in the territory of local self-governments. Small-scale schools are the most represented in Vojvodina, followed by Central Serbia and finally the City of Belgrade. Separate primary schools classes attended by students of different ages are rarer in Vojvodina and Belgrade than in the rest of Serbia.

A network of primary schools that is not adapted to the demographic decline causes two major difficulties. First, there is a large number of small primary schools in central city areas. Second, in certain remote rural communities, the teaching in regional schools is organised in so-called "combined classes" in which children attending different classes are grouped into one classroom taught by one teacher. Teaching and learning in such classes is a challenge and generally of a lower quality than in the usual structure of a class.

### **Progress achieved in the reporting period**

In the field of improving the quality of primary education one activity relates to the application of education standards and their improvement (PU-OŠ02). In this activity, the education standards<sup>78</sup> refer to statements on knowledge, skills and abilities that students should acquire up to a certain level in education. The standards articulate the most important requirements of school learning and teaching and show them as outcomes visible in students' behaviour and judgment.

Most of the student achievement standards for the end of compulsory education (in 10 subjects) were adopted in 2010, as well as the standards for the end of compulsory education for the native

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<sup>78</sup> There are other numerous quality standards in education - standards of quality of work of institutions, standards of competences for teachers and principals, textbook quality standards, etc.

languages of the national minorities (Albanian, Bulgarian, Hungarian, Romanian, Ruthenian, Slovak and Croatian language). In 2011, the National Education Council has adopted educational standards for the end of the first cycle of primary education. Standards of achievement for primary education of adults were adopted in 2013. Training on the application of standards after their adoption was organised by the Institute for the Evaluation of the Quality of Education in the entire territory of Serbia.

The most recent activities, in the reporting period, in the field of standards of achievement are the adoption of the Rulebook on General Standards of Achievement for the End of Compulsory Education for the Bosnian language in 2016<sup>79</sup>, the Rulebook on General Standards of Achievement for the End of Primary Education for a Foreign Language in 2017<sup>80</sup> and the Rulebook on General Standards of Achievement for Serbian Language as a Non-native Language for the end of the first and second cycle of compulsory education, general secondary education and basic adult education, also in 2017<sup>81</sup>. In support to the implementation, teachers' manuals for the use of foreign language standards<sup>82</sup> and standards for Serbian language as a non-native language<sup>83</sup> have been developed.

During 2017, the IEQE organised the revision of the General Standards of Achievement for the Subject Native Language for the End of Primary Education course in 2017. Positive opinions were received from the National Minorities Councils of and the proposal was submitted to MOESTD for adoption.

In the reporting period, the general standards of achievement for the end of compulsory education for ten teaching subjects (Serbian language, Mathematics, History, Geography, Biology, Physics, Chemistry, Music, Fine Arts and Physical Education) were revised by the National Educational Council of the Republic of Serbia at its session on November 15, 2016. The revised standards have not yet been adopted. The new LFES competence for the adoption of education standards was transferred to the MOESTD. As a reference institution in this domain, the Institute for the Evaluation of the Quality of Education has established professional teams for the revision of standards of achievement in primary education, which included experts from the IPA 2011 Project (Razvionica). The process of revision of the standards of achievement for the end of the primary school included adjustment and harmonization of standards with the concept on the basis of which the standards for the end of secondary school were developed. This implied the following: 1) defining the general interpersonal competences that students need to develop by the end of primary school; 2) formulating a description of general and specific subject competencies at

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<sup>79</sup> Ordinance on general standards of achievement for the end of compulsory education for the Bosnian language, "Official Gazette of the Republic of Serbia - Educational Gazette", no.13/2016

<sup>80</sup> Ordinance on general standards of achievement for the end of primary education for a foreign language, "Official Gazette of RS", No. 78 dated 18 August 2017.

<sup>81</sup> The Ordinance on general standards of achievement for the subject Serbian as a non-native language for the end of the first and second cycle of compulsory education, general secondary education and basic adult education was published in the "Official Gazette of the Republic of Serbia", no. 55/2017 dated June 2, 2017.

<sup>82</sup> Institute for the Evaluation of Education (2017). General standards of achievement for the end of primary education for a foreign language.

<sup>83</sup> Krajišnik, V. and Zvekić-Dušanović, D. (2017). General standards of achievement for the subject Serbian as a non-native language for the end of the first and second cycle of compulsory education, general secondary education and basic adult education. Teacher Manual. OSCE Mission in Serbia.

primary education level; 3) correcting the formulation of the statement of standards in accordance with the approach to learning and teaching developed within the Project Razvionica.

In the meantime, the development priority has been put on creating the curricula and teaching and learning plans towards a new paradigm oriented to learning outcomes and developing competencies. In the field of the curricula<sup>84</sup>, the new LFES has introduced the novelty that will drive the new curricula to be oriented towards outcomes and competences, and less towards content such as traditional ones were. Namely, the new elements that the curricula and the teaching and learning plans need to contain were prescribed. In addition to the goals by level of education and the aims of studying subjects (i.e. elective curricula and activities) by grades, it is stipulated that the curricula need to include general subject competencies, specific subject competencies, learning outcomes and educational standards (qualifications standards for the CSA). Instead of previous mandatory and recommended content, the new curricula need to include the key concepts of the subject content. The curricula also need to contain instructions for their didactic-methodical execution, instruction for formative and summative assessment of students and the manner of their adapting for students with disabilities, students with exceptional abilities, for education in the language of national minorities and adult education. These legal solutions have created the legal basis for the adoption of new curricula and plans for teaching and learning in a comprehensive manner, first of all in accordance with the pedagogical concept of curricula oriented towards outcomes, as planned by the Strategy for the Development of Education and the Action Plan.

At the end of 2017, a new Rulebook on the teaching and learning plan for the first cycle of primary education and the teaching and learning curriculum for the first grade of primary education were introduced, which will be implemented starting from the school year 2018/2019. The curriculum places the emphasis on teacher methods and ways of work. Through instructions and explanations in the curriculum itself and through instructions for the teaching of individual subjects, there are clarifications on what curricula oriented toward outcomes are and how to achieve them. This implies that active teaching methods and cross-curricular connections, as well as project teaching, are more commonly used in regular teaching. Project teaching is defined as a form of educational work that is mandatory for all students. It is planned in a total of 36 hours – one class once a week or two classes every other week; the teachers should discuss thematically with their students the content of various subjects, with the obligatory use of information and communication technologies.

At the level of primary education, starting from the school year 2017/2018 for the fifth grade primary education students, an amended and updated curriculum and plan for teaching and learning are applied. Modifications of the curriculum and the plan relate to the introduction of three teaching subjects as compulsory subjects, namely Informatics and Computing, Technology and Physical and Health Education. In support of the implementation of the reformed curricula and plans of teaching and learning, IIE has organised for 2618 teachers to be trained in the organization of for the application of the curriculum content of the new subject Physical and Health Education for the 5th grade of primary school. Also, 1,670 teachers have been trained in the application of the curriculum content of the new subject Technology for the fifth grade of

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<sup>84</sup> Among other, the term curriculum was replaced by the term teaching and learning curricula.

primary school. In the meantime, appropriate new curricula for other teaching subjects in the fifth grade have been adopted.

In the coming school years, the curriculum and plan for teaching and learning will be changed for all the other grades, successively, as required by their application, while following the progress of students attending the first or fifth grade through grades. The reform of the curricula and the plans for teaching and learning for primary education will continue in the next four school years, when students of all primary school grades will acquire primary education according to the new curricula and the plans for teaching and learning.

The support for the implementation of reformed curricula and the plans for teaching and learning is also provided through the professional development of teachers, of professional associates and of principals, especially in the field of teaching oriented toward learning outcomes. In this context, from April 2018, the Teacher Training Program is delivered for the teaching oriented toward learning outcomes. It is a three-day program (one day is an online training) aimed at developing competencies for planning and delivering teaching oriented toward learning outcomes and it includes: getting acquainted with the new concept of the teaching and learning programs; global, operational planning and preparation for class; methods, techniques and activities focused on learning and outcomes; project teaching; entrepreneurship; monitoring and evaluation of learning. By mid-May 2018, 215 trainings were delivered, during which 6,389 trainees were trained. The plan is to train about 20,000 teachers, professional associates and principals by the end of 2018.

The recent monitoring of the application of educational standards was achieved through the external evaluation of schools through monitoring the achievement of standards in the areas of the School Curriculum and the Annual Work Plan, Teaching and Learning and Educational Achievements of Students. This does not represent a sufficient level of monitoring of such an important segment of education, so additional design and planning of monitoring of the execution and the effects of the new learning plans and curricula (and educational standards) is needed in order to plan further support for their implementation and/or correction of program documents.

The Action Plan for the implementation of SEDS as one of the actions at the level of primary education is determined by the Evaluation of Educational Achievements of Students (PU-OŠ05) through the organization and execution of quality evaluation systems (national and international), through the development of new instruments for evaluating and through the development of teacher training programs for assessing students' achievements.

For the first time since 2004, during May 2018, one national testing of students in primary education was conducted on primary school students of the seventh grade. The test was conducted on a representative sample of students from 148 primary schools in three subjects: Mathematics, Physics and History. In the coming period, data analysis will provide very valuable information on the quality of student achievement at the national level.

In 2017, a pilot test of four inter-subject competencies was conducted on a sample of 16 schools and it encompassed primary school students of the seventh grade (and secondary school students of the third grade). These are the following competencies: Problem Solving; Digital Competence; Entrepreneurship and Entrepreneurial Competence and Responsible Attitude towards the Environment.

Since 2003, Serbia has been regularly participating in the most important international studies on student achievements - TIMSS and PISA<sup>85</sup>. Serbia has participated in the latest TIMSS 2015 study cycle and is currently participating in the TIMSS 2019 cycle (in 2018, the Institute for Educational Research has conducted a test) - the results of the research are expected at the end of 2020. During May 2018, the PISA research in Serbia was conducted by the Institute of Psychology in over 220 secondary schools. For the first time, this research has been conducted entirely on computers, making Serbia one of the countries that are conducting this research in the most modern way. The results of the PISA 2018 research are expected at the end of 2019. It is planned that Serbia will take part in other important international research.

IEQE develops new evaluation instruments each year (around 250 tests annually). The trial final exam tests and final exam tests for 8th grade students in the Serbian language and the languages of national minorities are prepared every year. This also includes qualification exams and test qualification exams for students with special abilities for computer science and computing. Periodically, initial and final tests for students of other grades are being developed (in 2015, for students in the 4th, 6th and 8th grades, in 2016 for students in the 6th and 8th grades, and in 2017 for the students in 5th and 7th grade<sup>86</sup>). The primary purpose of the initial testing is that teachers, analyse students' results to identify areas in which additional support is needed in order to achieve the expected learning outcomes expressed through standards of achievement.

IEQE has developed teacher training programs for assessing students' achievements, accredited in the Catalogue of Continuing Professional Development of Teachers, Educators and Professional Associates for the school year 2016/2017 and 2017/2018: School Assessment in primary and secondary school 1, School Assessment in primary and secondary school 2, and Application of knowledge tests in primary and secondary school. During the reporting period, over 1,500 teachers have attended one of these trainings. The improvement of teachers for better evaluation and assessment of students' knowledge is especially important in the context of analyses that identify problematic practices in this segment of teaching (almost half of the students achieve excellent grades at the end of the eighth grade, while every fifth student has all the average of 5, although the average achievement of the holder of the "Vuk Karadzic" diploma is higher than the national average, in some districts, some holder of the "Vuk Karadzic" diploma do not even reach the national average).

One of the central points in evaluating student achievement is the final exam at the end of primary education and therefore the SEDS AP defines the analysis of experience and improvement of the final exam in primary school (PU-OŠ07) as one of the activities. The final exam was first conducted in 2011, and since 2014 students have passed the exam with three knowledge tests: in Serbian, i.e. native language, mathematics and a combined test (tasks in biology, history, geography, physics and chemistry). For the first time, the final exam was also passed in the Bosnian language in the school year 2016/2017- the students have achieved good results.

Based on the results of the final exam, the IEQE conducts an analysis and compiles annual reports on the results of the final exam at the end of primary education, as well as annual reports on the

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<sup>85</sup> Except for the cycle PISA 2015

<sup>86</sup> Since 2017, tests have been conducted for students in secondary schools as the basis for preparation of graduation exams. Thus, a mathematics test for the first and third grade of secondary school was developed.

achievements of national minority students. The final exam is designed to have three functions: the certification, selection, and evaluation functions. The final exam data, however, cannot be used as a measure of quality of achievement at the national level without major reservations<sup>87</sup>. The results of the final exam are more informative when it comes to fairness regarding the quality of educational achievements. The comparison of results in the report is based on the data provided for the level of administrative districts and municipalities, for boys and girls and for national minorities.

The IEQE prepares an annual Report on the Results of Assessment Quality Control. The survey is conducted on a selected sample of schools and provides information on the regularity of the exams (to what extent schools have the commissions complied with procedures for reviewing and evaluating tests). In this way, the assessment of the objectivity of the assessment determines the level of confidence in the results of the final exam. After the exam, each school receives a report on the results of its students on the final exam (school report) and can compare the achievements of its students with achievements of students at the level of the municipality, the district, the school administration it belongs to, and the national average. In addition, the data allow insight into the achievements of students in different classes, and one of the analyses focuses on determining the relationship of achievement with grades at the end of the seventh and eighth grades. At the same time, schools receive information on students' achievements by areas, standards and levels of achievement. In order to ensure the quality of tasks and tests, working groups for designing the tests receive a Report on the metric characteristics of tests and tasks. The report provides the information on reliability and informative nature of tests, but also on the quality of individual tasks (parameters of difficulty, discrimination, measurement errors, data irregularity, guessing).

Although in most schools the exam is organised in accordance with the procedures, the results of previous IEQE analyses indicate that there are problems during the examination, first of all in examining the tests, which can somewhat compromise the confidence in the results, that is, the reliability of the data. Students from several administrative districts continuously achieve the best results, although this cannot be expected in the light of the fact that the largest number of municipalities in these districts is classified as underdeveloped or devastated areas. Based on this, as well as on the report on the completion of the final exam, the Ministry of Education, Science and Technological Development is continuously working on improving the examination procedure in order to prevent situations that lead to questioning of the regularity of the exam and its results. Among other things, each year an expert instruction for conducting a final exam is issued, which specifies in detail the tasks, roles and responsibilities and procedures.

According to the work program and plan for 2018, the IEQE will deal with the analysis of the existing system of final exam in primary education and make a proposal for further development of this system.

The Action Plan for the Implementation of SEDS also defined the action of establishing a unique system of awards and rewards for students due to good educational achievements at the level of the Republic of Serbia (PU-OŠ08). There was no significant progress in this segment - there are

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<sup>87</sup> In order to be able to make a reliable assessment of students' knowledge in Serbia in, for example, Algebra and the function requires more tasks than there are in the final exam (5). The problem is even more pronounced in a combined test where 4 to 5 tasks cover the outcomes of the entire subject.

no advanced systems for assessing the knowledge of students that favour the quality of knowledge, and in that sense, not much has moved towards the development of excellence in education, which is the essence of this activity. In the context of current practice of evaluating educational achievements at both national and school level, rewarding students for good educational achievement was considered mainly from the point of view of better monitoring student achievements at national level competitions.

Data on students who won points at national level competitions were collected during the reporting period and they were evaluated in accordance with the Rules on enrolment in high schools. An overview of competitions was also made containing information about the student codes that were taken from the database for each individual student. At the end of 2017, the Expert Instructions on organizing competitions and examining primary and secondary school students were adopted, which regulated: goal, tasks, types and levels, organization and criteria of the competitions for primary and secondary school students, evaluation of students' achievements and rewarding, financing, tracking and reporting on the conducted competitions. In the monitoring and reporting plan, it has been established that the organizers submit a report to the Ministry on the conducted competition within seven days after the competition, on a form that is available on the official website of the Ministry.

In SEDS, educational work is explicitly stated as an integral part of education that is realized through the entire school life from teaching, extracurricular activities, the ethos of the school, and through the specific identity that the school develops. Also, the need to strengthen the educational function of the school which was neglected in the previous period is clearly emphasized, which is also in the Action Plan (PU-OŠ06).

The strengthening of the educational function of the school is based on the Law on the Foundations of the System of Education and the Law on Primary Education, in which the school program affirms partially neglected school activities, which relate to the realization of both the teaching and the free activities, as well as the activities related to cooperation with family, local institutions, sports and cultural activities, and the like.

The strengthening of the educational function of the school can also be considered by focusing on the development of inter-curricular competences in the new LFES. Among them, communication, cooperation, responsible participation in a democratic society, responsible attitude towards health and responsible attitude towards the environment have a more educative character. The introduction of health education has a special place in the new teaching and learning plans and programs (as part of Physical and Health Education). In this course, the students will learn about healthy lifestyles, proper and healthy nutrition, and so on.

The British Council in Serbia is implementing the project of the *Schools for the 21<sup>st</sup> Century* - this is a regional support program for the capacity building of schools in the countries of the Western Balkans, to enable its students to acquire skills that are essential for achieving a positive contribution to the culture and the economy of the 21<sup>st</sup> century (digital skills, problem solving skills and critical thinking, which are essential for a successful career in the workplace or for continuing education). 10 primary schools in Serbia are taking part in this pilot project.

In the previous period, the MOESTD has undertaken significant activities in the field of prevention of violence in schools. Through numerous trainings, tens of thousands of students, teachers and parents have been trained in the following activities: Strengthening the capacity of schools to recognize and respond to child and youth trafficking situations; Strengthening the capacity of schools to prevent digital violence; Strengthening the capacity of schools to prevent violence in sports activities; Prevention of gender-based violence; Prevention of violence and discrimination in schools in multicultural environments; Strengthening the support system for parents, students and teachers in protecting students from violence in schools (SOS hotlines for reporting violence).

Fostering a democratic culture in schools is a project (2017-2019) that seeks to improve the quality of education by fostering a democratic culture, using anti-discriminatory approaches based on the Council of Europe standards and practices. The main project activities include the implementation of a framework of competences for democratic culture and human rights education in the school environment.

The new LFES also insists on increasing the accountability of institutions and employees, as well as of the parents and students. Thus, the parent, or other legal representative of the child is responsible, among other things, to take an active part in all forms of educational work with the student at the invitation of the school. An educational disciplinary procedure for a serious violation of student's obligation shall be initiated no later than eight days after the day it has been established. The procedure is initiated and managed by the principal and ends with a decision, after an intensive disciplinary work. The measure can be pronounced only if the school has intensified the disciplinary work, and if the disciplinary work is effective - the procedure will be terminated. The measure is pronounced in the school year in which the violation was committed. The school, along with the pronouncement of the educational or educational-disciplinary measure, determines the student's duty to perform community service or humanitarian work in accordance with: the severity of the violation, the psycho-physical and medical ability, the age and the dignity of the student. The work takes place in school premises or outside the premises with the supervision of a teacher or a professional associate

It is also planned to adopt regulations that will regulate the issues of importance for organising excursions and lessons in nature, the regulation of the work of school libraries as owners of cultural activities of the school.

Given that the enrolment rate of primary education is high, the SEDS and the Action Plan emphasize the reduction of student dropout (PU-OŠ04), which is much more present among the vulnerable groups. Therefore, in recent years, additional attention has been paid to the prevention of student dropouts. With the amendments to the Law in 2013, the schools have become obliged to incorporate dropout prevention measures into their development plans. The new LFES from 2017 determines that the school provides additional support to children and students who are at risk of early dropout, that is, it ensures the developing, adoption and execution of the individual education plan. LFES also regulates the obligation of the school (and deadlines) to notify the parents if the student does not attend classes and in case of their inadequate response, to notify the local self-government and the competent institution of social protection.

Although official SEDS data show that the primary education coverage rate in Serbia is very high, the assumption is that the real rate is somewhat lower due to different practices in schools in reporting data on the number of students. This applies in particular to drop-out rates for which various expert analyses find are higher than the official data. A more reliable monitoring of dropping out is a priority that will be addressed by achieving the full functionality of a single information system in education and by the introduction of a unique education number.

In the area of student dropout prevention, new approaches are being developed and piloted. Within the project "Prevention of student dropout from the education system of the Republic of Serbia"<sup>88</sup>, mechanisms for early identification of children at risk of dropping out, for the response and implementation of preventive measures and intervention at the school level have been developed. The focus is on the local integrated, inter-sectoral approach to preventing the student dropout, developed in cooperation with international organizations and civil society organizations.

The work of pedagogical assistants contributed to increasing the coverage of Roma children by education. There are currently 175 pedagogical assistants in the education system - in pre-school institutions there are 35, while others are engaged in primary schools. Their number is currently insufficient; therefore 50 new teaching assistants will be hired in the next period. MOESTD also works on the description of their jobs, the preparation of a network of pedagogical assistants and instruments for measuring their results by a bylaw.

In terms of the efficiency of the primary education system, SEDS AP defined the optimization of the primary schools network (PU-OS03) as an important activity. The Law on the Foundations of the Education System from 2017 has provided new solutions regarding the establishment of a network of public pre-school institutions and public primary schools. It has been established that documents on networks of public pre-school institutions and acts on networks of public primary schools are adopted by the local government units based on the criteria established by the Government of the Republic of Serbia. These documents are defined as planning documents for planning their spatial distribution according to their type and structure, and not as documents that only list the current situation. Local self-government units have a one-year deadline to pass these documents from the date of establishing the criteria. In the event that the local self-governments do not pass the documents within the prescribed deadline or they do not comply with the prescribed criteria, the documents will ultimately be provided by the MOESTD.

At the beginning of 2018, the Regulation on the criteria for the adoption of the public pre-school institutions and the network of primary schools network document was adopted, which replaced the corresponding Regulation from 2010. Among the more important changes, the obligation of local self-government units is to draw up a study with a network development plan based on the trend of natural rise in the number of children and students, as well as migration movements in the local self-government unit for public pre-school institutions for a period of five years and for public primary schools for a period of four or eight years.

A feasibility study on the rationalization of the school network and the mapping activity of schools in Serbia was prepared in 2017. Based on the analysis of the legal framework and statistical data, different models of optimization have been proposed, with the ultimate goal of the new pre-

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<sup>88</sup> Partners in the project implementation UNICEF, Center for Educational Policies, MOESTD

university school network being to improve its efficiency and effectiveness without losing focus on the quality of education as well as improving equality, i.e. prevention of potential negative impacts on ensuring equality.

### SEDS AP execution table

Activity	Executed	Partially	Not executed	Deadline 2018+
PU-OŠ01 - Harmonization of laws and by-laws in the field of primary education with SROS		✓		No
PU-OŠ02 - Application of education standards and their upgrading		✓		No
PU-OŠ03 - Optimization of the primary schools network		✓		No
PU-OŠ04 - Reducing the student dropout rate during primary education		✓		✓
PU-OŠ05 - Evaluation of student educational achievements		✓		✓
PU-OŠ06 - Strengthening the educational function of primary school		✓		✓
PU-OŠ07 - Analysis of the experience and improvement of the final exams in primary schools		✓		No
PU-OŠ08 - Establishing a unique system of awards and rewards for students for good educational achievements at the level of the Republic of Serbia		✓		No

## General and Art Secondary Education

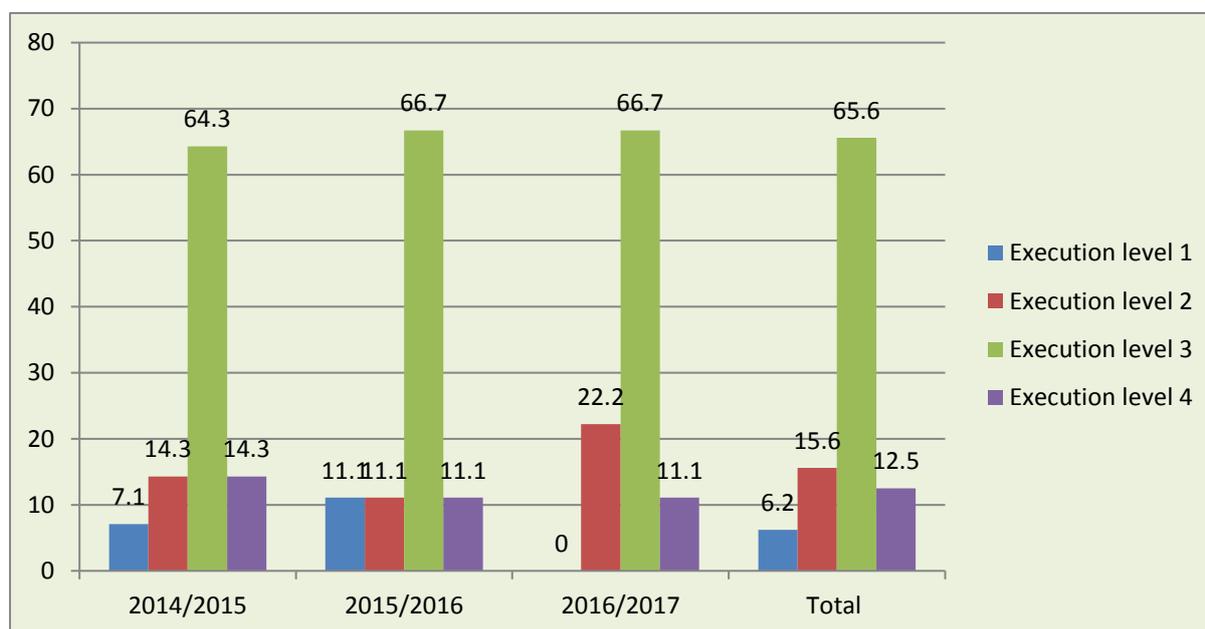
### Basic information on the current situation

At the level of secondary education, there is currently no national examination (final or graduation exams), but it is stipulated by the regulations. The General and Art Graduation Program was passed in 2017 and the Vocational Graduation and Final Examination Program were passed in 2018. The final exam will be taken for the first time in the school year 2019/2020 and the graduation exam will be taken in the school year 2020/2021.

National testing on a representative sample of third-grade students (about 6000 students) was conducted for the first time in May 2018 at secondary education level in 135 secondary schools in three subjects: Mathematics, Physics and History. Data analysis in the coming period will provide information on the quality of student achievement at the national level. Until then, however, there are no data on which the quality of student achievement could be assessed.

The results of the external evaluation of educational institutions are the main source of information on the quality of education at this level. The quality of work of primary schools is assessed on the basis of 30 quality standards related to the seven key areas of school work: School Program and Annual Work Plan, Teaching and Learning, Educational Achievements of Students, Student Support, Ethics, Organization of Work and Management and Resources. Due to the small number of art schools that are assessed during one school year, they are presented in annually in the IEQE

annual external evaluation reports together with secondary vocational schools. Therefore, only basic results for general secondary schools are shown here. In the previous three school years (2014/2015, 2015/2016 and 2016/2017) a total of 32 general secondary schools were evaluated.



The data show that the vast majority (almost 80% of general secondary schools) are classified as good (grades 3 or 4)<sup>89</sup> - in two thirds of schools, the overall quality of their work is rated by grade 3. On the other hand, every fifth general secondary school does not achieve the quality standards at a satisfactory level (grades 1 or 2), of which 4 schools have also received a grade 1 for the overall quality of their work. In relation to vocational schools, in the process of external evaluation of the general secondary schools, they rarely receive grades 1 and 2 and also grade 4.

Parallel to the general quality of the institution, the field of Teaching and Education is dominantly rated with grade 3, as an indicator of the achievement of the standard. An analysis of the distribution of the assessment of the quality of teaching and learning in secondary schools in different regions shows that at this level of education, teaching work is very uneven. The results of the assessment show that there are visible differences in the quality of teaching within one school administration, and also between school administrations.

IEQE conducted a study in 2017 on the opinion of employees in general secondary schools on the quality, efficiency and relevance of the existing concept of general secondary school education<sup>90</sup>. The study involved 84 general secondary schools, with a total of 872 respondents (744 teachers, 72 professional associates, 35 principals and 21 vice principals). As special qualities of general secondary education, the employees see it as the best preparation of students for further education that it provides good general education to students that enables their success in competitions and provides a supportive environment for the development of their personality.

<sup>89</sup> The general quality of the work of the institution can be rated with 1, 2, 3 or 4, with being the 4 highest grade (the standard achieved to the greatest extent).

<sup>90</sup> MOESTD, LFES (2017). What is good in our general secondary school, and what needs to be changed? Attitudes of employees in general secondary school on the quality, efficiency and relevance of general secondary school education.

According to the employees in general secondary schools, the advantages that this type of school offers are the possibility of a good choice of profession, student activism, developing working habits and encouraging lifelong learning. In the eyes of the employees, general secondary schools foster good quality traditional education, but also modern approaches and innovativeness. On the other hand, it is important that every fifth respondent agrees that teaching in general secondary schools is predominantly lecturing, and that the curriculum is too extensive and that it is not adapted to the nature of these schools and the characteristics of students in terms of structure and content. Almost every fourth employee mentioned the quality of teaching methods as one of the major shortcomings in general secondary schools.

A study of employees in general secondary schools showed that one third of teachers in their work need support in adapting the teaching to the needs of students, that is, in the process of individualization and differentiation of teaching. The same percentage of teachers has problems with the use of ICT in teaching, and 40% of teachers have indicated the need for support in the implementation of thematic-problem teaching and the interdisciplinary approach.

Regarding the **relevance** of general secondary education, almost half of the respondents believe that general secondary schools did not lose their specific identity of institutions that prepare the students well for the university (47.5%), 41.4% of respondents partly agree with that, while every tenth employee believes that the general secondary schools have lost this distinction, which represents the basic field of relevance of general secondary education. The majority of respondents (69%) share the view that general secondary education empowers students to participate actively in social, cultural and scientific life, while 28% partly agrees with that, and 3% do not agree. In relation to this, 65% of employees believe that their school has established a continuous and rich cooperation with cultural, scientific and other organizations and institutions, so that the future cultural and intellectual elite has the opportunity to connect extracurricular knowledge and skills with the school knowledge.

When asked what general and interpersonal competences the teachers are best developing with their students, the results of the study have shown that general secondary school teachers best develop *a responsible attitude towards the environment, communication and cooperation and a responsible attitude towards a democratic society*.

Nearly 50% of the interviewed teachers expressed the need for support when it comes to developing students' *entrepreneurship and entrepreneurial competences*, 35% of teachers do not feel capable of developing students' *digital competences*, and 33% of respondents do not know how to develop students' *competences for life-long learning*.

In the Strategy for the Development of Education in Serbia until 2020, educational work is explicitly stated as an integral part of education that is realized through the entire school life from teaching, extracurricular activities, the ethos of the school to the specific identity that the school develops. Also, the need to strengthen the educational function of the school that was neglected in the previous period is clearly emphasized. The IEQE study on the opinions of employees in general secondary schools also focused on specific examples of improving the educational work. The most frequent way in which schools improve their education is the rich and varied offer of extracurricular activities both in terms of organizational forms and the content (sections, additional

classes, preparations for the competition, exhibitions, theatre shows, workshops, seminars, focus groups, debates, lectures from various fields, socially useful community service, study tours, excursions, field trips, visits to book fairs, science fairs, museums, humanitarian actions, exchange with other schools ...).

Cooperation with parents, peer cooperation, especially with homeroom teachers and the pedagogical-psychological service, cooperation with students, group and team work, joint participation of teachers and students in some activity are the second example of improvement of educational work of the school. Quality, contemporary teaching that involves modern forms, methods and means of work, active role of students, use of the Internet, correlation between subjects, joint interdisciplinary projects, in a large number of cases, arise as an example of improving the educational work of the school. The role of Civic Education is especially emphasized. Ethos of the schools and the organization of work, in the opinion of a number of teachers, significantly improve the educational function of the school. Continuous monitoring and support to students through a consistent implementation of the system of rewards and punishments are also greatly cited as examples of improved educational work. Special preventive programs and intensified educational work, which most often involve more engagement of the pedagogical-psychological service, with frequent discussions with students and parents in our schools are frequent examples of improving the educational work.

On the basis of the obtained results it can be concluded that the measures envisaged by the Action Plan for implementation of the strategy of strengthening the educational function of the school are partly accomplished, but it is also important to include students' perspective in a more objective way to achieve the educational function of general secondary schools.

**The coverage** of secondary education in the school year 2016/2017 was almost 90% according to the SEDS data. SEDS sets a goal that at least 88% of the generation enrolls in secondary education<sup>91</sup>. Of this volume of 90%, general secondary schools and art schools are attended by 24.9% of the students. The rate of continuing education from secondary to higher education in the school year 2016/2017 was 64%<sup>92</sup>. The rate of continuing education in the school year 2016/2017 for students who have graduated from a general secondary school was 91.8% - SEDS set the target to be 95% by 2020 for the general secondary school graduates.

In the IEQE study of the opinion of employees in general secondary schools, 16.4% of the participants agreed that one of the important shortcomings of general secondary education is the small coverage of students from vulnerable groups and an undeveloped system of support and of providing conditions for their education - 45,6% of the respondents partly agree with this answer, and 38% of the respondents do not agree with this answer.

General secondary education is the most economical program in secondary education (it requires the least dividing into groups). The average number of students in a general secondary school class is 26.

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<sup>91</sup> These are different, yet comparable indicators for making conclusions on coverage rates.

<sup>92</sup> The indicator was calculated as the number of frustrations who completed high school the same year when they enrolled higher education in relation to the number of high school students who completed the school in the same year.

The drop in the number of students in secondary education was not followed by a decrease in the number of classes and schools. Compared to 2000, the number of students in the school year 2017/2018 is 23% lower, the number of classes is lower by 11.5%, and the number of schools has increased by almost 7%. This resulted in a decrease in the average number of students per class, from 28.6 in 2000 to 24.9 in 2018. This average is slightly higher in general secondary schools and it is 26.3.

The secondary school network does not correspond to the enrolment trends and students' wishes, and therefore there are major deviations in the use of space. There are a large number of schools with excess space and, on the other hand, general secondary schools and several other types of secondary vocational schools that lack space.

### **Progress achieved in the reporting period**

SEDS AP determines the completion of existing educational standards and their application (PU-SO02) as a separate activity. General standards of achievement for the end of general secondary education and secondary vocational education in the field of general education were passed in 2013<sup>93</sup>. Standards are specifically defined for the following subjects: Serbian Language and Literature, Mathematics, History, Geography, Physics, Chemistry, Biology, Foreign Languages (English, Russian, French and German) and are described in three levels of achievement. Being an important support in the application of standards, teachers' manuals for all subjects were published in 2015 during the reporting period.

A teacher training program for the application of educational standards for the end of secondary education was developed "Training of employees in secondary schools for the application of general standards of achievement for the end of general secondary education and secondary vocational education and training in the field of general education." The training lasted 16 hours of professional training and it was delivered in 3 parts: the introductory part of the training (2 hours) was delivered live in the school, the general part of the training (7 hours) was delivered during one week on an Internet platform, the subject part of the training (7 hours) was delivered on an Internet platform after the so-called General Week and lasted one week. The two training cycles, in 2016 and 2017 were attended by 6551 teachers (teachers, professional associates and principals), of which 3,878 general secondary school teachers and professional associates.

The latest activities in the field of developing standards of achievement are the adoption of the general standards of achievement for Serbian language as a non-native language for the end of the first and second cycle of compulsory education, of general secondary education and of primary adult education (in 2017). In order to support the implementation, a teacher manual for the use of the standard for Serbian as a non-native language was developed<sup>94</sup>.

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<sup>93</sup> Standards were developed in the period from 2010 to 2013 within the project of the Ministry of Education, Science and Technological Development Support to the Quality Assurance of the Final Level Examination System at the National Level in Primary and Secondary Education (IPA 08) funded from EU funds and the Republic budget Serbia. This manual was created within the same project.

<sup>94</sup> Krajišnik, V. and Zvekić-Dušanović, D. (2017). General standards of achievement for the subject Serbian as a non-native language for the end of the first and second cycle of compulsory education, general secondary education and basic adult education. Teacher Manual. OSCE Mission in Serbia.

At the level of general secondary education, the reform of curricula and plans for teaching and learning is under way - a curriculum and a Plan of teaching and learning for general secondary education have been prepared. It's the first major change in the last 20 years. The main reform principles are: electoral (greater choice of electoral programs in order to better prepare students for continuing education, for the choice of profession, as well as greater student satisfaction with education); interdisciplinary (overcoming subject boundaries by linking different disciplines into meaningful units for the development of students' functional knowledge and competencies); gradual in the introduction of changes (i.e. gradual preparation of schools, teachers and students for the new curricula). The innovation of the curriculum goes in a direction for the teaching to become oriented toward the outcomes and the development of competences.

The new curricular concept of general secondary education introduces a number of new elective programs: Modern Technologies and Entrepreneurship; Applied Science; Education for Sustainable Development; Health and Sport; Basic Geopolitics; Economy and Business; Methodology of Scientific Research; Language, Media and Culture; Religions and Civilizations; The Individual, the Group and the Society; Art and Design. Elective programs will be selected in the first and third grades and will be taught for two or four years. They will be programmed in relation to the resources of the school and will be focused on achieving outcomes and developing competencies through various active methods such as project teaching, research work, and the like. Under the new programs, students will have 33 classes per week (so far it was 31 classes).

In general secondary schools, the traditional courses also introduce teaching oriented towards outcomes, that is, teaching focused on the development of student competences. A greater number of laboratory exercises and classes of project teaching (which is a solution from the new curriculum) should contribute to this.

As with the reform of plans and curricula in primary education, the reform at the general secondary school level foresees extensive teacher training. It is the training for the implementation of teaching focused on learning outcomes and developing competencies; application of an integrated, thematic and interdisciplinary approach to teaching and learning; evaluation and assessment.

Further modernization of general secondary education is also the introduction of special classes in general secondary schools in which students with special abilities in computing and informatics acquire secondary general education according to a special curriculum - Rulebook on the general secondary school curriculum for students with special abilities in computing and informatics.

An international graduation program was introduced in three public general secondary schools in school year 2017/2018. The Rulebook on the International Graduation Exam Program is being developed.

AP SEDS has determined the development of a final examination system in secondary education as an important activity: general, art and vocational graduation (PU-SO05) and related development in the field of evaluation of student education achievements (PU-SO04). The establishment of a working group for the concept of final exams in secondary education (October 2016) was one of the first steps. This concept was made in March 2017 and at the end of 2017 the General and Art Graduation Program was adopted (the Vocational Graduation and Final Examination Program was adopted at the beginning of 2018). The program determines the goal,

content and structure and other important elements of the graduation exam. Students who complete the four-year general secondary education, art education or secondary vocational education will take graduation exams starting from school year 2020/2021. The process of organizing and executing graduation exams will be implemented through a project funded by the EU from IPA 2014 funds (components related to the preparation of tests, informing the educational public, preparation of higher education institutions, collections of tasks for practicing the graduation exams, information system for exam support, etc...).

In the meantime, working groups have been formed to prepare initial language tests and for writing mathematics problems. Based on the analysis of curricula, standards of achievement and subject competencies, illustrative tasks were prepared, which were prepared for piloting. After reviewing the material, the highest quality tasks and problems were selected and 96 tests were developed in Serbian, i.e. native language and mathematics for the 1st and 3rd grade secondary school students. At the same time, native language tests were prepared for students from national minorities, who attend classes in their native language. The schools downloaded the tests for initial testing using a unique code and a PIN code from the portal <http://sr-skole.ceo.edu.rs>. The students have been tested in most schools at the same time to ensure that they have equal working conditions. Out of more than 30 schools (Belgrade, Valjevo, Novi Sad), about 12,000 tests have been taken from the initial testing of third-grade students. A working group was established for coding student responses and a material for processing student achievement was developed.

In addition to these activities, it is important to note that national testing of students in secondary education was conducted for the first time in 2018. The test was conducted on a representative sample of third-grade students from 135 secondary schools in three subjects: Mathematics, Physics and History. Data analysis will provide in the coming period very valuable information on the quality of student achievement at the national level. The development of a procedure for ensuring the quality of testing instruments and analyses quality is being developed.

After 16 years, in September 2015, a new Rulebook on Student Assessment in Secondary Education was adopted, which sets out the method, procedure and criteria for assessing the success in individual subjects and in conduct, and numerous other issues of importance for student evaluation.

During May 2018, the Institute of Psychology conducted a PISA research in over 220 secondary schools in Serbia. For the first time, this research has been conducted entirely on computers, making Serbia one of the countries that are conducting this research in the most modern way. The results of the PISA 2018 research are expected at the end of 2019. It is planned for Serbia to take part in other important international research. In cooperation with the PISA Council, with the expert and financial support of IEQE, four school manuals with examples of good practice for evaluating key competences for lifelong learning have been developed. In 2018, the manuals will become available to schools in electronic format.

In 2017, for the first time, pilot testing of four inter-subject competences was carried out -, 6 secondary schools participated at the level of secondary education and it involved students of the third grade. It is about the following competencies: Problem Solving; Digital Competence;

## Entrepreneurship and Entrepreneurial Competence and Responsible Attitude Towards the Environment.

Significant progress has been made in the implementation of specific evaluation systems in art education (PU-SO06) (no specific evaluation systems are defined in different domains of art education). They have improved the qualification examination in music schools and arts schools in terms of prescribing the procedures. Coding was introduced wherever it was possible and segments of the exams and the results students achieved on them were separated. This activity requires the definition of educational outcomes in this type of education and the engagement of experts in its implementation.

The advanced admission exam procedures are contained in the Professional Instruction for the enrolment of secondary school students that also regulates the procedures for conducting the entrance examination for enrolment in specialized schools (mathematics and philological general secondary school, general secondary school classes for students with special abilities in physics and computing, and informatics, classes where part of teaching is in a foreign language, music and ballet schools and fine arts schools). In order to achieve full equality in education, the Guidelines for Adapting the Entry Exam for Secondary School were also adopted for students who need additional educational support, on the basis of which the school organizes and implements the entrance exam for students who are subject to additional educational support due to disturbances in development and disability.

In SEDS, educational work is explicitly stated as an integral part of education that is realized through the entire school life from teaching, extracurricular activities, the ethos of the school, and through the specific identity that the school develops. Also, the need to strengthen the educational function of the school which was neglected in the previous period is clearly emphasized, which is also in the Action Plan (PU-OŠ06). The last systematic act that deals with the educational function of the school is the 1991 document entitled The Basics of the Educational Work Program in Secondary School, and since then, only the 2015 Rulebook on the Basics of Educational Program relating to Schools with Dorms and Student Homes was adopted.

Strengthening of the educational function of the school can also be considered by focusing on the development of interpersonal competences in the new LFES. Among them, communication, cooperation, responsible participation in a democratic society, responsible attitude towards health and responsible attitude towards the environment have a more educative character. In the new curricula and plans for teaching and learning, the introduction of health education (as part of the course Physical and Health Education) has a special place. In this course, students will learn about healthy lifestyles, proper and healthy nutrition, and so on.

In the past period, MoESTD has undertaken significant activities in the field of prevention of violence in schools. Through numerous trainings, tens of thousands of students, teachers and parents have been trained in the following activities: Strengthening the capacity of schools to recognize and respond to child and youth trafficking situations; Strengthening the capacity of schools to prevent digital violence; Strengthening the capacity of schools to prevent violence in sports activities; Prevention of gender-based violence; Prevention of violence and discrimination

in schools in multicultural environments; Strengthening the support system for parents, students and teachers in protecting students from violence in schools (SOS hotlines for reporting violence).

During the last two school years, 40 schools have completed three weeks of teaching in the framework of the project "Improving the quality of teaching - developing key competences through a multidisciplinary approach – with Collaboration to Knowledge". A Handbook "With Collaboration to Knowledge" was prepared as a guide for the implementation of activities involving these 40 schools.

The Institute for the Advancement of Education within the project "Strengthening the Educational Role of the School" has launched a competition for the selection of examples of successful extracurricular activities in primary and secondary schools and educational activities in student homes in Serbia. Examples include the various activities, programs, activities, projects and initiatives that are fostered in the students' school/home to achieve the educational role. The results of the competition will be published on the Institute website in June 2018.

Fostering a democratic culture in schools is a project (2017-2019) that seeks to improve the quality of education by fostering a democratic culture, using anti-discriminatory approaches based on the Council of Europe standards and practices. The main activities of the project include the implementation of a framework of competences for democratic culture and human rights education in the school environment.

The establishment of a unique system of awards and rewards of students and public system of funds and foundations for encouraging endowed and talented students was achieved by rewarding the secondary school students for their achievements in renowned national and international competitions within the annual competition announced by the Fund for Young Talents of the Republic of Serbia. The basic goal of the Fund for Young Talents is to stimulate and evaluate the outstanding achievements of the young talents of the Republic of Serbia in various fields, in terms of their further theoretical and professional development, as well as professional progress. The Ministry of Education, Science and Technological Development also awards scholarships to young researchers that are in the final high school grades, who have won one of the first three places at the International Olympiads of Knowledge. In connection with this, it should be noted that new criteria for financing of the competition have been introduced, as well as a reporting form that enables a better analysis of the results achieved.

The optimization of the secondary school network (PU-OS03) has started with the application of the Rulebook on the Price of Services, which led to the rationalization of the number of employees in secondary schools. When planning student enrolment in the school year 2016/17, the criteria for establishing a department were applied in accordance with the law and the Professional Instruction. In mid-March 2018, the Decree on the Criteria for the Adoption of the Act on the Network of Public Secondary Schools was adopted. Nine criteria were established: economic, equality, accessibility, organizational, status, demographic, geographic, cultural, optimization. The established criteria enable the development of a more streamlined network of secondary schools, they also enable the merging of small schools into one institution (the minimum number of students is set at 200, conditionally) and the establishment of educational centres. The Regulation on the Criteria for the Adoption of the Act on the Network of Public Secondary Schools of the

Republic of RS was adopted at the session of Serbian Government ("Official Gazette of RS", number 21/18), which is applicable from March 27, 2018. Also, field analysis was carried out and the drafting of the Act on the network of public secondary schools in the Republic of Serbia and the Decision on the abolition and establishment of new secondary schools is in progress.

### SEDS AP execution table

Activity	Executed	Partially	Not executed	Deadline 2018+
PU-SO01 - Harmonization of laws and by-laws with the Strategy in the field of secondary general and art education	✓			No
PU-SO02 - Upgrading the existing educational standards and application	✓			No
PU-SO03 - Optimization of the secondary schools network		✓		✓
PU-SO04 - Evaluation of student educational achievements		✓		✓
PU-SO05 - Development of the final examination system in secondary education: general, art and vocational graduation exams	✓			✓
PU-SO06 - Introduction of specific evaluation systems in art education			✓	No
PU-SO07 - Strengthening the educational function of secondary schools		✓		✓
PU-SO08 - Establishing a unique system of awarding and rewarding secondary school students for good educational achievement at the level of the Republic of Serbia (organised by MOESTD)		✓		No
PU-SO09 - Establishment of a unified public system of funds and foundations for supporting endowed and talented students		✓		No

## Secondary Vocational Education

### Basic information on the current situation

Secondary vocational education covers just over 70% of students. According to internal MOESTD data, in school year 2017/18, 152,723 primary school graduates have enrolled in four-year profiles of secondary vocational schools, 30,407 primary school graduates have enrolled in three-year profiles, while 66,078 primary school graduates have enrolled in in general secondary schools and art secondary schools. These data should be viewed in light of the fact that student enrollment in secondary education is still centrally planned and implemented on the basis of predetermined number of places for each school and specific educational profiles, although the enrollment policy for dual profiles is somewhat different and planning implies involvement of actors outside the education system and local consultation.

The Institute for the Advancement of Education (IIE) reports that in June 2017, 157 four-year and 102 three-year education profiles were available to students. An overview of the number of profiles by duration of schooling and the field of work is presented in the following table.

No.	Field of work	4-year	3-year
1	Agriculture, food production and processing	8	9
2	Forestry and wood processing	6	8
3	Geology, mining and metallurgy	8	12
4	Machine engineering and metal processing	26	28
5	Electronics	14	6
6	Chemistry, non-metals and graphic work	13	7
7	Textile and leather	7	6
8	Geodesy and civil engineering	5	9
9	Transportation	13	4
10	Trade, catering and tourism	5	4
11	Economy, law and administration	10	0
12	Natural sciences - mathematics (hydro-meteorology)	2	0
13	Culture, art, public information	24	0
14	Health and social protection	13	2
15	Other personal services professions	3	7
<b>TOTAL</b>		<b>157</b>	<b>102</b>

On the strategic and education policies plan, expectations from the vocational education system have not changed over the last decades - it is expected to play a major role in contributing to the economic development and prosperity. More specifically, secondary vocational education is not viewed merely as a functional measure for promoting economic goals, but also as part of the education system that has the potential to improve the transition from education into the world of labour and offer young people a perspective for career planning to find their own role in the society. In this sense, tendencies that aim at acquiring competences in a specific work environment

in vocational education are highly stressed, that is the strengthening of learning through work instead of learning that exclusively takes place in the school environment.

Secondary vocational education is still the most frequent choice of students from vulnerable groups, and the majority of Roma students are in technical schools - transportation, mechanical engineering, technological, textile processing and design, leather and hairdressing. They least enroll in general secondary schools (there are almost no students from vulnerable groups in general secondary schools), medical, chemical and pharmaceutical vocational schools, or in agricultural and food vocational schools. Nevertheless, the latest available data (from 2016) show that the implemented affirmative action measures yield results - in addition to increasing coverage, a significant number of Roma students are enrolled precisely in those areas of work and profiles that are considered the most attractive at the national level (health, trade, economy ) (Social Inclusion and Poverty Reduction Team, 2016).

When it comes to vocational education of members of national minorities in the school year 2017/2018, in Autonomous Province of Vojvodina, in 40 local self-governments (out of 45), that is, in 34 municipalities and six towns, there were 75 vocational schools and 11 mixed schools. Teaching in the languages of national minorities/national communities was organised in 44 vocational schools (in two schools in Romanian, 36 in Hungarian, three in Slovak, two in Croatian, and in one school there is a Ruthenian language class).

In addition to national regulations concerning dual education, in the European integration process Serbia has developed the Economic Reform Program (ERP) and the Employment and Social Reform Program (ESRP), which aim at more efficient planning and coordination of interlinked policies. These documents are particularly important in the context of the European Union accession, because labor-market-oriented education has priority, especially within the ERP, and thus gives education and other closely related policies a note of "compulsory", which, due to the "nature" of the negotiations with the European Union is lacking in the Negotiating Chapter 26 (Education and Culture).

### **The situation in the area prior to the implementation of the activities from the Action Plan**

Successful completion of any program within secondary vocational education should guarantee to students, and later to employers, the acquisition of necessary competences for performing work processes in a particular profession. However, research conducted in previous years indicates that the **quality** of secondary vocational education should be further improved. Thus, an IPSOS study<sup>95</sup> shows that in 2015, when the study was conducted, respondents perceived the secondary education curricula as obsolete and insufficiently applicable. According to citizens, the biggest problems with primary and secondary education in Serbia were related to the lack of acquisition of practical knowledge and of "soft skills". This opinion was shared by over half of the citizens of Serbia. Similarly, in a feasibility study on dual secondary vocational education in Serbia, it was concluded that, although the quality varies from school to school, the method of achieving students'

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<sup>95</sup> IPSOS, Social Inclusion and Poverty Reduction Team (2015). Education in Serbia. Citizens' opinion about the education in Serbia

professional practice within the framework of secondary vocational education programs is not adequate and does not lead to acquiring desired skills and the required competencies<sup>96</sup>.

When it comes to **fairness and coverage**, an assessment based on SEDS data was that about 16% of students between the ages of 15 and 18 had no formal qualifications due to early dropping out from secondary school, and that the rate of abandonment in general from secondary education was about 1.1%; if we only look at three-year education profiles where the most students from vulnerable groups usually are enrolled, the dropout rate was almost three times higher, 3.1% (annually). Earlier it was already mentioned that the official methodology of calculating students' dropout rates probably underestimates the correct numbers, so the assumption that the dropout rate is higher than the above is justified.

Also, the vocational education system has for many years been regarded as irrelevant. That is, there is a widespread assumption that the current system of secondary vocational education does not sufficiently provide the qualifications necessary for improving the economy and supporting the companies in their struggle to meet the future demand on the national and global market. Also, all the studies in this field highlight the incompatibility of youth competences and the needs of the labor market as one of the causes of high unemployment rates. Thus, for example, a survey of the Serbian Association of Employers showed that only 4.12% of young people think that they have the skills and the knowledge needed for a specific job, while as many as 86% of young people said they did not have practical knowledge (Serbian Association of Employers, 2014).

Also, on the relevance of secondary vocational education and the need to improve the system of planning enrollment in secondary schools, the following data was also reported: in 2014, the enrollment quota for the fields of work Economy, Law and Administration (which was almost filled) was 12,026 places, which is over 25% of places in all areas of work. At the same time, according to the NES data, in October 2014 (but also for a number of years before) the highest number of registered unemployed persons were classified in this occupational group - 81,472. On the other side of the extreme, the area of work of textiles and leather has been for years about 2.0% of the total enrollment quota (in 2014, 2.19% - 1.262 places), although sewing is among the five most demanded occupations (Velev, 2015).

The **efficiency** of the system was indicated by the fact that 64.2% of all secondary school graduates continue their education in the higher education program, while more than half of those who complete secondary vocational schools continue their education in the higher education program.

## **Progress achieved in the reporting period**

### **The quality of developing the curricula**

In order to eliminate criticisms of secondary vocational education related to the relevance of the curriculum, obsolescence and problems in assessing students' achievements it was envisaged that the curricula be developed or adapted to the standards of qualifications (PU - ST03), thus establishing a Catalog of Standards of Qualifications that is continuously updated. According to the Institute for the Advancement of Education, the curricula are developed on the basis of the qualifications standards and 71 curricula have been adopted so far compliant to this methodology.

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<sup>96</sup> GIZ (2016). Dual secondary vocational education in Serbia. Feasibility study.

As foreseen, the curricula have the compulsory and the elective parts. Entrepreneurship is a compulsory subject in each of these curricula based on the outcomes and standards of qualifications, and a "student company" program is applied as an extracurricular activity in more than 200 vocational schools. Student companies provide students with the opportunity to gain knowledge of market economy and entrepreneurship through the programs of the "Youth Achievements" organisation during a school year, and they manage their companies from the establishment to the company's report and closing of the company. The students are led by mentoring teachers who have been trained by this organization, accredited by the Institute for the Advancement of Education.

Teacher training is continuously carried out through various seminars from the IIE catalog and through international projects because the CSF is one of the priority topics of many donor organizations. Besides other donors, Serbia has continuous support from the EU in the promotion of the CSF; EU has invested € 25 million in support of vocational education.

The adoption of the Law on Crafts, the establishment of craft chambers and the introduction of master education in the Strategy was seen as a way to maintain craftsmanship and support the quality of such training (PU-ST02). This process has not been initiated as the development and adoption of legal regulations in this area, which is under the competence of the Ministry of Economy, is expected.

The Strategy also clearly states that all CSF elements will function harmoniously and that all participants in the process will contribute to quality, a clear division of roles and responsibilities is crucial (PU-ST09). In that sense, it can be said that cooperation has progressed both within the education system and with other sectors. More specifically, both institutions participated in all activities in accordance with their competencies, and the connection with organizations and bodies from the world of economy is gradually and formally regulated by the new laws. It remains to be seen how the Sectoral Council will work in the future and whether this type of co-ordination and cooperation between education and employers will be effective.

What is significant is that with the adoption of a new LFES both National Councils, the National Education Council (NEC) and the Vocational Education and Adult Education Council (VEAEC), can only give opinions and suggestions but they can no longer adopt certain documents. In the previous years, the procedure that connected IIE, IEQE, NEC and VEAEC when it comes to approving national plans and curricula was often a bottleneck.

### **Quality of program implementation**

Based on the Law on Dual Education, an accreditation model for employers will be developed, and the Serbian Chamber of Commerce (SCC) will be responsible for these tasks. For the purpose of full implementation of this law, the Serbian Chamber of Commerce will adopt the following general acts: the Act on the organization, composition and method of work of the Commission for determining the fulfillment of conditions for conducting learning through work with the employer; the Act on the delivery of training, the composition of the commission for the instructor license exam, the issuance of the license and the issued licenses registry; and the Act on the amount of training costs and passing exams for instructors. The development of trainings for instructors in companies is in accordance with the Law on Dual Education entrusted to the Institute for the

Promotion of Education and Training (Center for Vocational Education and Training of Adults). Bearing all the foregoing in mind, it can be assumed that the quality of the implementation of the program will be improved.

Exams and assessment are relevant not only to students, but also to the whole system. That is why establishing a monitoring and evaluation system of the CSF is one of the priorities until 2020 (PU-ST08). Thus, the assessment of vocational schools has been successfully implemented in all previous years. A relatively high percentage of vocational schools received the highest grade, especially in comparison with general secondary schools. Given the method of evaluation, whereby the quality of the work of the institution is first and not the quality of the curriculum itself, it is not possible to draw a conclusion on the individual profiles. Reporting about conducted external evaluation is carried out in accordance with the Rulebook, the school is first reported to, and then the aggregated data is published on the IEQE website.

The external evaluation of vocational schools has been carried out based on general standards, because the specific standards envisaged by the strategy have not yet been adopted. When reviewing the external evaluation methodology, which was used in the first cycle, there will certainly be several changes in order to more precisely define and cover all the specifics of vocational schools. It should be noted that the IIE prepared Additional Standards for the Quality of Work of Vocational Schools in 2015, but they have not been adopted. One of the main obstacles was the fact that the proposed number of additional standards was significant, which would mean that vocational schools have a much greater number of requirements they have to meet.

In the period from 2015 to 2017, IEQE, in accordance with the requirements of MOESTD, evaluated 21 education profiles in the system of secondary vocational education. All reports were submitted for further competence to the Ministry of Education, Science and Technological Development and the Council for Secondary Vocational Education and Adult Education. Each report was presented by the author to the Working Group on the issue of secondary vocational education (which was established by MOESTD and VEAEC) as well as at VEAEC sessions.

Final exams are currently the only national examinations that provide a picture of student achievements at the end of vocational education. The Action Plan combines several activities within the first action related to the standardization of exams (PU-ST01). Considering this complexity, the deadline for completion is scheduled for 2020, but it should be noted that important steps have been taken in the period since the adoption of the AP. Center for Vocational Education and Adult Education - Sector for Qualifications Development and School Network has developed a methodology of assessment based on competencies in vocational education. The methodology is the result of many years of research and gained experience through the execution of final and graduation exams as well as the applied assessment methods in the framework of educational profiles in the exam. 500 external examiners accredited by the Serbian Chamber of Commerce and the Serbian Association of Employers at the proposal of the IIE have been trained. The development of qualification standards enables the monitoring and objective assessment of student competencies within each qualification, but the full implementation of the National Qualifications Framework Law, which was adopted in April 2018, is still awaiting. This law establishes a unified and integrated national qualifications framework that includes all levels and types of qualifications, regardless of how they are acquired and regardless of the life period in

which qualifications are acquired. The qualifications in the SNCF are classified into eight levels and four sub-classes, and according to their type, they are classified into general, professional, academic and vocational qualifications. This law also establishes a system for classification of qualifications KLASNOKS that is in line with the International Standard Classification of Education. The law also envisages the education of the SNCF Council as an advisory body that provides recommendations on the process of planning and development of human potential in accordance with public policies in the field of lifelong learning, employment, career guidance and counseling.

#### *Coverage*

Measures to prevent dropouts and early school leaving have been developed in cooperation with the CEP and UNICEF for primary and secondary schools. What is missing most is the data on students and monitoring that would help timely response. Such measures require intersectoral cooperation, which is currently not sufficiently effective due to the capacities of the centers for social work and of the schools (PU-ST06). Also, the problem that is transferred to all levels of education, which diminishes the effectiveness of prevention measures, is the fact that the student-related section in the information system is still not functioning. The plan is for this section to be developed in 2018 and it should include the ability to monitor students during the education process. Given that the deadline for the implementation of the PU-ST06 by 2020, we can expect that the Unified Information System for Education (UISE) will be fully operational.

The Enrollment Rulebook for secondary school students enables the enrollment of Roma national minority students under more favorable conditions in order to achieve full equality in the access to education. This Rulebook prescribes criteria and procedures for Roma students at the level of secondary education, which means that the Roma national minority students who apply for enrollment in secondary schools under more favorable conditions are in the process of gaining full equality, the number of points attained for school success and the final the exam increases by 30 percent from the number of points they miss till 100 points. The application for enrollment in school under more favorable conditions is submitted in the primary school by the parent, or other legal representative of the student. In the application, the parent, or other legal representative of the student, declares the nationality of the student and submits documentation on the social status of the student . Primary schools compile a list of students who have applied for enrollment in school under more favorable conditions and submit it to the ministry responsible for education.

Career guidance system and professional orientation are still not completely adapted to students from marginalized groups (and the work on this is planned within PU-ST06).

#### *Relevance*

The question of the **relevance** of secondary and, therefore, secondary vocational education can be seen also through data showing that in 2017 there were 274.3 thousand unemployed persons with completed secondary school in Serbia, which is about 63.07% of the total number of unemployed persons (SEDS, 2017 ). The duration of the transition to a first stable/satisfactory employment is higher by half for young people with a secondary school diploma with 24.3 months, compared with young tertiary level of education graduates with 11.7 months (Marjanović, 2016). These data indicate that there is still a need to work in the field of increasing the relevance of secondary vocational education.

The reduced relevance of the VET is contributed by the fact that in Serbia there is still no consolidated methodologies for the labor demand forecast. There is only sporadic evidence that skills needs analysis at school level has been performed, for example by analysing current job ads. Occasionally, employers' associations conduct surveys with employers and trade unions, but mainly for internal use (ETF, 2017).

However, in the last two years and in the framework of the support to the development of dual education in Serbia, regular regional meetings have been organised by the Standing Conference of Towns and Municipalities (SCTM) and a model of a joint statement on the municipal/ city plan for enrollment of students signed by schools, municipalities/cities and Serbian Chamber of Commerce.

The participation of employers is enabled at different levels of policy making, and the IIE and the SCC have signed a Memorandum of Cooperation in Qualification Planning. Further reform of the curricula will increase the scope of employers' participation in the implementation of national curricula and for the time being, practical lessons are executed with employers in most educational profiles in the scope of the prescribed national curricula. In 33 profiles based on qualification standards, representatives of employers are members of the examination panels at the final examinations.

Also, in line with the reform directions in Serbia, the so-called "modernised experimental profiles" that are evaluated after a certain number of implementations and if the evaluation shows that the profiles yield better results in different dimensions of the estimate compared to the "classical" profiles, they are introduced into the system by replacing them. Reformed educational profiles were conceived in cooperation with relevant actors and in close cooperation with representatives of the economy, and within these profiles the ratio between practical and theoretical lessons was changed to the benefit of practical lessons in school laboratories and workshops, but also with employers. Screening profiles have also offered a new concept of vocational graduation and final exam, where the focus is on checking professional competencies and practical knowledge, and employers are included in the exam commissions.

What is lacking in this activity (PU-ST07) is a mechanism to stimulate employers to enter the education process. The Law on Dual Education does not provide incentives for employers to materially support students entering the dual learning model. This limits the potential offer of profiles, because currently dual education is being implemented in companies that meet the requirements defined by the Law on Dual Education, and there is probably a need for many other occupations for which it is not possible to provide work environments due to insufficient resources of the company.

The data indicating that during the school year 2017/18 in the enrollment plan, a decrease in the total number of places in secondary vocational schools was introduced by 2.28%, so that the offered number of places was adapted to the demand for a number of professional educational profiles speaks in favor of the educational system being determined to increase the relevance of secondary vocational education. This has mostly affected the optimization of the number of students in classes, ie the prevention of a large number of classes with a small number of students. During the same school year, the quota of four-year profile offers in the field of economy, law and

administration was reduced by 6.29% in line with current trends in the labor market and in order to optimize the network of profiles in this field. In parallel to this decrease, there was an increase in the quota for craft/three-year educational profiles in a large number of areas of work (construction 15%, forestry and woodwork 33%, textile and tanning 47%, trade, catering and tourism 3%) in response to the identified lack of qualified persons for occupations of this type and at the same time better trends in their employment after the completion of their education.

Center for Vocational Education and Adult Education and Serbian Chamber of Commerce, participate in the project "*Learning by Doing - Targeted capacity building of VET partnerships in the Danube Region for the effective modernization of VET systems*", which brings together the countries of the Danube Region and which aims to improving the capacity of social partners involved in vocational education and training in the Danube countries, through strengthening national and international partnerships, enabling the development of a system in which qualifications are adjusted to the needs of the labor market. Within this project, various promotional activities are organised in order to strengthen the capacities for implementation of learning through work in the system of secondary vocational education in Serbia<sup>97</sup>.

#### *Effectiveness*

Data on the transition and employment of students who have finished vocational education are still not being collected through the educational information system, and there is no unified monitoring of the effectiveness of education in secondary vocational schools.

However, in 2017, MOESTD collected certain data on first-generation students who were educated within the cooperative learning model established through the GIZ VET project, that is data on students who have completed educational profiles: locksmith, electrician and industrial mechanic. These students were enrolled in eight secondary schools in June 2014 and have passed the final exam in June 2017.

The data indicate that, if the number of enrolled vs. the number of planned students that can enroll in these educational profiles is observed, the quota is filled by 65%. Upon the completion of education of the enrolled students, relative success is identical. Specifically, only 65% of those who have enrolled in these profiles have managed to complete them within the prescribed time limit. Cumulatively, it turns out that only 42% of students who were potentially able to be educated for the mentioned professions have acquired the appropriate diploma within the stipulated deadline.

Interesting insights related to efficiency in the case of the first generation of students who have studied by this model also provide data on student dropout rates during the final year of education, including passing the final exam in the first term. In other words, in the profile of the locksmith - welder the final grade dropout was 3%, and if we consider the number of failures in the final exam in the first term, in June 2017 the total dropout was 10%. With the profile electrician, the dropout in the final grade was even more pronounced and amounted to as much as 25%, and if we take into account the number of failures at the final exam in the first term, in June 2017, the total dropout is increased to a huge 55%. With the profile industrial mechanic, which was implemented in only one school in the first two generations of enrolled students, the Technical School in Pecinci, there were no dropouts in the final year of learning so that all 13 students have successfully

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<sup>97</sup> Source: <http://IIE.gov.rs/projekat-learning-by-doing/>

completed the final grade and then passed the final exam in the first term. The education of this profile, through the cooperation of the secondary school in Pećinci and the company BOŠ, is also interesting for the fact that the 10 first-generation students are already employed by BOŠ, where they have been attending practical training for two years.

The collected data on the course of education of these students also indicate large fluctuation of students (signing out and subsequent enrollment of students during schooling), as well as a pronounced practice of failing, due to the large number of insufficient grades at the end of each year of study.

The issue of the secondary school network that was not changed, at least not in a planned way, is more complex when it comes to secondary vocational schools. This is not just about demographic change (a drop of 13% of the student population since 2011), but also about the impact on economic and regional development (PU-ST05). However, some progress has been made in this area. The Regulation on the Criteria for the Adoption of the Act on the Public Secondary Schools Network of the Republic of RS was adopted at the session of the Government of the Republic of Serbia ("Official Gazette of RS", number 21/18), which is applicable from 27.03.2018. Also, field analysis was carried out by the Sector for Secondary Education and Adult Education. The draft Act on the Network of Public Secondary Schools in the Republic of Serbia and the Decision on the abolition and establishment of new secondary schools is under preparation (38 secondary schools in 19 pairs in horizontal optimization).

It is necessary to mention that although there are currently no mechanisms for assessing the effectiveness of all measures, any modernization in vocational education requires significant financial investments in equipment and infrastructure, teacher training for new programs (ETF, 2017), and the question of financing all of these measures remains open.

### **Dual education**

Considerable funds have been invested in the system of dual education in Serbia by Germany, Austria and Switzerland who already have introduced this system. The signing of the Memorandum of Cooperation between the Serbian Chamber of Commerce, the Ministry of Education, Science and Technological Development, the Federal Ministry for Europe, Integration and Foreign Affairs of the Republic of Austria and the Austrian Chamber of Commerce, on February 9, 2016 has officially confirmed the Austrian support for the development of dual education elements in secondary vocational education in the Republic of Serbia. Switzerland has invested in developing a profile for the dual model of education for the wood processing industry. This part of the education system, i.e., the form of secondary vocational education is implemented in close cooperation with the SCC and the competencies for numerous aspects related to the preparation and implementation of the program are under the authority of the SCC.

The Law on Dual Education has been initiated with the aim to adapt the concept of dual education to the time, needs and conditions in which this process can take place in the Republic of Serbia, at the same time using all the experiences of European countries that have developed this education system. In order for the aforementioned law to have complete and unobtrusive application, the following Rulebooks that are in the process of adoption are being drafted: Rulebook on the training program for instructors and closer examination requirements for instructors; Rulebook

on the method of allocating students for learning through work; Rulebook on closer conditions on the manner of work, activities and composition of the career guidance and counselling team.

The process of planning the enrolment of students to secondary schools begins with the schools submitting and justifying on the Dositej Education Information System the number and the structure of student's enrolment by area of work and educational profiles/directions they plan to enrol, and followed by local meetings with relevant partners. The result of each meeting should be a document: A proposal for a student enrolment plan for a city/municipality for a school year. After that, this plan is reviewed by the SA, and the competent services in the Ministry of Education, Science and Technological Development in cooperation with key partners - IIE, RPK and SCTM, as the final instance (MoESTD, 2018).

The enrollment plan for dual education was fulfilled with 81%, which is a significant increase compared to the previous period in which craft educational profiles, most often for a three-year period, remained very poorly filled at the end of the enrollment period. In 2017/2018, the total number of enrolled students in educational profiles by dual model (or with dual model elements) was 4,559.

More specifically, when it comes to the so-called single dual profiles there are total of 19 and they include three educational profiles (Locksmith-welder, Electrician and Industrial mechanics) developed within the project "Reform of secondary vocational education in Serbia - Phase V", which was supported by the German Organization for International Cooperation (GIZ). One educational profile, Furniture Production Operator, was developed through the project "Regional economic development and entrepreneurship", supported by the Swiss Agency for Development and Cooperation (SDC) and thanks to the further support of the Government of Switzerland, it came to life through the establishment of private-public partnerships between schools and employers.

This group of educational profiles includes five civil aviation profiles (Aviation Mechanic, Mechatronic for Airport Transportation Systems, Air Traffic Technician, Air Traffic Rescue Technician and Air Traffic Safety Technician) that already exist but from school year 2017/18 they are implemented on the principle of dual education with the support of MOESTD, SCC, JAT tehnika, Air Serbia and Nikola Tesla Airport. MOESTD and the Ministry of Defense have also signed an Agreement on Cooperation between two ministries in the process of introducing dual education for the needs of Serbian Armed Forces, that is, on the implementation of learning in companies, for educational profiles, Technician for Aircraft Engines, Technician for Aircraft Electronic Equipment, Rocket Systems Mechatronics and Mechatronics for Radar Systems. In addition, this Agreement provides for the introduction of two new educational profiles that will contribute to the improvement of the military industry (educational profiles of the Technician for Arms and Ammunition and Missile Technician), who will learn through work in the specialised industry factories (Sloboda Čačak; Crvena Zastava Kragujevac, Prvi Partizan Uzice, etc.).

In addition to that, five new educational profiles have been developed for application in school year 2017/18: Mechanic for Motor Vehicles, Electrician for Renewable Energy Sources, Fashion Tailor, Metal Processing Operator and Logistics and Freight Forwarding Technician. These profiles were created in response to the identified market needs and were developed according to

the methodology, which included continuous coordination with economy experts. The implementation will take place in accordance with the model of dual education, which among other things involves a significant number of lessons dedicated to practical instruction in a company. Depending on the study year it is 1, 2 or 3 days a week. In the first year of teaching, practical lessons take place in the school, while in the second or third year, learning takes place in companies the schools have previously signed appropriate cooperation agreements for the practical part of the curriculum. In some cases, contracts with companies are concluded by students or their parents, which is a binding form envisaged by the Law on Dual Education. According to MOESTD data, from the school year 2017/18 these profiles are active in 28 schools throughout Serbia.

In the school year 2017/18 one of the aforementioned 19 educational profiles designed for the dual model of implementation are executed in 49 secondary vocational schools.

As a special measure of support for the development of dual education, the MOESTD budget for 2017 provided funds for the project "Promotion of Dual Education" in Serbia. The project is planned for 2017-2019, and in 2017 it is being implemented in 34 cities and municipalities throughout Serbia. The objectives of the project are: promotion of the concept of dual education through the implementation of educational and promotional workshops in primary and secondary schools in Serbia, linking with companies and organizations that will raise the capacities of this type of education, and raising the public awareness of the importance and role of this type of youth education (Serbian Budget System Law).

Additional 43 education profiles have pronounced elements of dual education. One of these profiles is Merchant, which was reformed four years ago but is now being implemented in one part of schools in accordance with the principles of dual education and is developed with the support of the Austrian Federal Chamber of Commerce and the Austrian Development Agency.

According to internal MOESTD data, education profiles based on a dual model or profiles with pronounced elements of dual education/learning through work in companies are implemented in 69 cities and municipalities throughout Serbia (13 local governments with a level of development below 60 % of the national average). The total coverage of students with these profiles is 5,751 students, and the total number of schools is 127, which represents about 35% of all vocational schools. MOESTD reports also suggest that the interest of companies supporting dual education exceeded all expectations. That is, a large number of companies have provided MOESTD and the Serbian Chamber of Commerce with binding Letters of Intent to cooperate with schools and support students who will study for these profiles. These Letters of Intent are part of the new methodology of student enrollment planning in cooperation with local governments and local employers conducted in the period November 2016 - April 2017 and which resulted in a new call for enrollment of students in secondary schools.

On the basis of the Law on Dual Education, the Government of the Republic of Serbia established a commission for the development and implementation of dual education in order to implement and improve dual education and three-year evaluations of the achieved results. This commission is made up of representatives of both sectors - education and economy.

## SEDS AP execution table

Activity	Executed	Partially	Not executed	Deadline 2018+
PU-ST01 - Standardization of the exam for qualification		✓		✓
PU-ST02 - Introduction of master education			✓	✓
PU-ST03 - Development of education programs based on the standard of qualifications		✓		✓
PU-ST04 - Flexible organization of teaching			✓	✓
PU-ST05 - Aligning the network of vocational schools and the offer of educational programs (profiles) to the needs of the economy		✓		✓
PU-ST06 - Reducing the early dropout rate		✓		✓
PU-ST07 - Inclusion of employers in the process of programming, development and realization of the VET	✓			✓
PU-ST08 - Establishing a system for monitoring and evaluating vocational education		✓		✓
PU-ST09 - Defining a clear division of responsibilities, roles and tasks of all management stakeholders in the VET	✓			✓

## Higher Education

### Basic information on the current situation

Institutions that independently perform higher education activities are universities (and faculties and art academies that are their parts), academy of vocational studies, higher schools and higher schools for vocational studies. During the school year 2016/2017, a total of 262,108 students were enrolled in Higher education (of which 56% were female students) at all levels of studies, including public and private universities as well as public and private high schools (about 15% of students are enrolled in private higher schools) in all ten areas of education (education, arts and humanities; social sciences, journalism and media; business, administration and law; natural sciences; mathematics and statistics; information and communication technologies; engineering, manufacturing and construction; agriculture, forestry, fishery and veterinary science; health and social services; services). Data on graduates in 2016 indicate that during that year a total of 51,544 students have graduated (of which 58% were female), and out of that number, 20,1% were in private high school. The number of newly enrolled students in school year 2017/2018 is 47,676 (of which 53.8% are female)<sup>98</sup>.

After several amendments to the Law on Higher Education (LHE)<sup>99</sup>, which addressed individual issues, a new Law was adopted in 2017<sup>100</sup>. This Law has divided the public. Its content is in line

<sup>98</sup> Data from the Statistical Office of the Republic of Serbia.

<sup>99</sup> After the adoption of LHE in 2005, the amendments were adopted in 2008, 2010, 2012, 2013 and 2015.

<sup>100</sup> The Law on Higher Education ("Official Gazette of RS", nos. 88/2017 and 27/2018 – state law)

with the Action Plan and SEDS 2020, however the issues that are most often posed relate to the transparency of the work of higher education institutions (HEI), as well as changes in the competencies and authority of certain bodies, which have resulted in the MOESTD and the Serbian Government playing a significant role in the bodies that make decisions and give opinions on issues of relevance to the higher education system.

### *Quality Assurance*

Quality control is a long-term process that ensures compliance with the agreed standards. These standards should ensure that each educational institution has the ability to meet the set criteria for quality assurance. The standards and recommendations of the European Association for Quality Assurance in Higher Education (ENQA), which relate to internal and external quality assurance in higher education, are based on several basic principles of quality assurance in a single European Higher Education Area. In 2013, the Quality Assurance Committee in Higher Education (CAQA) received full 5 year membership in the European Quality Assurance Association in Higher Education (ENQA) and in 2014 it became the member of the European Quality Assurance Register for Higher Education (EQAR). The memberships have demonstrated that the standards and procedures that CAQA is implementing are in accordance with the European Standards and Guidelines for Quality Assurance (ESG), and that the quality system in our country is compatible with the European one.

### *The positioning of Serbian universities in international rankings*

Although the high positioning of faculties in international rankings is not the only guarantee and proof of education quality and success, the relative success of Serbia's universities in relevant ranks cannot be denied.

Universities in Niš, Kragujevac and Novi Sad have appeared on the Shanghai ranking list of world universities for the first time in 2017, among the top 500 universities in the field of mathematics, ranked between positions 301 and 400 (University of Niš), 401 (University of Kragujevac), and 500 (University of Novi Sad). The Belgrade University has improved its position in the area of Mathematics in 2017 compared to the previous four years, now ranging from 201 to 300, where it was in 2016, and even it is better ranked in the field of physics (from 151 to 200).

The University of Belgrade was on the Shanghai List for the first time in 2012, when it was ranked between 401 and 500. Since 2013 it has improved its ranking and has been in the positions between 301 and 400, and this year it was ranked in the group between 201 and 300.

The University of Belgrade was ranked among the world's best universities in 8 out of 46 science fields and in two science fields within the QS World University Rankings by Subjects for 2017. QS World University Rankings is one of the three most influential global academic instruments (along with the Academic Ranking of World Universities and the Times Higher Education World University Rankings), and for the needs of this year's publication, a total of 4,438 world universities were evaluated, ranked on the basis of their academic reputation, their reputation among employers and bibliometric indicators of scientific research, with the aim of determining excellence in certain disciplines. In the field of natural-mathematical sciences, the University of Belgrade, was ranked at 347th position among world universities, while in the field of humanities it ranked from 401st and 450th place.

The Shanghai List, published every year by the Gao Tong University in Shanghai, is one of the most influential lists that ranks international universities. The criteria taken into consideration when ranking faculties on the Shanghai List are: the number and the quality of scientific papers; number of researchers most cited in their discipline; number of Nobel Prize winners among former students; number of scientific papers written in cooperation with foreign universities; number of Fields medal winners among former students. The areas in which the Universities are ranked are: mathematics and natural sciences, engineering/technology and computer science, life and agricultural science, pharmacy and clinical medicine and social sciences.

### **Studying from the perspective of students**

Most of the above quantitative indicators in this section represent the findings of the EUROSTUDENT V and VI researches that provide insights into the data related to the availability and equity of higher education in our country, but also provides the possibility of a comparative review<sup>101</sup>.

#### Educational background of students and connection with funding during studies

When it comes to the educational background of students, a significant percentage has at least one parent with a basic degree (43.8%). There is almost the same number of those whose parents have completed secondary school (42%). Only 1.8% of students come from a family where no parent has completed secondary education. Almost 12% of students have at least one parent with a master or doctoral level of study<sup>102</sup>.

A little over 50% of students with financial problems arrive from families where secondary education is the highest level of education, while 61.4% of them comes from families where at least one parent has a university degree. It is typical that among the student population in our country, more students who provide their own financing (i.e. have their own income) come from

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<sup>101</sup> Note: A study from 2017 did not include HIS that are not a part of a university.

<sup>102</sup> Available at: <http://database.eurostudent.eu/>

highly educated families, although they seem to be at a lower pressure to earn because these families are generally well-off. Out of the total number of loans and scholarships MoESTD allocates up to 10% for university students and up to 10% for secondary and primary students from vulnerable social groups. In the case of university students, these include the granting of tuition fees, as well as the actions that the student centres should contribute to by allocating up to 10% for accommodating the students from vulnerable social groups within their accommodation capacities.<sup>103</sup>

### *Satisfaction with studying*

In the framework of the reform of higher education in Europe, special goals are focused on changing the position of students and on their active participation in their education, their subject position, decision-making, curriculum development through the selection of subjects and orientation, taking responsibility for their own education, active participation in teaching, quality control of study programs and pedagogical work of teachers. New approaches to higher education involve a more active position of students influencing their greater engagement and participation, as well as motivation for their own learning and education

Satisfaction with studying gives an important perspective on the quality of higher education from the perspective of participants in the process. Within the EUROSTUDENT survey, more than six dimensions related to the quality and organization of lectures are measured (lecture quality, study organization and lecture schedule, the possibility of selecting a large number of courses), the ratio of employees to students (ratio of employees in administration to students, continue to students) and equipment of higher education institutions (library, computers, buildings, classrooms).

According to the latest EUROSTUDENT data, over half of the students are satisfied with the quality of teaching (54.6%), while 16.4% express their dissatisfaction. It seems that the initial enthusiasm has an impact, so the majority of the first year basic studies students are generally more satisfied. However, this does not apply to students in short programs. One possible explanation is that the traditional way of teaching at faculties in Serbia is less relevant to students in specialized and professional studies who need more practical and interactive work. When we look at the areas of education, more than 60% of students of social sciences, journalism and ICT are satisfied, while students in the areas of health and social protection, natural sciences and statistics are more often dissatisfied again, because they feel that they lack more practical work.

When it comes to satisfaction with the teachers, opinions are divided - 40.4% find that they are inspired by teachers, and 30% do not agree with that. This finding is somewhat complemented by the fact that almost half of the students consider that their teachers are not interested in their progress. Students in the field of health and social care especially emphasize the lack of interest of their teachers. Just under 60% of students would recommend their program to others, and 71.5% have no doubts that the program they chose was the right choice.

### *Mobility*

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<sup>103</sup> Čekić-Marković, J (2016) Analysis of the Application of Affirmative Measures in the Field of Roma Education and Recommendations for Improving Measures, Belgrade: SIPRU and the Government of RS

Promoting international student mobility in the European Higher Education Area is assessed as one of the most important goals of the Bologna process. On the one hand, mobility improves the quality of study programs, contributes to excellence in research and increases co-operation as well as competition among higher education institutions, and it is equally important for personal development of students and increases the chances of employment.

Most students who have any foreign experience have mostly gained it in summer schools, language schools or excursions. Only 1.5% of students have really studied, and 3.2% had some form of practice. Students on master studies and longer programs are usually more mobile, and so are the students who have their own income. Those who depend on loans, scholarships or their families rarely stay abroad. Most students (58.6%) have good knowledge of two languages, and 16.1% of students have good knowledge of three languages. Students who intend to study abroad generally have better language skills. From the students' point of view, barriers to studying abroad are mostly financial or administrative, while personal ones primarily relate to not wanting to separate from their family, friends or partner (40.3%). The language represents a problem for almost a quarter of students. Administrative barriers primarily refer to the lack of information from the domestic HEI (34.7%), and it is also important that it is not easy to integrate the program abroad to studying in Serbia. For 65% of students, the biggest problem is finances.

#### *Being prepared for the labour market*

Higher education should prepare students for intellectual work that requires complex skills, expertise and creativity, but it should also help develop positive personal qualities.

The economic crisis did not bypass the graduates. From 2008 to 2013, the percentage of employees among graduates from 20 to 34 years of age, within one to three years after graduation, fell by 6.6%<sup>104</sup> (from 82%) in the European Union. The percentages have been improving at European level from 2013, so in 2016 78.2% of graduates gets an employment within one to three years, but Serbia remains behind all the EU countries by the employability of people with tertiary education<sup>105</sup>.

39% of the students estimate (EUROSTUDENT VI) that their chances of finding a job matching their qualifications on the domestic and foreign market are the same, but only 9.5% believe that they are more likely to be on the foreign market (versus 29.5% who see a better chance at the domestic labour market). What is somewhat of a worrying fact is that as much as 21.9% could not assess their chances - before all those who are on longer programs and basic studies, probably because of the lesser contact with the work environment. This points to the need for students to be more involved in career guidance, to get to know the work environment and to have the opportunities to explore potential occupations through practices or visits. Students in programs in the field of business, administration and law, as well as education, are more directed than others at the domestic labour market. The reason for this may be the specificity of the system in these areas, which makes them not as equally prepared for the foreign labour market. Almost half of the

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<sup>104</sup> Eurostat (2017). Smarter, greener, more inclusive? Indicators to support the Europe 2020 Strategy, 2017 edition, EU

<sup>105</sup> WEF (2017) The Global Human Capital Report Insight Report -Preparing people for the future of work, World Economic Forum

students think they are well prepared for the national market, especially those students who intend to work in education and the ICT sector, while 12.5% of the students think the contrary.

The advantage that students give to the domestic labour market can be associated with their reduced mobility, as even 79.1% of students did not have any academic experience abroad.

### **Progress achieved in the reporting period (with an overview of the period 2012-2015)**

Below is a summary of the progress made since the adoption of the SEDS 2020 Action Plan ending in 2017, while a table with the review of the performance of individual measures is at the end of the section.

#### *Improving quality assurance mechanisms*

Quality evaluation is of particular importance for each educational system, because it is a process that leads to quality assessment and provides recommendations for further development.

Since 2007, CAQA has completed two rounds of accreditation at the level of institutions and curricula: the first in the period 2007-2011 and the other in the period 2012-2016, as well as one round of external quality control institutions (SPC). In total, over 200 higher education institutions and 2,000 curricula have been accredited in both rounds of accreditation. By the end of 2016, CAQA performed a total of 5,234 evaluations, of which 4,401 were the applications for accreditation of curricula (1,947 in the first cycle of accreditation and 2,454 in the second).

After the second round, the following was accredited:

- 1,610 academic study programs for the enrolment of 85,713 students for the first year of studies (20% at private universities)
- 444 vocational study programs for the enrolment of 26,088 students
- A total of 2,054 enrolment programs for the enrolment of 111,801 students<sup>106</sup>

The table below taken from the CAQA Self-Evaluation Report (2017) shows statistics during the three accreditation cycles (including SPCs).

<b>The first round of accreditation 2007-2011</b>	
2007 *	78 High schools of vocational studies + 515 study programmes
2008 *	81 Faculties, High schools, Universities + 928 study programmes
2009 *	60 Faculties, High schools, Universities + 308 study programmes
2010 *	13 Faculties, High schools, Universities + 51 study programmes
2011 *	145 study programmes
<b>The first round of external quality control 2011-2015</b>	
2011 *	54 High school of vocational studies
2012	36 Faculties, 6 High school of vocational studies
2013	7 Universities, 59 Faculties
2014	1 University (with follow-up monitoring), 17 Faculties (3 follow-up monitoring)
2015	7 Faculties (1 follow-up monitoring)
<b>The second round of accreditation 2012-2016</b>	

<sup>106</sup> Presentation of "KAPK Experience After Second Cycle of Curricula Accreditation ", Commission for Accreditation and Quality Control, Serbia, Second Regional Conference of Bodies in Quality Assurance in Higher Education, March, 2017 Banja Luka

2012	52 HEI (2 Faculties, 50 High schools of vocational studies, 14 Articles) + 210 study programmes (59 Articles, 2 refusals)
2013	35 HEI (2 Universities, 27 Faculties, 1 High School, 6 High schools of vocational studies) + 494 study programmes (Articles, refusals)
2014	63 HEI (8 Universities, 52 Faculties, 2 High Schools, 1 High school of vocational studies, 4 Articles) + 644 study programmes (79 Articles, 2 refusals)
2015	40 HEI (2 Universities, 32 Faculties, 3 High Schools, 3 High schools of vocational studies) + 366 study programmes (68 Articles, 37 refusals)
2016	6 HEI (3 Faculties, 3 High School, 3 Articles) + 250 study programmes (141 Articles, 57 refusals)
<b>The third round of accreditation 2017-</b>	
2017	13 HEI (1 University, 3 Faculties, 7 High schools of vocational studies, 3 Articles) + 151 study programmes (65 Articles, 9 refusals)
<b>Initial accreditation 2013-</b>	
2013	4 HEI (1 positive opinion, 3 negative opinions)
2014	9 HEI (3 positive opinions, 6 negative opinions)
2015	3 HEI (2 positive opinions, 1 negative opinion)
2016	11 HEI (3 positive opinions, 8 negative opinions)
2017	2 HEI (2 positive opinions)
<b>Outstanding external quality control at the request of the Ministry</b>	
2014	1 High school of vocational studies
2016	1 High school of vocational studies

In the field of quality assurance in accordance with the recommendations of ENQA and EQAR, which CAQA, with the consent of the National Council for Higher Education (NSVO), the group of activities performed independently during the second round of accreditation includes: a) introduction of the follow-up procedure b) publication of several systemic analyses and c) the introduction of employers and students into the quality assurance system. Significant remarks by ENQA and EQAR referred to the legal status of the Commission, to the organisation and the resources, as well as the promotion of independence, which is harmonisation with the ESG<sup>107</sup>.

With the new LHE, the legal status of CAQA has been changed and it envisages the establishing of an independent state regulatory body - the National Accreditation Body (NAT) consisting of a management body, an expert body, CAQA and professional services that perform administrative and technical tasks (VO-ZD11). The establishing of NAT was certainly planned by the action plan, but what has not been discussed is the possible model of establishment of the agency. NAT was constituted in May 2018 and should take over the work on analysing the work of the HEI and making recommendations for improving the work (VO-AS06).

The accreditation process itself has been improved through work on standards, supplementing the standards for new areas and increasing the transparency of the process (VO-ZD09, VO-ZD10). Quality Indicators (standards) were first introduced in 2006 and have been improved several times (major changes were made when standards for initial accreditation were introduced in 2013, when changes to standards for doctoral studies were introduced in 2015, and when standards for vocational master studies were introduced and finally a major revision of the ESG standard has been made in 2016. One of the current Erasmus+ projects "Development and Implementation of the HEI Performance Assessment System in Serbia" (PESHES) aims at linking several actions and

<sup>107</sup> Презентација „ Чланство КАПК у ENQA і EQAR Обавеза одржања националног система обезбеђења квалитета у високом образовању и изазов за његово унапређење“ Софија Пекић Кири 22. Скуп трендови развоја: “Нове технологије у настави”, Златибор, 16. - 19. 02. 2016.

creating a system that would monitor the quality of the HEI outcome, and not just the quality of the input characteristics. The project aims at further improving standards for accreditation, linking VET with employers (in order to obtain a relevant assessment of acquired competencies) and developing a system for ranking programs and institutions<sup>108</sup>.

In accordance with the ENQA recommendations, foreign reviewers for doctoral study programs have been introduced, and what is extremely important in the process of strengthening the public responsibility of HEI for quality of higher education (VO-ZD08), registers of accredited institutions and programs are defined as "open data", i.e. data available to the public. For now, all this has been defined in the regulations, but it has yet to be implemented, as well as the operationalisation of all systems from the Unique Educational Number (UEN) to functional registers.

After the analysis of the first cycle of accreditation, CAQA finds that the level of responsibility of the institutions for quality control has increased (VO-ZD08). The independent researches show that transparency is still not at satisfactory level, and so even if the institutions are objective and diligent at performing self-assessment, the public does not receive full reports and all the relevant information (or does not receive it regularly and consistently)<sup>109</sup>.

#### *Student participation in management*

Within the European Higher Education Area, participation in the HEI management also means a greater role for students and student organizations. SEDS 2020 and the Action Plan see students as an important resource for raising the quality and therefore it is envisaged that the students are included in the process of quality assurance and that they contribute to the monitoring of the teaching process (VO-ZD15). HEIs have the freedom to involve students in the process of evaluating the teaching process, and most HEIs conduct some form of student evaluation<sup>110</sup>. What appears to be a problem is the quality of the instruments themselves and the lack of regulation of the evaluation criteria, but also the public nature of the evaluations. Thus, each HEI brings its own Rulebooks and can decide to make publicly available parts of the evaluations or just their summaries. In accordance with the HEI's obligation to provide current and future students with clear and transparent information relevant to studying decisions, the publishing of reports by subjects and the evaluations of the work of teachers should be public. Only in this way can students be considered equally involved because they have full insight into all stages of the evaluation, which includes the final quality evaluation. When asked about the participation of students in decision making, the Student Union of Serbia (SUS)<sup>111</sup> has organised the first round of public discussions on the draft Law on Student Organisation in Novi Sad, Belgrade, Niš and Kragujevac in January 2018. The Draft Law on Student Organisation was prepared by the SUS working group in cooperation with MOESTD, in a two-year process. In addition to SUS, students' participation in

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<sup>108</sup> <http://peshes.ius.bg.ac.rs/summary.php>

<sup>109</sup> Nasevski, S (2017). Quality assurance and open data for ranking in Serbian higher education – we are ready. Belgrade: BOŠ, 2017

<sup>110</sup> For example. Rulebook on Student Evaluation, Veterinary Faculty, University of Belgrade

<sup>111</sup> The Student Union of Serbia is an active member of the European Student Union (ESU) and one of the founders of the Mediterranean Student Network (MedNet) and the South East Initiative (SEI) - a network of national student organizations from the countries of Southeast Europe.

decision-making is enabled through the Student Conference of the University of Serbia (SKONUS) and the Student Conference of Academies of Vocational Studies (SKASS), as well as through individual student parliaments at the HEI. The current regulation of students' participation in decision-making is reduced to the provision of LHE (Article 11, paragraph 2) which prescribes that in matters of relevance to students, at the invitation of the National Council for Higher Education, two student representatives chosen by the student conferences from among students who have an average grade of at least eight participate in the work of the National Council, with the right to participate in decision-making. In order to assess the status of implementation of this activity, it would be necessary to have a uniform method of monitoring students' participation through adequate indicators (e.g. whether participation is essential and significant or formal, and similar).

Students in some areas are not satisfied with the scope and frequency of practice within the course curriculum. In 2015, the NSWS issued a Reminder for Student Vocational Practice<sup>112</sup>. The need for student practice has been recognized in the Action Plan (VO-ZD16) and steps have been taken to ensure the fulfilment of this obligation. In accordance with the Standards and Procedures for Accreditation of HEIs and study programs within the framework of the Standard 5 relating to the curriculum, student practice is set as a condition. Without a register of students and programs it is not possible to speak with precision about the extent to which student practice is being implemented and how, at this moment, Portal [www.studentskapraksa.com](http://www.studentskapraksa.com) is available to students; it is a unique demand and offer data base for student vocational practices for the students of the University of Belgrade, the University of Novi Sad, the University of Kragujevac and the University of Niš. The above-mentioned universities and university career development centres are linked to this demand and offer data base and can carry out an active and continuous exchange of information with faculties and students and employers. Employers are able to post the open positions for practice and thus significantly facilitate the process of candidate selection, administration of application and evaluation. Students are able to create their profile in the data base and to actively search ads for practice and apply for current offer of vocational practices.

#### *The quality of work of teachers in higher education*

Without good quality teaching staff, there is no good quality education. The Action Plan recognizes the need to support and improve the work of teaching staff in VO (VO-ZD17, VO-ZD18, VO-ZD19, VO-ZD20). A Program for acquiring teacher competences in the field of pedagogical-psychological and didactic-methodical training of teachers is being developed (VO-AS06). The Staff Registry of HEIs provided for by the LHE contains personal data of employees and engagement data, but the data included in the criteria for engagement or promotion is only available to the HEI that decides on engagement. The more detailed conditions for the election to the title of teacher are determined by the general act of the HEI, in accordance with the minimum requirements for the selection of university teachers that were passed in 2015. So far, the conditions for electing teachers in various scientific and artistic fields have not been defined, so this part of the activities from the VO-ZD17 measure is partially achieved. A procedure has been established for the teachers from the diaspora and teachers from abroad. Intergovernmental

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<sup>112</sup> NCHE (2015). Reminder for Student Vocational Practice in Higher Education

agreements and programs on cultural and educational cooperation, as well as inter-university and inter-faculty cooperation programs have been signed. As an example of the achieved cooperation, in accordance with the signed bilateral agreements, in the period from 2015 to 2018, 332 lecturers have resided in Serbia. The support to teaching staff in teaching and professional work abroad (VO-ZD18) awaits the adoption of new bylaws. The Regulation on norms and standards of working conditions of universities and faculties for activities financed from the budget suffered the last change in 2007<sup>113</sup>, and a new model of financing the HE and scientific research projects has not yet reached the public debate phase. Teacher mobility data are now only available within the university and HEI, and only with the establishment of a staff registry will it be possible to monitor within the unified database the effects of individual measures taken by the HEI. At the level of vocational studies, there are no new adopted policies (VO-SS06) except for the possibilities open to the new LHE for teaching staff at all HEIs.

Regarding the harmonization of the number of teachers by areas (VO-ZD20), no analyses were conducted at the national level, and there are no reliable data on this. Accreditation standards define the number of students per teacher for different fields, as well as the scope of teachers' workload, and this Action may be deemed to be partially fulfilled. The standards also envisage several options for the work of part-time teachers<sup>114</sup>. It is important to point out that these are the standards for curriculum accreditation - when an institution receives the accreditation for the curriculum, it should implement it accordingly. However, the poor practice of later dismissal or apparent recruitment of staff is not unknown among the HEIs. Inspections and CAQAs that have limited capacities respond to complaints about work, and this process may sometimes take a long time. The student rights can be seriously threatened by then. The teaching staff register must therefore be made publicly available to provide an insight into the current state of the HEI, as well as the fulfilment of Standard 9 in order to have a realistic picture of the current practice at any given moment.

#### *Mobility in higher education*

The mobility and internationalization of universities is an integral part of harmonization with the European educational area. In April 2017, the Law on Ratifying the Agreement on Participation in the Central European University Exchange Program was adopted. In addition, international bilateral agreements with 77 countries are in force. In the period from 2015 to 2018, the Government of RS received scholarships for 260 students, and 332 lecturers were in Serbia, based on the agreement. Other activities within the VO-ZD28 and VO-ZD29 actions are successfully and consistently implemented, for example, the analysis of work and advisory groups' documents within the *Bologna Follow-Up Group* as part of preparations for the ministerial conference in Paris, and the University of Belgrade, the University of Niš and the University of Kragujevac have adopted mobility strategies. There are also efforts to eliminate individual administrative barriers, so MOESTD acts in accordance with the Law on Foreigners and issues certificates for regulating the temporary residence in the competent police station. 20 contracts with student centres, the Tempus office and other social partners have been concluded, which regulate the health care procedure. The effects of these measures will be known when data from a single information

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<sup>113</sup> Official Gazette of RS no., 15/02, 100/04, 26/05, 38/07, 110/07

<sup>114</sup> Standard 9: Teaching staff, 9.1.

system is available, and some current data from the EUROSTUDENT survey are given in the previous section.

#### *Research and development*

The quality of higher education is also reflected in the number of published scientific papers in international journals, the citations, etc. Research and development are an inseparable part of the HE Mission and the Action Plan contains measures that should improve the area (VO-ZD25, VO-ZD26). New accreditation standards also include standards related to scientific research (Standard 6), but also indicators that would allow monitoring and a better policy planning in this area. Measures that should help the development of scientific and research activities rely on several different pillars, such as the way of HEI financing, the way of financing science-research activities, establishing and updating registers (teachers, researchers, projects), as well as improving competencies for scientific- research work. It can be concluded that LHE has been adopted and that there are Standards covering this area, but that substantial progress has not been made in this area. A project implemented by the World Bank and MOESTD should result in a new way of combined financing.

#### *“Students in the Centre of Learning” and their competence*

The common theme at all levels of education is how the student truly becomes the centre of the whole system, with the system remaining sustainable and well-organised and at the same time flexible and responsive to the needs of different users.

When it comes to the quality of education, one cannot ignore the final outcomes, that is, what is to be achieved with that education? What capabilities and competencies need to be developed and what kind of experts do we want to have when they finish their education? Learning outcomes can be defined in the form of general academic discipline standards. These standards explicate and describe the characteristics, knowledge, abilities and skills that graduates have in a discipline. The methods of examinations available to teachers are numerous: tests, essays, project work, oral exams, tasks, diaries, reports, case studies, presentations, practical demonstrations. For potential employers, university institutions and the community as a whole, the explicitly defined learning outcomes at the level of the curriculum facilitate the identification and recognition of individual qualifications and vocations. Definitions of the learning outcomes are necessary for ensuring and quality control of education because they establish quality standards with which we compare the acquired and the demonstrated knowledge and skills of students at the end of the learning process.

"Students in the Centre of Learning" (VO-ZD21) is not a concept covered by the Bologna Declaration, but instruments such as ESPB, recognition of previous learning, NQF, etc. are the bases for its implementation. Orientation toward learning outcomes and competencies means shifting focus from the content of areas and subjects to what students know to apply. Learning outcomes are measurable statements about what a student who has received the appropriate qualification or completed the curriculum, or part of it, is expected to know, understand and what the student is able to do. The principles of this concept are recognized in the LHE and Accreditation Standards, so that the action (VO-ZD21) is implemented by individual institutions and bodies in accordance with the needs of students. Some HEIs provide information on what they do in this regard, e.g. in accordance with the good practice of international universities, at the

Faculty of Mechanical Engineering of the University of Belgrade, from this school year, two changes were introduced - introductory lectures in mathematics and physics and the mentor institution. According to the analysis of the results of the students in the Mathematics 1 exam, they had a higher pass rate and a higher average grade of around 12% compared to the previous generation. The key competences for basic academic studies are not defined by LHE, but they are in the Standards for Accreditation of the Curriculum, but the AP (VO-AS02) requirement is that there is a previous analysis and the clear separation of the basic and the vocational studies is not fulfilled.

Students' competencies are defined for basic and master studies, and especially for doctoral studies with increased emphasis on the scientific-research competencies and competencies necessary for conducting projects. When it comes to master studies, the situation is the same. Master studies are adapted to the current requirements of the society and the goals of higher education by directing and training students for required and significant jobs, and this is also checked during accreditation (VO-AS03). In the Rulebook on self-evaluation, universities (such as UBG, UN) have an employer survey that should be used to improve study programs (VO-AS06).

All HEIs point out in their information bulletins and on their web sites that the curricula and the lessons are conceived around learning outcomes and that students receive clear information on what is expected of them and which competencies they will eventually acquire. Harmonisation of learning outcomes and the number of ESPBs achieved is a process that follows the revision of the curricula (VO-ZD22). Learning outcomes are described according to the descriptors of learning outcomes of the national qualifications framework, so it is expected that, when the Law on the National Qualifications Framework is adopted, institutions will align their curricula and align the defined outcomes within the same areas/subjects. Standard 5 for curriculum accreditation: The curriculum provides guidelines for the allocation of ESPB points, and therefore the guidelines for scheduling classes within each field by semesters. For 60 points of studies, the annual workload of students is from about 1500 to 1800 hours, which corresponds to a number of approximately 25-30 of student work hours per point<sup>115</sup>, but there is no analysis of whether the curricula are distributed in such a way. The training that was foreseen in the Action Plan "The Connection between Learning Outcomes and Student Burden" was not delivered, but different HEIs have organised different trainings<sup>116</sup>. In the Action Plan (VO-AS04), special awards for "excellent" curricula are envisaged, however, quality assessment indicators other than those envisaged for accreditation have not been further elaborated so that the quality of individual curricula can be compared, therefore the special quality certificates are not possible. In the light of the establishing of NAT, it is necessary to revise the AP in the parts concerning the competence of quality inspection and quality assurance institutions to recognize the role of NAT. This finding also relates to the ranking of curricula (VO-AS05).

The question that we are always return to when quality is discussed is the teaching process itself, the way of teaching and of developing competencies. The Action Plan emphasizes the need for

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<sup>115</sup> <http://europa.eu.int/comm/education/socrates/ects.html>

<sup>116</sup> We do not have the data on how many HEI have met this obligation, but all accredited curricula should meet this requirement at least on the basis of documentation.

modernization and implementation of new learning models and of ICT (VO-ZD23) and envisages the popularization of distance learning. MOESTD has published a competition in August 2017 on "The Development of Higher Education" on its website. The subject of the public competition is the co-financing of projects by MOESTD to support higher education institutions in the development of new and innovating existing courses within the curricula. The right to participate in the public competition was awarded to accredited higher education institutions founded by the Republic of Serbia which: (1) have accredited curricula, within which the project proposes the introduction of new or innovating existing courses, (2) introduce a new curriculum that follows the needs of the labour market and has courses whose development is proposed by the project. In November 2017, funds were allocated by the decision of the Minister of Education, Science and Technological Development to 67 HEIs. HEIs also have the opportunity to implement distance learning programs in accordance with the LHE and to provide conditions for electronic examination. This practice is currently more common in private faculties. Most public faculties use Moodle or some other platform, mainly for electronic exams, access to textbooks, presentations, news, etc.

Vocational studies at the first and second degrees have undergone different changes. The issue of post-secondary vocational studies and the eligibility criteria for this type of studies remains to be further regulated. The Action Plan (VO-SS01, VO-SS03) of the planned action should raise the quality and offer curricula to students who want to develop in a particular field and have a quick access to the labour market. However, given that the higher education mission should have a development role at all levels, the strengthening of the research component must also be reflected in the second and third degree vocational studies. It is late to implement the activities related to the reorganisation of these degrees, but the Standards for Accreditation have been amended, a working body for the development of qualifications standards has been established and the issue of equivalences with previous qualifications (VO-SS05) has been resolved.

At the third level, i.e. on doctoral studies, the scientific component of HE is most pronounced. That is why the strengthening of the staffing capacity of the HEIs for research projects and the inclusion of as many young PhD students is set as strategic goals (VO-DS01, VO-DS02). In order to improve accreditation standards for doctoral studies, it is necessary that NAT becomes fully operational and that the NSC makes the appropriate decisions. Opportunities for training teachers for work on international projects are mainly achieved through projects in which HEIs participate. Projects generally provide the most opportunities for post-doctoral training (VO-DS07).

### *Coverage*

Within the framework of the Europe 2020 Strategy, a consensus was reached that the desired percentage of highly educated population at the EU level is 40%. In order for this to be achieved by Member States, but also by aspiring candidate countries, they defined their target values and measures. The percentage of those who, according to the European early drop-out rate indicator, have a completed secondary school since 2008 at most, fell from 14.7% to 10.7%, while the percentage of highly educated increased from 31.1% to 39.1%<sup>117</sup>.

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<sup>117</sup> Eurostat (2017). Smarter, greener, more inclusive? Indicators to support the Europe 2020 Strategy, 2017 edition, EU

SEDS 2020 predicts that enrolment in higher education increases gradually with each new generation. For 2020, the target value is to enrol at least 50% of the total number of higher education institutions, and most likely 55% of the generation, 40% - 50% of those who have completed four-year secondary vocational schools (15% - 18.5% of the generation) and 95% of those who have completed general secondary school (35% of the generation). In schoolyear 2017/2018, the coverage of the generation that attends faculties and high schools (19-24<sup>118</sup>) is 54.2% indicating a further mild growth trend (SEDS), and that strategic plans are feasible. The rate includes first-degree vocational or academic studies of first degree is 41.7% and of the second degree is 10.2%, while the doctoral studies account for 1.2%<sup>119</sup>.

One of the main goals of SEDS 2020, defined by the Law on Higher Education, is to enable equal and equitable access to higher education, as well as the possibility of lifelong learning, while respecting the principles of human rights and civil liberties, with the prohibition of any form of discrimination. At the national level, there are measures aimed at increasing access to vulnerable groups such as Roma and students with disabilities or disabilities. At the moment, this means that each HEI is obliged to provide 2% of vacancies for students from vulnerable groups within the budget quota, and up to 10% of vacancies for students from vulnerable groups are reserved in student dormitories.

About 15.1% of students receive some type of financial support (loans or scholarships). According to data from the EUROSTUDENT VI<sup>120</sup> research, the percentage of students from vulnerable groups enrolled in higher education is as follows:

- Students with very poor socio-economic status (SES) **31%**
- Students with disabilities **6.8%**
- Students with a migrant background (second generation) **14%**

In most faculties, questions for the entrance examination are not known in advance, and therefore secondary school students are often forced to attend paid preparatory classes that are organised by faculties or to attend classes organised by individual teachers, which can be very expensive. Therefore, the chances of success at the entrance exam and of studying within the budget are reduced for high school students from lower social classes, which is exactly the case with Roma students<sup>121</sup>.

#### *Accommodation during studying*

Students from vulnerable social groups exercise their right to housing and meals under the conditions stipulated by the Law on Student Standard (2013), the Rulebook on Accommodation and Nutrition for Students (2012), the Rulebook on Student Loans and Scholarships (2013) and by applying lower criteria<sup>122</sup>.

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<sup>118</sup> Generation of age 19-29 28,2%

<sup>119</sup> Data submitted by SEDS (April, 2018)

<sup>120</sup> Eurostudent: *PLASD Country profile The social dimension in higher education in: Serbia, 2015*

<sup>121</sup> Čekić-Marković, J (2016) Analysis of the Application of Affirmative Measures in the Field of Roma Education and Recommendations for Improving Measures, Belgrade: SIPRU and the Government of RS

<sup>122</sup> Ibid

Most students in Serbia live with their parents (48%), while 30.7% live with their roommates. Rare are those who live with a partner, more often they are older than 30 years, but a significant percentage lives only 16.2%. About 11% of students (2% of those who do not live with their parents) live in dormitories. Those who live alone, but with the financial support of the family, have 17.6%, and 6.3% have their own income.

#### *Transition from secondary school*

About three-quarters of students enrol in HEI within one year of completion of the secondary education. However, there is a certain number, which makes up 16% of the student population that enrolls HEI sometimes even more than two years after the completion of the secondary school. Until 2017, studying & working was not envisaged, so the factor of independent income often affected the delayed enrolment. Students who opt for short curricula do so often when they are already employed, and the possibility or the need to acquire a certain qualification is indicated. Students who have enrolled in service activities and education higher education institutions are more inclined to postpone their enrolment, and those who study educational profiles related to agriculture, natural sciences, medicine and related fields are less inclined to postpone their enrolment<sup>123</sup>.

Of the students who have participated in the EUROSTUDENT V research in Serbia, 57.7% come from secondary vocational schools, while 42.3% come from general secondary schools. Bearing in mind that 24.8% of the total secondary school population is composed of general secondary school students, it can be concluded that the enrolment in higher education of general secondary school students is higher, although these data show that higher education in Serbia is also very accessible to students of secondary vocational schools<sup>124</sup>. According to SEDS, the rate of continuation among general secondary school students is 90.9%, while 34.7% of students who finish secondary vocational schools continue their education in HEI.

The highest percentage of students in higher education enters the traditional way, after graduating at the end of secondary education and passing the entrance exam at the faculty. Non-traditional entrance to the HEI refers to those who have attended three-year high school. In that case, it is necessary to take differential exams to obtain a certificate of completed secondary education that has a pass to the third level of education, and some even have to attend adult education programs. The second way of entering higher education refers primarily to art faculties, which students can enrol even before finishing secondary school on the basis of exceptional talent and entrance examination. More often men have a non-traditional and delayed enrolment to the HEI, as well as students over the age of 30.

As one of the ways to increase fairness and better control of the enrolment into faculty, it is envisaged that enrolment in higher education be organized on the basis of the post-secondary school diploma (VO-ZD01). This would reduce the differences in access terms and future students would have a more transparent competition for places. For now, enrolment is still being carried

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<sup>123</sup>Jovanović, V. et al. (2015). The Social Dimension of Studying in Serbia. EUROSTUDENT V Report on the Republic of Serbia

<sup>124</sup> Ibid.

out through admission exams with successful secondary school achievements, but the new LHE envisages the introduction of a joint graduation exams as an entrance exam, while HEI is left the possibility of additional requirements (additional tests). Measures that envisage a different organization of enrolment to the HEI have a legal basis in the new Law on Higher Education and the General and Vocational Graduation Exam Program, according to which the graduation exam is evaluated at the enrolment to the faculty, and the students can choose, besides the compulsory part, the subjects in accordance with the requirements of the chosen HEI.

Flexibility and development of different models of higher education did not have a significant impact in the reporting period, so there are no new proposals for recognition of previous learning or entry to higher education, except through the graduation and entrance examinations (VO-ZD02).

The new LHE has also opened the possibility of learning, studying while working (in accordance with VO-ZD04). Rules that should further regulate this area are planned for adoption by the end of 2018. Admission to the second degree studies takes place in accordance with the HEI competition. With the new Law on Higher Education, the enrolment policy regarding the enrolment of graduates from vocational studies to Master Academic Studies has been defined, i.e. there is no longer a possibility of enrolment. The general rules defined by LHE relate primarily to the number of ESPBs that enable the passage to the second degree, while the closer conditions are detailed in the HEI competition. The flexible paths of admission to HEI, although they are partly open as each HEI can define the eligibility criteria for the competition, they still in fact relate to a limited number of cases. Slow progress in the validation of non-formal and informal learning is conditioned, to some extent, by ambiguities regarding terms and definitions (new terms are in use, e.g. recognition, validation, certification). The question of how to evaluate learning is raised over and over again with dilemmas, such as assessing learning outcomes and who needs to set assessment standards. In addition to the basic subjects, when applying for enrolment in higher education institutions in Serbia, in the coming years, points could also be awarded for various completed courses. In order to cover the entire spectrum of previous learning, the EU Council also includes alternative methods of evaluation and validation. In addition to classical tests and examinations, interested students who want to enrol in a faculty or one of the modules will be able to present their portfolio, ask for an interview, and their knowledge acquired through practice could even be recognized with an exam<sup>125</sup>.

#### *Affirmative measures*

Measures to encourage fairness and accessibility for students from vulnerable groups exist within affirmative measures. Apart from the special quota and the possibility of adapting the entrance exam, the conditions for enrolment to the next year follow the status of a student. Thus, e.g. students enrolled in accordance with affirmative action measures can continue studying on the state's expense with the achieved 36 points (versus 48 as needed by other students, if they retain the position during the ranking). What was perceived as a disadvantage during the TEMPUS project "*Equal Access for All: Empowering the Social Dimension in Strengthening the European Higher Education Area in the Context of Student Standards*" is also the following problem - the lack of a

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<sup>125</sup> Available on: <https://ec.europa.eu/epale/en/content/what-slows-down-process-competence-validation>

transparent and easily accessible information centre on scholarships, loans and other support during education, despite the fact that the Law on Higher Education envisages keeping records on the student and the student success<sup>126</sup>.

The new LHE and the introduction of a Unified Educational Number (UEN) as well as the compulsory student register will enable more transparent and precise guidance for students (in accordance with VO-ZD05). Measures such as loans and scholarships do not have adequate criteria, as the condition for financial support is meritocratic and insensitive to the socioeconomic characteristics of students. It is therefore clear that such a system of budgetary allocation does not contribute to the improvement of the social dimension of higher education because it recognizes only the criterion of excellence. Of the total number of student loans and scholarships, up to 10% is allocated to students from vulnerable social groups, that is, all students apply at a regular student loan and scholarship competition, and the mentioned 10% remains reserved for students from vulnerable groups who failed to exercise their rights in the first distribution. If these 10% are not fully distributed, the remaining loans and scholarships are awarded to students who were "below the line" on a regular basis. Bearing in mind that these 10% are "reserved" for members of all vulnerable groups, it is clear that this percentage is by no means sufficient for everyone, nor does it make a difference in the number of members of certain groups<sup>127</sup>.

Regarding the availability of dorms, it is necessary to revise the criteria and procedures because a student, or a candidate for housing in the student dormitory, submits extensive documentation proving the belonging to a vulnerable social group. For each vulnerable social group, a special ranking list is formed based on the points from the final regular ranking list.

#### *Harmonization with the market needs*

Regarding measures for targeted coverage increase, i.e., increase of coverage in areas where there is a lack of educated staff, these measures are applied in accordance with the possible legal solutions. Upon the adoption of the National Qualifications Framework Law, conditions for establishing bodies that assess the development and market needs and priorities (until then the enrolment quotas are determined as before, with a possible increase of 20% if assessed as justified and in line with the demand).

Career centres at universities and faculties were established (e.g. <http://www.razvojkarijere.bg.ac.rs>). There is still no enrolment strategy, statistics, or changes in the way of financing in vocational studies. For the first year students the AP envisaged the introduction of preparatory classes in the form and scope of HEIs, as well as electronic courses. For candidates who show interest, e.g. The Faculty of Agriculture in Čacak conducts completely free preparatory classes in the subjects that need to be passed on admission exams (VO-AS07). Universities continuously carry out the promotion of the basic academic studies curricula among students of secondary vocational schools and general secondary schools.

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<sup>126</sup> Đorić, G. (2015). The Social Dimension of Higher Education, Faculty of Philosophy, Niš

<sup>127</sup> Eurostudent: *PLASD Country profile The social dimension in higher education in: Serbia, 2015*

<sup>127</sup> Čekić-Marković, J (2016) Analysis of the Application of Affirmative Measures in the Field of Roma Education and Recommendations for Improving Measures, Belgrade: SIPRU and the Government of RS

### *Financial support for students*

Financing higher education as an instrument for increasing equity has not undergone significant changes for the time being, but in 2018, it is expected that the Law on Higher Education Financing will be launched, which is being drafted by the MOESTD Working Group (VO-AS07). Currently, on the basis of loans and scholarships, students receive on average about 22% of their total income from the state and they make up about 16.7% of the student population<sup>128</sup>. Of the students receiving some kind of support (16.7%), 69.9% receive scholarships, and 32.5% have received loans. The only thing that makes a kind of differentiation (apart from the criterion of success and the economic situation of the student) are scholarships for specially talented students. It has been shown that full-time students have more opportunities to get state aid, and those who work while studying exercise their rights in only 3.8% of cases. The current scholarship and crediting system is more in favour of regular students and students with a better average, which suggests that it may be necessary to better adapt the criteria, or to separate additional types of support, because students whose basic needs are not met can hardly compete in achievement with their colleagues who are better off.

### *Preventing dropping out from higher education*

The competent bodies have not yet adopted some form of protocol for monitoring and preventing dropping out from higher education (VO-ZD07). The HEIs, with the action VO-AS07, are also responsible for preventing dropping out and conducting analyses that can help in this. The tutoring systems and all measures that are implemented starting from studying with working, strengthening of career centres and offering relevant curricula also serve as prevention of dropping out, and it depends on the HEI which measure was identified as the most necessary. What is lacking, and what is the most important instrument for effective prevention measures, is a good data collection and processing system. The establishment of student registries is the basis, but the dropping out at all levels including the higher education level requires the development of a special strategy of educational statistics with a predetermined dynamics of collecting, monitoring, analysis and feedback of the authorities in order to undertake preventive and intervention measures. Without monitoring, there is no insight into the scope of measures or the effectiveness of all the HEIs, and thus those who create new policies lose significant feedback.

### *Relevance*

In the context of current social changes, the development of science and the technological advancement, the trends in higher education are specifically directed towards educational goals, outcomes and required competences. Most development and reform measures aim at linking higher education and the economy to meet growing labour market needs, to improve the role in the global economy, to empower and strengthen individuals and to base societies on knowledge.

In line with such changes, contemporary society requires a different approach to education that involves skills development such as critical approach to problem solving, ability for team work and

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<sup>128</sup> Eurostudent VI database <http://database.eurostudent.eu/>

cooperation with others, establishing quality communication, as well as functional and applicable knowledge.

The introduction of a vocational master program and opening opportunities for short cycle programs in the future could, with good appraisal of needs and quality control, significantly improve the employability of graduated students. Through the introduction of the UEN, it will be possible to monitor the employment rate of graduates with all three degrees (VO-ZD06). Defining a compulsory knowledge body is a prerequisite for modernizing the curricula and for better alignment with the world of work (VO-ZD14). The adoption of the Law on NQF has created a legal ground for establishing Sectoral Councils. In the amended Standards for Accreditation of the Curricula, professional competences are mentioned as a necessary condition for accreditation, but it remains to wait for the beginning of the work of the Sectoral Councils. This action is planned for a full implementation in 2019, so we can conclude that the formal conditions are slowly being fulfilled.

Strengthening of the innovation potential at all levels of studies (VO-ZD26, VO-DS03) was also recognized through the Research Innovation Development 2020 Strategy (adopted in March 2016). Several innovation centres, business incubator, technology transfer centres, etc. have been opened. The number of newly companies established by students is not known, but there is no noticeable increase, or an increased cooperation between HEI and the economy in order to develop innovations<sup>129</sup>. The number of registered or accepted patents remains very low. The adoption of the new Law on Innovation Activity, as well as of the Law on Scientific and Research Activity (NID) is expected, as it should create a more favourable legal framework for the development of innovations.

Modernization of study programs is a continuous process (VO-AS01). Some universities and faculties have tested different ways and some are definitely examples of good practice. For example, at the Faculty of Agriculture in Čačak during the autumn semester of the school year 2017/2018, the tutors held five meetings with students and submitted their work reports. On this occasion, certain suggestions and proposals were given in order to improve the students' passing of exams. This is just one of the examples and there are still more, but there is a need for research into the effects of new measures, evaluations and education policies to ensure that the quality is balanced at the national level.

With the new LHE, a short study program can be conducted in the range of 30 to 60 ESPB points. The Erasmus+ project PT&SCHE (Part-time & short-cycle studies in higher education) refers to the introduction of short programs of IT studies (VO-AS10).

#### *Alignment with the needs of the economy*

The needs for some of the deficient staff were recognized by the competent institutions, so the Government initiated the development of the information technology (IT) sector, which was

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<sup>129</sup> Report on existing strategies and laws of the Republic of Serbia related to the dimensions of the third mission, Project "Institutional framework for the development of the third mission at the universities in Serbia", UKG

followed by the development or revision of the program at 15 faculties. The quota for students has increased by 700 places in this field. However, the enrolment policy still does not address the issue of curricula that have a problem to fill the quota or where there is an overload of the market with certain education profiles.

The Law on Higher Education stipulates that two members of the NCHE are elected at the proposal of the Serbian Chamber of Commerce and that two members of the Board of Directors of the National Accreditation Body are elected at the proposal of the Serbian Chamber of Commerce. The NCHE issues standards for accreditation of study programs at the proposal of the National Accreditation Body (VO-ZD24, VO-DS03). Also, the National Council holds a meeting with the Serbian Chamber of Commerce at least twice a year, or once a year with the

In March 2018, the Council for Cooperation between Science and Economy was formed, consisting of MOESTD representatives, the Cabinet of the Minister without Portfolio in charge of Innovation and Technological Development, the Cabinet of the Prime Minister - Strategic Projects Implementation Unit - IT and Entrepreneurship Team, National Secretariat for Public Policy of the Government of Serbia, as well as the Intellectual Property Office, representatives of the Universities of Belgrade, Kragujevac, Novi Sad and Niš, Innovation Fund, Development Agency of Serbia, ICT cluster network, Scientific and Technological Park Zvezdara, ICT HUB, Biosens Institute, Agrounik, HTEC Group, Helvetas and others.

National Education Council, the Council for Vocational Education and Adult Education and other professional associations, to discuss issues within its competence and to establish priorities in the implementation of higher education policy. In this way, employers participate in all relevant processes and have the opportunity to regularly monitor the development of policies and programs and thus contribute to better compliance with the economy

To better connect employers with HEI, sectoral councils need to start with work and for the time being LHE only opens up the possibility that HEI, in order to achieve cooperation on the development of a curriculum in accordance with the needs of the labour market, can have employers' council. Universities offer employers cooperation within the Career Centres and they primarily achieve it through forming the offer of practice and career guidance activities (example of UBG - Employers' Section <http://www.razvojkarijere.bg.ac.rs/poslodavci-saradnja>).

Encouraging entrepreneurship and entrepreneurial spirit is a common theme at all levels of education. With the new LFES among the competences that should be the outcome of both primary and secondary education, entrepreneurial competences are included as key and interdisciplinary competences. This principle is also transferred to higher education, and the activities aimed at improving this component (VO-ZD27) are defined accordingly. Their implementation is stagnating for the time being, although at the same time some faculties want to launch entrepreneurial programs, and some already offer selected subjects, and even master studies. There is no unified data on how many HEI have modules or content related to entrepreneurship, and there is no information about student companies or self-employment. This action, although placed high on the list of priorities in the development of competitiveness and relevance of the HE, for the time being does not have adequate implementation.

In vocational studies, the LHE envisages the participation of employers in developing of the curricula, but there are still no clear educational measures in this regard. Not much has been about the planned activities to strengthen economic ties with the economy done since the adoption of the AP (VO-SS07). The introduction of a professional master should contribute somewhat to better student mobility and more equitable competition in the labour market.

### *Efficiency*

The efficiency of studying have been in the focus of higher education reform in the last ten years. In Serbia, before the adoption of the Law on Higher Education in 2005, which has officially started the reform processes, the so-called old system of studies was most strongly criticized precisely from the perspective of efficiency, its basic dimension, duration of studying. The average duration of studying of graduated students who studied under the old, pre-Bologna program was 7.28 years, while the average duration of studying of graduated students who completed according to the new, Bologna system of studies was 4.89 years<sup>130</sup>. Nevertheless, despite the increased efficiency of studying, it is important to consider all the obstacles that students today face on their way to efficient studying.

For the break taken during studying, the students mainly state as the reasons the loss of motivation (34.5%), financial difficulties (32%) and health reasons (31.6%). The smallest percentage indicates that employment led to a break in studying (18.1%). Those who depend on their own income more often state the financial reasons for the termination of their studies. On the other hand, students who receive state support rarely make a break, given that support is largely conditioned by the regularity of studying<sup>131</sup>.

Upon enrolment, almost one in 10 students makes a break in studying that is longer than one year. On the other hand, 4% of students make a break that is longer than one year between two levels of study, that is, after obtaining the first diploma and before continuing studies. Postponing studies does not affect the intensity of study later<sup>132</sup>.

Of the students who pass to the second level (master), almost 70% of students pass immediately after the completion of basic studies. The remaining 30% do so either after one to two years or later. There are differences between the areas, so most of the students from the arts, social, natural and ICT faculties immediately continue studying, while only 27% of students from the faculties of agriculture do so immediately after the completion of basic studies<sup>133</sup>. Based on SEDS data from last year, in Serbia, we are currently have about 1500 new PhD students annually, which in the light of the SEDS indicator is more than the number of 200 doctorates per million inhabitants.

The action plan envisages the establishment of a system for measuring and monitoring efficiency, and the development of measures for increasing efficiency. According to current data from the

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<sup>130</sup> Jovanović, V. et al. (2015). The Social Dimension of Studying in Serbia-EUROSTUDENT V Report on the Republic of Serbia

<sup>131</sup> Eurostudent database: <http://database.eurostudent.eu>

<sup>132</sup> Jovanović, V. et al. (2015). The Social Dimension of Studying in Serbia-EUROSTUDENT V Report on the Republic of Serbia

<sup>133</sup> Eurostudent database: <http://database.eurostudent.eu/>

EUROSTUDENT database<sup>134</sup>, 5% students study longer than seven years, so it could be said that there are not many students who study slowly or have longer breaks. Unfortunately, for now, there are no data on the deadline for the completion of education in national databases, and the efficiency indicators are not defined. Until NCHE adopts the indicators, and until implementation starts on individual HEIs (which is enabled by the adoption of LHE and the introduction of UEN), this action cannot be fully applied (VO-ZD13).

In order to ensure efficiency, universities began to follow the execution of teaching on daily level. For example, at the University of Kragujevac, the timetable (lectures, exercises and laboratory exercises) is published before the beginning of the semester and the faculty management supervises the pertaining to the timetable (VO-AS01)

Indicators for measuring educational performance exist on individual HEIs, but NCHE has not yet adopted them at the system level, nor are there standardized data and developed databases on the basis of which the efficiency of studying could be monitored (VO-ZD12).

### SEDS AP execution table

Activity	Executed	Partially	Not executed	Deadline 2018+
JOINT ACTIVITIES				
VO-ZD01 - Development of the enrolment system for basic studies based on the passed graduation exam		✓ <sup>135</sup>		No
VO-ZD02 - Introduction of alternative pathways to higher education enrolment			✓	No
VO-ZD03 - Access to a the second degree of higher education				
VO-ZD04 - Introduction of part-time studying		✓ <sup>136</sup>		No
VO-ZD05 - Ensuring availability at all three levels of studying for students from vulnerable groups		✓ <sup>137</sup>		No
VO-ZD06 - Developing programs to increase coverage in priority areas		✓		✓
VO-ZD07 - Reduction of the rate of abandonment of higher education			✓	No
VO-ZD08 - Strengthening public accountability of HEI for quality of higher education		✓		No
VO-ZD09 - Introduction of Quality Indicators in HE		✓		No
VO-ZD10 - Improving the Accreditation System	✓			No

<sup>134</sup> Note: The study from 2017 did not include HEIs that are not part of the university or short cycle programs.

<sup>135</sup> Bylaws of the new Law on High Education are expected

<sup>136</sup> Bylaws of the new Law on High Education are expected

<sup>137</sup> Bylaws of the new Law on High Education are expected

VO-ZD11 - Improving the quality assurance system - establishing a national accreditation agency		✓ NAT is expected		No
VO-ZD12 - Introduction of an educational performance analysis			✓	✓
VO-ZD13 - Efficiency Improvement Program			✓	No
VO-ZD14 - Defining the core of a profession (compulsory knowledge and competence corpus)			✓	✓
VO-ZD15 - Improving student participation in raising the quality of the teaching process		✓ There are no trainings and no common approach		No
VO-ZD16 - Establishing a system of vocational practice		✓		No
VO-ZD17 - Improving the criteria and procedures for the selection and promotion of the teaching staff		✓		No
VO-ZD18 - Development of support to teaching staff in teaching and scientific work			✓	No
VO-ZD19 - Coordinate the number of teachers by field				No
VO-ZD20 - Introduction of inter-sectoral engagement of teachers			✓	No
VO-ZD21 - Improving the implementation of the concept "student in the centre of learning"		✓		✓
VO-ZD22 - Alignment of learning outcomes and student load (ESPB)		✓		✓
VO-ZD23 - Improvements in the application of new methods of learning, of information technology and of e-learning		✓		✓
VO-ZD24 - Improving cooperation with employers and the economy		✓ <sup>138</sup>		No
VO-ZD25 - Improving the research component of higher education		✓		✓
VO-ZD26 - Strengthening innovative potential and increasing innovative outcomes		✓		✓
VO-ZD27 - Strengthening the entrepreneurial component of higher education			✓	✓
VO-ZD28 - Improving the international openness of the higher education system	✓			No
VO-ZD29 - Establishing international mobility for	✓			No

<sup>138</sup> The establishment of Sectoral Councils is expected

teachers, students and researchers				
VOCATIONAL STUDIES				
VO-SS01 - Reform of the organizational structure of vocational education institutions			✓	✓
VO-SS02 - Strengthening the role of the Conference of Vocational Studies Academies			✓	No
VO-SS03 - Introduction of research into vocational studies			✓	✓
VO-SS04 - Adaptation of the enrolment policy in the field of vocational studies			✓	✓
VO-SS05 - Improving the expected outcomes of vocational studies	✓			No
VO-SS06 - Improving teacher competencies in vocational studies			✓	No
VO-SS07 - Strengthening the cooperation of HEI in the field of vocational studies with the economy			✓	✓
ACADEMIC STUDIES (BASIC AND MASTER)				
VO-AS01 - Modernization of study programs in accordance with the needs of the labour market and with the level of achieved international scientific and technological development		✓		✓
VO-AS02 - Redefining Key Competencies for Basic Academic Studies (BAS)		✓		No
VO-AS03 - Redefining Key Competencies for Master Academic Studies (MAS)	✓			No
VO-AS04 - Encouraging the development and the offer of quality curricula			✓	No
VO-AS05 - Introduction of ranking of curricula			✓	No
VO-AS06 - Improving the teaching methodology and technology		✓		✓
VO-AS07 - Preparation of freshmen for teaching in higher education		✓		✓
VO-AS08 - Developing the interest of potential students to study at OAS		✓		✓
VO-AS09 - Introduction and application of modules to master studies		✓ <sup>139</sup>		No
VO-AS10 - Introduction of short programs (short cycle)		✓		✓
VO-AS11 - Organization of studies in the field of art			✓	✓

<sup>139</sup> Bylaws of the new Law on High Education are expected

DOCTORAL STUDIES				
VO-DS01 - Inclusion of doctoral students in research projects			✓	✓
VO-DS02 - Strengthening research capacity and excellence			✓	✓
VO-DS03 - Establishing cooperation with the economy, business and public sector			✓	No
VO-DS04 - Improving the quality assurance system of doctoral studies		✓		No
VO-DS05 - The development and organization of "doctoral schools"			✓	✓
VO-DS06 - Improving doctoral studies in the field of art			✓	No
VO-DS07 - Introduction of postdoctoral specialisation		✓		✓

## Adult Education

### Basic information on the current situation

Adult education in Serbia is an integral part of the education system and strategic commitments, and the directions for the development of the adult education system have not changed since the adoption of the Strategy for the Development of Education in Serbia until 2020.

Data from the latest Adult Education Survey, according to which the trend of higher participation in informal adult education programs in Serbia is continuing in relation to formal adult education (4% in formal, 13.6% in informal in 2011 and 3% in formal and 18.2% in informal education according to the 2016 survey).

At the same time, Serbia's strategic commitment is that by 2020, a minimum of 7% of citizens participate in some form of lifelong learning (SROS, 2012), while the EU goal is for 15% of the population aged 25-64 to participate in the lifelong learning and adult education by 2020. Thus, if we compare the EUROSTAT data where it was stated that the EU average participation in adult education is 10.9% for 2017 with a percentage for Serbia which is 4.4% in 2017, according to the data of the Statistical Office of the Republic of Serbia, collected in the Labour Force Survey, it can be concluded that Serbia is quite distant from the goals set by the national strategy, and even farther from the EU average.

Internal data of the Ministry of Education, Science and Technological Development state that in the school year 2016/2017, 1,158 students of Roma nationality have completed the third cycle of basic adult education.

### Progress made in the reporting period

Adult Education in Serbia is defined in the Strategy for the Development of Education in Serbia until 2020, the Strategy for the Development of Adult Education (2007), but also in other strategic documents - Strategy for Poverty Reduction in Serbia (2003), National Employment Strategy (NES) (2011) and the Career Guidance and Counselling Strategy (2010). If the strategic framework

is observed from 2007, that is, from the moment of adoption of the Adult Education Development Strategy, all achieved and unrealized results at the end of 2020 will be the result of the implementation of this framework and of the thirteen-year strategic planning.

Since the adoption of the SEDS, the greatest progress has been made in 2013, by adopting the legal framework, i.e., of the Law on Adult Education (Official Gazette of the Republic of Serbia, No. 55/2013) and of the bylaws that were primarily related to primary education of adults - "Rulebook on the curriculum for basic education of adults (Official Gazette of the Republic of Serbia - Educational Gazette No. 13/13), Rulebook on conditions in terms of space, equipment, teaching aids and degrees and types of education of teachers and andragogic assistants for the delivering the adult education curriculum (Official Gazette of the Republic of Serbia - Educational Gazette Nos. 13/13, 18/13), Rulebook on general standards of achievement for basic adult education (Official Gazette of the Republic of Serbia, No. 50/2013 and 115/2013), while two additional bylaws were adopted in 2015 - Rulebook on closer conditions in terms of curricula, staff, space, equipment and teaching equipment for the status of a publicly recognized organizer of adult education activities (Official Gazette of the Republic of Serbia, No. 89/2015) and Rulebook on the type, name and content of forms and manner of keeping records and the name, content and appearance of forms of public documents and certificates in adult education (Official Gazette of the Republic of Serbia, no. 89/2015) and they also apply to other levels and types of adult education.

Serbia participated in the last two research cycles in the Adult Education Survey (2011 and 2016)<sup>140</sup> and the data from that survey for Serbia show that the percentage of adult participation according to that methodology is 16.5% in 2011 and 19.8% in 2016, which represents minimal growth, given that this percentage at the EU level is much higher and amounts to 40.3% for 2011. According to the aforementioned methodology, if data for 2016 are observed, only Greece and Romania of all EU Member States (for which data are available) have a lower participation rate in adult education compared to Serbia, while compared to countries in the region Serbia comes before Bosnia and Herzegovina and Macedonia.

The adult education system in Serbia is first implemented through the program of functional basic adult education. The program of functional basic adult education was initiated by the IPA project "Second Chance - Development of a Functional Basic Primary Education System in Serbia" (2010-2013) aimed at improving basic skills in the most vulnerable social groups by developing the concept of Functional Basic Adult Education (FBAE). Over 5,000 adults (persons older than 15) participated in the project, in 80 primary schools the program was conducted in and in 75 secondary vocational schools that provided vocational training to adults. Thanks to this project, the basis for the adoption of a legislative framework for the implementation of basic adult education was laid, and through the project, besides the capacity of schools (over 1,000 teachers were trained for the implementation of this program), developed curricula and training materials within FBAE<sup>141</sup>.

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<sup>140</sup> Data are available in the EUROSTAT database, and the publication of the official data of the Republic Statistical Office for the 2016 research cycle is expected in 2018.

<sup>141</sup> Source: [www.drugasansa.rs](http://www.drugasansa.rs)

The second most common form of adult education in Serbia are the retraining, additional qualification and specialization programs, while publicly-recognized training organisers (PRTO) are also presented in the form of non-formal education, but, as the PRTO Adult Education Register has not yet been established, there is no precise data on the organizers or on the number of participants in these programs<sup>142</sup>.

The Annual Plan of Adult Education, as an important document adopted by the Government of the Republic of Serbia, defines the priorities, allocates the activities of adult education to local self-government units and determines the dynamics of the implementation of activities (taking into account the needs of the labour market and the potential number of adult education program participants) and the resources needed to implement the plan and the criteria for allocating these funds. By analysing the three latest annual adult education plans (AAEPs) for 2015, 2016 and 2017, it is concluded that plans, compliant to the law regulating the content of the plan (Article 55 of the Law on Adult Education), have sections on the indicators of the education system for adults in Serbia, and then the estimated number of participants in adult education programs by local self-government unit. In other words, in the first part, all annual adult education plans contain general information on adult education, in the first place data from the Adult Education Survey and the Labour Force Survey and by their content they are a summarized strategic framework taken from the SEDS and other relevant documents, which questions the validity of these plans.

In addition to these plans, the adoption of reports on the implementation of the Annual Adult Education Plans is envisaged. In the report on the implementation of the Annual Adult Education Plan for 2016, data on spent assets and program implementation are only provided in formal adult education, and the report itself shows that there is insufficient data on participation in activities in informal adult education, recognition of prior learning, as well as in the field of career guidance and counselling<sup>143</sup>.

However, when it comes to formal education, the report states that the basic primary adult education program was implemented in 68 primary schools and was attended by 6,072 students (6,679 students were planned) in 2016. Secondary education of adults in the same year was achieved in 209 secondary schools, in the territory of 17 school administrations for 2,801 participants, and the retraining, additional qualifications and specialization program was delivered in 238 secondary schools, in the territory of 17 school administrations for 6,747 participants (20,228 participants were planned). Part-time secondary education for adults, for students older than 17, financed from the budget of the Republic of Serbia, in 2016, was implemented in 209 secondary schools, in the territory of 17 school administrations. The program of part-time secondary adult education was attended by 2,801 participants (and 4,628 were planned) older than 17.

Also, the latest AAEP for 2017, referring to the 2016 plan, notes that "the network of institutions and organizations that offered adult learning and education programs was expanded, and the coverage of adults in formal and informal education programs has increased significantly in line

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<sup>142</sup> What is available is the list of publicly-recognized adult education organisers on the MOESTD website ([www.mpn.gov.rs/obrazovanje-odraslih/](http://www.mpn.gov.rs/obrazovanje-odraslih/)), which has 23 JPOAs and 68 accredited training courses.

<sup>143</sup> Certain data on informal education and career guidance as part of the employment policy is available as part of the annual reports of the National Employment Service.

with the planned" (Government of the Republic of Serbia, 2017, page 6), without specifying precise data or data sources.

The same report also states that the program of Functional Basic Adult Education in Penitentiary Institutions in Niš, Kruševac, Valjevo and Požarevac was implemented through joint activities of the Ministry of Education, Science and Technological Development and the Ministry of Justice - Administration for the Execution of Criminal Sanctions in 2016 that in the future, the preparation of the conditions for the start of the implementation of the FBAE and the Detention Centres in Sremska Mitrovica and Novi Sad is planned.

Therefore, when looking at current results both in the adult education system and in the participation rate, despite all the declarative efforts to place adult education as a mechanism that will improve the educational structure of the population and bring the philosophy of lifelong learning closer to the people, that is, to better connect the workforce with the labour market (SROS, 2012, NES, 2011), the progress in this area is very modest. Namely, although the legal framework exists, it has not been developed and applied to a sufficient extent and it does not reflect the need of a society for the development and improvement of lifelong learning and adult education. That is, irrespective of the fact that it covers different levels of education (primary, secondary, tertiary education) and that it has different functions (compensatory function (Kulić and Despotović, 2010), poverty reduction (Medić, 2004), improving the quality of life (Pejatović, 2005), professional aspect (Mihajlović and Kecap, 2014), etc.) the basic is still dominant in adult education in Serbia, which emphasizes the compensatory and poverty reduction functions, and the numbers related to the planned and achieved participation indicate that the existing system capacities are not sufficiently exploited.

### SEDS AP execution table

Activity	Executed	Partially	Not executed	Deadline 2018+
PD-OO01 – Establishing a network of publicly-recognized organizer of activities (PROA) of adult education.			✓	✓
PD-OO02 - Improving the functionalization of basic adult education			✓	✓
PD-OO03 - Developing programs of education and vocational training of adults in the workplace (workplace learning);			✓	✓
PD-OO04 - Introduction of short training courses for acquiring the necessary knowledge and skills, with ESPB			✓	No
PD-OO05 - Introduction of a system for evaluating the quality of institutions for formal and informal adult education at all levels			✓	✓
PD-OO06 - Introduction of e-learning in adult education			✓	✓
PD-OO07 - Establishment of the "university" for senior citizens			✓	✓

## Education of National Minorities

### Legal framework

**The Law on the Foundations of the Education System** ("*Official Gazette of the Republic of Serbia*", No. 88/2017), in **Article 5**, *The use of language* prescribes that educational work is to be carried out in the Serbian language and Cyrillic alphabet, while for members of the national minority educational work is carried out in the language, that is, the speech and the script of the national minority, with the possibility for the educational work to be carried out bilingually in the language and script of the national minority and in the Serbian language, in accordance with a special law. In the LFES section dealing with the aims of education, **Article 8** stresses the "development and respect for racial, national, cultural, linguistic, religious, gender, sex and age equality, tolerance and respect for diversity, development of personal and national identity, development of awareness and feeling of belonging to the Republic of Serbia, respect and nurture of the Serbian language and the native language, tradition and culture of the Serbian people and national minorities, development of interculturality, respect and preservation of national and world cultural heritage". Regarding the network of public institutions, LFES in **Article 104** prescribes that in a local self-government unit where the language and script of the national minority are in official use, or in which educational work is carried out in the language and script of the national minority, the act on the network of public preschool institutions and public primary schools is taken with the previously obtained opinion of the National Minority Council whose language and script is in official use in a local self-government unit, or whose language and script is used in educational work.

**The Law on Preschool Education** ("*Official Gazette of the Republic of Serbia*" Nos. 18/2010 and 101/2017) in **Article 5**, "*Use of languages*" prescribes the following: "Educational work is carried out in the Serbian language. For members of the national minority, educational work is carried out in the language of the national minority, and it can be carried out bilingually in the language of the national minority and in the Serbian language, if at least 50% of the parents or other legal representatives of the children choose so. The statute of the preschool institution determines the language in which the educational work is carried out, and the way in which the preschool program is carried out". **Article 6**, Records and Public Documents stipulates that "*When educational work is carried out in the language of a national minority, the institution keeps a record in the Serbian language with a Cyrillic script and in the language and script of the national minority, with the exception of records and pedagogical documentation on educational work conducted in the language in which educational work is carried out.*" In **Article 7a**, the Employment Records, it is noted that the employee records include the data on nationality, information on the language in which the primary, secondary and higher education has been completed, and the knowledge of the language of the national minority. Article 18 of the Law, dealing with different forms and programs of educational work, emphasizes that "in order to improve the quality of educational work, expanding the diversity of program offer, forms of work and services and increasing the coverage of children, the pre-school institution also implements various forms and programs in the function of caring, educating children, rest and recreation,

supporting the family, **nurturing the language and culture of the national minority**". When it comes to educating the educator, Article 39 stipulates that "The work of the educator can be performed by a person who meets the requirements prescribed by the Law and has completed the appropriate education, as follows: 7) with children - members of national minorities - a person who meets the requirements from items 1) to 6) of this paragraph, if they have acquired appropriate education in the language in which the educational work is being carried out, or if they have passed an examination in that language with the methodology in the appropriate higher education institution - the educator, in accordance with the Law. Exceptionally, in the absence of teachers with a knowledge of the language of the national minority, with a teacher who does not fulfil the conditions due to the lack of knowledge of the language, an assistant educator with a knowledge of the language and at least secondary education of the educational institution can be hired, until the procedure is completed after the announced competition, and the latest until August 31".

**The Law on Primary Education** ("*Official Gazette of the Republic of Serbia*" Nos. 55/2013 and 101/2017) stipulates in article 12, The language for carrying out educational work: "Educational work is carried out in the Serbian language. For members of the national minority educational work is carried out in the language and script of the national minority. Exceptionally, for members of the national minority educational work can be performed bilingually in the language and script of the national minority and in the Serbian language. When educational work is carried out in the language and script of the national minority or bilingually in the language and script of the national minority and in the Serbian language, the ministry responsible for education (hereinafter: the Ministry), according to the opinion of the relevant National Minority Council, gives its approval to carrying out educational work for less than 15 students enrolled in the first grade. When educational work is carried out in the Serbian language, the teaching of the national minority language with the elements of national culture as an electoral program is organized for the student of the national minority. When education is acquired in the language of a national minority, foreign language or bilingual, learning the Serbian language is mandatory."

**The Law on Secondary Education** ("*Official Gazette of RS*", Nos. 55/2013 and 101/2017) in Article 5, The use of languages prescribes the following: "Educational work is carried out in the Serbian language. For members of the national minority educational work is also carried out in the language and script of a national minority, or bilingually, if at the time of enrollment in the first grade, at least 15 students were identified. The school can carry out educational work in the language and script of the national minority, ie bilingually for less than 15 students enrolled in the first grade, with the consent of the ministry responsible for education, in accordance with the law. The Ministry shall give its approval for carrying out the school program in the languages of national minorities for less than 15 students, according to the opinion of the relevant National Minority Council, compliant to the law regulating the competence of National Minority Councils. If the National Minority Council does not submit an opinion within 15 days from the date of receipt of the request, the opinion shall be deemed to have been given. When educational work is carried out in the language and script of the national minority, the school is obliged to organize the teaching of the Serbian language for the students. When educational work is carried out in the Serbian language, the teaching of the national minority language with the elements of national culture shall be organized for the students of the national minority."

**The Law on Dual Education** ("*Official Gazette of the Republic of Serbia*", No. 101/2017) in **Article 22** stipulates the following: "Obligatory elements of the contract on learning through work are: 8) if the curriculum is carried out in the language of a national minority, the employer's obligation is to organize and carry out learning through work in the language of that national minority." Article 29 stipulates that the "Instructor is a person who:

- 1) is employed by an employer or who independently performs the activity;
- 2) has a working experience of at least three years in the appropriate occupation or occupational group for which the student is educated in dual education;
- 3) has at least the same level of education for the appropriate educational profile for which the student is studying;
- 4) speaks the language of the national minority in which the curriculum is being carried out"

**The Law on Textbooks** ("*Official Gazette of RS*", No. 27/2018), in Art. 5, Textbook in the language and script of a national minority, defines these textbooks in more detail: The textbook in the language and script of a national minority is considered to be:

A textbook in the language and script of the national minority shall be considered to be:

- 1) a textbook in the language and script of a national minority issued in the territory of the Republic of Serbia;
- 2) a textbook in the language and script of the national minority, which is a translation of a textbook approved in the Serbian language;
- 3) a supplement to a textbook used for carrying out a customised part of the curriculum for subjects of importance for the national minority;
- 4) a textbook in the language and script of a national minority issued in a foreign country, which has been approved in accordance with this Law. The provisions of this law relating to the textbook shall also apply to the supplement to a textbook for items of importance for a national minority.

#### **Number of educational institutions, classes and students belonging to national minorities who attend classes in the languages of national minorities**

In the territory of the Republic of Serbia, classes are taught in 1,302 primary schools, 61 primary and secondary music and ballet schools, 48 adult education schools, 44 primary special schools, 23 secondary schools and 573 secondary schools, with a total of 847,719 students. In their native language, education is attended by members of **8 national minorities: Albanian, Bulgarian, Bosnian, Hungarian, Romanian, Ruthenian, Slovak and Croatian national minorities.**

During the school year 2017/2018, primary and secondary schools are attended by a total of 44,633 students in 2,487 non-combined classes and in 239 combined classes, which makes 5.27% of the total number of primary and secondary school students in the Republic of Serbia.

School year 2017/2018

	<b>Number of students 2017/18</b>	<b>%</b>

TOTAL number of students in primary and in secondary schools in Serbian language	<b>803,086</b>	<b>94.73</b>
TOTAL number of students in primary and in secondary schools in the languages of national minorities	<b>44,633</b>	<b>5.27</b>
TOTAL number of students in primary and in secondary schools in the Republic of Serbia	<b>847,719</b>	<b>100</b>

## PRIMARY SCHOOLS

The number of students, classes and number of regular primary schools in school year 2017/18 in the Republic of Serbia according to the language of teaching.

Language	NUMBER OF STUDENTS		NUMBER OF CLASSES		NUMBER OF SCHOOLS
	$\Sigma$	%	Combined	Non-combined	
Serbian language	555,225	94.3	2,809	23,788	1,159
Albanian language	4,497	0.7	22	277	16
Bosnian language	12,374	2.1	79	530	21
Bulgarian language	36	0.007	0	5	1
Croatian language	245	0.05	6	24	5
Hungarian language	13,090	2.2	48	850	72
Romanian language	825	0.1	15	80	14
Ruthenian language	389	0.06	1	28	3
Slovak language	2,502	0.4	4	147	11
<b>TOTAL</b>	<b>589,183</b>	<b>100</b>	<b>2,984</b>	<b>25,729</b>	<b>1,302</b>

## SECONDARY SCHOOLS

The total number of students in secondary schools in the Serbian language and the languages of national minorities in the school year 2017/18.

LANGUAGE	NUMBER OF STUDENTS		NUMBER OF CLASSES		NUMBER OF SCHOOLS	
	$\Sigma$	%	Combined	Non-combined	$\Sigma$	%
Serbian language <sup>144</sup>	242,645	95.83	549	8,731	509	90
Albanian language	2,770	1.09	8	127	5	0.8
Bosnian language	1,429	0.56	3	47	6	1
Bulgarian language	149	0.06	0	12	2	0.4
Croatian language	167	0.07	0	2	1	0.2
Hungarian language <sup>145</sup>	5 394	2.13	23	206	36	6.4

<sup>144</sup> Serbian also includes Serbian-English, Serbian-Italian, Serbian-German and Serbian-French

<sup>145</sup> Hungarian also includes Hungarian-German

Romanian language	166	0.06	0	6	2	0.4
Ruthenian language	63	0.03	0	2	1	0.3
Slovak language	419	0.17	0	16	3	0.5
<b>TOTAL</b>	<b>253,202</b>	100	<b>583</b>	<b>9,149</b>	<b>565</b>	100

Elective course *Native language/speech with elements of national culture* is taught in 14 languages of national minorities in 314 primary schools in school year 2016/17: Hungarian, Bosnian, Romani, Romanian, Slovak, Bulgarian, Croatian, Ruthenian, Bunjevac, Vlach, Macedonian, Ukrainian, Czech, and Albanian. In school year 2016/17, **11,509** students attended this elective course, while in the school year 2017/18. In 310 primary schools, we have recorded an increase and **15,950** students attended this elective course. The status of this elective course has been improved by the adoption of the Professional Instructions on the forming of classes and the manner of financing in primary and secondary schools for the school year 2016/17, as well as the Professional Instruction for School Year 2017/18. The novelty brought by this document allows a school that carries out an elective subject program of curriculum native language/speech with elements of national culture to form a group at the level of a cycle, that is, a group consisting of students from the first to the fourth grade (students of the first cycle) and/or a group of students from the fifth to the eighth grade (students of the second cycle). Also, groups for the elective subject Native language/speech with elements of national culture can also be formed at the level of several schools in one municipality, with the consent of the competent school institution. The National Minority Councils actively participate in informing parents about the importance of studying the native language and speech, as well as in forming classes/groups for this elective subject.

The Ministry of Education, Science and Technological Development promotes the possibilities of learning the language and culture of national minorities through various forms of extracurricular and facultative activities (winter and summer schools, workshops ...) and other forms of work. Within the framework of the project of the Council of Europe and the European Union that supports South East Europe and Turkey in meeting European standards, as well as the approximation to the EU legislation during the enlargement process, the activity is implemented - strengthening the protection of national minorities in Serbia - and one of the goals is directed to strengthen the education in minority languages. Through the analysis of the model of education in Serbia and European countries, the model of learning the language of the social environment will also be analyzed.

Within this project, one of the activities focuses, among other things, on strengthening education in minority languages. Publishers were selected (PC Institute for Textbooks and Klet) whose textbooks will be analyzed. Curricula for the following subjects were also selected:

- Serbian Language and Literature: I-VIII grade of primary school and I-IV grade of general secondary school;
- History: VII - VIII grade of primary school and III-IV grade of general secondary school and secondary schools
- The World Around Us: I-II grade of primary school;
- Geography: VI-VIII grade of primary school, II-IV grade of general secondary school;

- Nature and Society: III-IV grade of primary school
- Fine arts: I-VIII grade of primary school and I-IV grade of general secondary school;
- Music art: I-VIII grade of primary school and I-IV grade of general secondary school.
- Sociology: IV grade of general secondary school;
- Constitution and citizens' rights: IV grade of general secondary school.

### **Improving the education of Roma children**

Support measures MOESTD are the following:

**Scholarships, loans, housing and nutrition** - the Rulebook on Amendments to the Regulation on student loans and scholarships was adopted, which established milder criteria for granting scholarships and loans to members of vulnerable social groups. Based on the Competition for Student Loan Grants and Scholarships for the School Year 2017/2018, 303 students were granted scholarships for Roma students. The Roma Education Fund, in cooperation with MOESTD, after the competition for Roma secondary school students with an average grade of 2.5-3.5, approved 500 scholarships for the school year 2017/2018. Support for inclusion, learning and advancement for these students is provided by teachers-mentors who have been trained for mentoring. Mentors provide support to students and monitor student progress, regularity of attendance and extracurricular activities. Students who are part of the mentoring support system have improved their school success and attend school regularly. In school year 2017/2018, 201 teacher-mentor was hired to provide support to students of the Roma national minority.

### **A program of affirmative measures for enrollment of Roma students in secondary schools.**

The adoption of the "Rulebook on criteria and procedure for enrolling students - members of the Roma national minority in secondary school under more favorable conditions in order to achieve full equality" in February 2016, which has now become part of the "Rulebook on enrollment in secondary schools", has rounded up the process of systematic regulation of this type of support. In the school year 2017/2018, with the application of the Affirmative Program, 1,969 Roma students were enrolled in secondary schools. In the school year 2016/2017, 182 future students of Roma nationality, 88 young men and 94 young women, were enrolled in higher education institutions, and in the school year 2017/2018, 153 students, 71 young men and 82 young women were enrolled higher education institutions.

**Pedagogical assistants** - there are currently 175 in the system, 35 are in pre-school institutions, the rest are engaged in primary schools, all have been certified through accredited modules within the Center for lifelong learning in Kragujevac. In the coming period, 50 new pedagogical assistants will be hired. Also, the Ministry is working on regulating the description of their jobs, and it is preparing a network of pedagogical assistants and instruments for measuring their results through a bylaw (a new one or an amendment of the existing one).

**Interculturality, tolerance, desegregation** - interested students in the Republic of Serbia have the opportunity to learn the languages and culture of national minorities through various forms of extra-curricular activities, ie facultative classes at winter and summer schools, camps, workshops or other forms of work.

The project "Fostering a democratic culture in schools" is a two-year activity co-funded by the European Union and the Council of Europe, and within the framework of the European Union-Council of Europe Program "Horizontal Assistance to the Western Balkans and Turkey". The program is implemented by the Education Department of the Council of Europe in cooperation with the Council of Europe Belgrade Office. The overall objective of the project is to increase the quality of education by encouraging a democratic culture in the formal education system through the application of anti-discrimination approaches based on the Council of Europe standards and practices.

The specific objectives of the project are to: a) enhance the competencies of teachers, students and citizens in the community about the concept, policies, practices and benefits that inclusive education and democratic culture play in schools; b) strengthen and increase the resources of pilot schools for eliminating prejudices and discriminatory access to vulnerable groups, as well as to address the situation of school violence. Expected results of the project are:

- Identifying an example of good practice of democratic culture in schools that will be promoted in the education and training system in the country and the region;
- A prepared action plan with projected activities and the way pilot experience will be used to develop a strategic plan;

20 pilot schools (10 primary and 10 secondary schools) were selected to introduce the measures and activities to combat discrimination and the mechanisms for monitoring these measures. The project lasts for 24 months and is implemented in cooperation with the Ministry of Education, Science and Technological Development through activities involving a wider group of relevant stakeholders, including the Institute for the Advancement of Education, research institutes, selected pilot schools, local communities, the media, non-governmental organisations, experts, academics, as well as international organizations/donors in Serbia. These 20 selected schools participating in the project "Encouraging democratic culture in schools" will promote the concept of democratic culture in school through teaching and extracurricular content, training of employees, establishment of practices and activities through which by the provision of new knowledge, skills and understanding, developing attitudes and behaviours, the students will learn how to defend their democratic rights and take responsibility.

**Student returnees after readmission** - During the school year 2016/17, in the primary schools in the territory of the Republic of Serbia, there were 711 students returnees after readmission, 369 girls and 342 boys. Since primary schools have an affirmative approach to the resolution of returnee issues, these students often do not register separately, but they apply by facilitated school enrolment procedures, then a team is engaged for previous assessment and inclusion of students in regular classes. Thanks to system flexibility and support measures, these students quickly integrate. Thus, students enrolled during the school year under the basic Readmission Agreement are often not treated as returnees, but after a month they become full-time students. In addition, if the child returns during the same school year, the school does not treat it as a newly-enrolled student, the child remains in the same class. Thus, the child does not lose a school year, the absence from school is justified, and children are given additional support in mastering the curriculum and

the opportunity to compensate for missed classes. The number of enrolled students returned under the Readmission Agreement to grades in primary schools: 1st grade: 0; 2nd grade: 101 (47 girls, 54 boys); 3rd grade 234 (122 girls, 112 boys); 4th grade: 262 (138 girls, 124 boys); 5th grade: 88 (54 girls, 34 boys); 6th grade: 13 (6 girls, 7 boys); 7th grade: 9 (2 girls, 7 boys); 8th grade: 4 (0 girls, 4 boys). Of the total number of students who were returned under the Readmission Agreement, 497 or 70% (292 girls, 205 boys) were enrolled in the age appropriate class. The others are enrolled in the lower grades according to the results of the knowledge and skills test.

The reasons for enrolment in the lower grade are:

- insufficient knowledge of the Serbian language, i.e. the language in which the lessons take place;
- insufficient knowledge of the Cyrillic script;
- irregular attendance;
- Frequent interruption of education and going abroad several times during the school year.

#### *Secondary School*

During school year 2016/17 a total of 15 students returnees after readmission, 6 girls and 9 boys, were enrolled in the secondary schools in the territory of the Republic of Serbia, The Ministry of Education, Science and Technological Development continues to monitor student returnees under the Readmission Agreement during school year 2017/2018

## **TEXTBOOKS**

Textbooks in the languages of national minorities are published in the Catalogue of Primary School Textbooks approved for the school years 2016/17, 2017/18, 2018/19, a total of 1,521 textbooks are available in the languages of national minorities for pre-school, primary and secondary education.

The Ministry of Education, Science and Technological Development, with the aim of obtaining the lacking textbooks in the languages of national minorities that present the entire curriculum in their native language, have signed Memoranda of cooperation in the printing of lacking textbooks in the language and script of the national minorities with the Institute for Textbooks and 8 National Minority Councils (Albanian, Bosnian, Slovak, Croatian, Bulgarian, Hungarian, Romanian and Ruthenian national minorities). These memorandums are designed to print 184 textbooks. By the end of 2017, 61 textbooks were printed, 26 textbooks are in the press, while 31 manuscripts are in the authorization procedure, 13 in preparation for approval, and for 72 textbooks no manuscripts have been submitted by the author.

In addition to national minorities who follow the complete curriculum in their native language, the Institute for Textbooks also publishes textbooks for national minorities who attend classes in the Serbian language, who have classes in the *Native language/speech with the elements of national culture*.

- For *Macedonian language with the elements of national culture*, textbooks for the first (2014), second (2015) and the third (2017) grade, funded by the Institute for Textbooks, have been printed so far. The textbook for the fourth grade is in preparation for sending for approval to the Ministry of Education.
- For *Vlach speech with the elements of national culture*, a first-grade school textbook (2014) has been printed, funded by the Vlach National Council. For the second grade, the manuscript is in preparation for sending for approval to the Ministry of Education.
- For *Bunjevac speech with the elements of national culture*, the first and second grade (2014) and grammar books from the first to the fourth grade (2014) have been printed so far, funded by the Textbook Institute. A teacher's manual for teachers of this course in the first and second grade was also made available to teachers on the website of the Textbook Institute. The draft of the third and fourth grade was sent for approval to the Ministry of Education.
- For *Roma language with the elements of national culture*, the preparation of textbooks for the first four grades is under way, two of which have been submitted for approval to the Ministry of Education (a positive opinion of the IIE was received, the Ministry's approval is expected so they can be printed), and textbooks for the third and fourth grade are in preparation for sending for approval and will be sent by the end of the year. The funds were provided by a tender launched by the Centre for Education of Roma and Ethnic Communities.
- For *Czech language with the elements of national culture*, textbooks for the first (2012) and for the second grade (2017), funded by the National Council of the Czech Republic (first grade), the Czech Institute and the National Council of Czech (second grade), have been printed.

### **Monitoring the quality of education in the languages of national minorities.**

Every year the Institute for the Evaluation of the Quality of Education makes an analysis of the achievements of students who are educated in the languages of national minorities. Based on the Report on the results of the final exam of national minority students for the school year 2015/2016, made by the Institute for the Evaluation of the Quality of Education states in the Conclusion of the document: "Of the total number of students who have passed the final exam this year in June, 4.5% belong to one of the seven national minorities. Students from different national minorities took tests in their native language, except for the members of the Bulgarian minority, who have solved the tests in the Serbian language. The native language test was identical in structure for all students, but not by content. Of all native language tests solved by members of national minorities, the highest score was recorded in the Croatian language test, and high achievements were also recorded by the students who were solving the tests in the Albanian and Hungarian languages. The lowest achievement (under 10 points) was achieved by the students who were solving the Ruthenian test. As in previous years, the mathematics test was the most difficult for students. Only members of the Croatian national minority managed to solve half of the tasks in the test on average, while it was unachievable to all other students. The worst and extremely low results were achieved by members of the Romanian and Hungarian communities. When it comes to the combined test, the students of the Bulgarian national minority have the highest achievements, and it is important to point out that only they achieve above the average results. On

the other hand, the achievements of students from other national minorities are below the average. By comparing achievements by age, it is noted that Ruthenian national minority students have very stable achievements. In contrast to other minorities, more or less oscillations are recorded over the years, with the most pronounced ones among the students in Hungarian (native language test), Bulgarian (language test and combined test) and Albanian minorities (mathematics test). Generally speaking, on average, there are more differences over the years in the native language and mathematics tests, than in the case of a combined test. Observed at the district level, fairly balanced achievements have been made on the mathematics test in environments in which the students of the Hungarian and Romanian national minorities attend classes, and in the native language test the smallest variability is recorded in the students from the Ruthenian community. The achievements of students from different minorities generally vary in a greater or lesser extent, while they are most pronounced on a combined test, in the case of members of the Romanian and Slovak national minorities. Although the greatest differences in the achievement of students of Albanian ethnicity have been identified, care should be taken when making conclusions due to the large disproportion in the number of students in districts. The above findings on the achievement of students from national minorities provide a good basis for monitoring the progress of these students and for formulating appropriate data-based education policies. The entire Report can be found on the website [www.ceo.edu.rs](http://www.ceo.edu.rs).

The concept of general, artistic and vocational graduation exam has been developed - students who have acquired education in one of the languages of national minorities have the right to take graduation in the language in which they acquired education and have the right to choose Serbian as a non-native language as an elective subject. In the process of passing, there is a Rulebook on the graduation exam. The final examination in the native Bosnian language was first taken by the students of the Bosnian national minority in the school year 2016/17.

The Rulebook on the Graduation Examination Program has been published. The Institute for the Evaluation of the Quality of Education, in cooperation with the Pedagogical Institute of Vojvodina, has formed 8 working groups, for each of the languages in which a special group is being taught, which will develop standards for the native language for the end of secondary education. Members of working groups were proposed by representatives of National Minority Councils and by departments of relevant faculties on the basis of the criteria defined by the Institute. The members of the working groups are experts in the field of literary language, teachers in primary and secondary schools and university teachers.

**Strengthening initial teacher education to provide competences in the language of the national minority and the Serbian language/Provision of professional staff for work in minority languages in accordance with the Strategy for the Development of Education in the Republic of Serbia until 2020 and the accompanying Action Plan.**

In July 2016, a Working Group was formed consisting of representatives of 6 public universities in the Republic of Serbia, where the initial education of teachers was realized. The working group will propose different models of initial teacher education. Several meetings were held with representatives of the National Council for Higher Education and the Commission for Accreditation and Quality Assurance. One of the proposed solutions is to encourage the mobility

of students, future teachers, to faculties in the countries of national minorities, which is in line with the Education Strategy in the Republic of Serbia until 2020, which will speed up the bilateral agreements. Amended standards for accreditation of the curricula adopted and published in the Official Gazette 88/17 of 29/09/2017. They are in line with the encouragement of student mobility.

The IIE and the Pedagogical Institute of Vojvodina are developing the program of professional development of teachers and associates who teach in the language of national minorities.

### **Improving the education of teachers in Serbian language as non-native language**

Within the project "Implementation of the recommendations of the Study for the Improvement of Teaching and Learning of the Serbian as a Non-Native Language in Primary Schools in Preševo, Bujanovac and Medveđa" (2014) implemented by the Ministry of Education, Science and Technological Development of the Republic of Serbia and the Service of the Coordination Body of the Government of the Republic of Serbia for the Municipalities of Preševo, Bujanovac and Medveđa, supported by the Office of the High Commissioner for National Minorities, the British Embassy in Belgrade, the European Progress Program and the OSCE Mission in Serbia, the most important activities and recommendations implemented during school years 2014/15 and 2015/16 are:

- two cycles of eight-day accredited Basic Teacher Training (2015 and 2016) and one cycle of four-day Accredited Advanced Teacher Training (2016) were designed and executed. A total of 72 teachers attended the training, and from 2016, teachers from the AP Vojvodina are included in the trainings;
- organised meetings of teachers who teach Serbian as a non-native language with representatives of institutions (MOESTD, IIE, IEQE) (2015);
- organised meetings of teachers from the south of Serbia with their colleagues from AP Vojvodina in order to exchange experiences and good practices (2015 and 2016);
- Six teaching assistants were selected and engaged in teaching in four primary schools in Bujanovac and Preševo during the school year 2015/2016 in order to support teachers in the application of new methods of teaching and monitoring students' achievements.

Teacher training for the implementation of the general standards of achievement for the subject Serbian as a non-native language for the end of the first and second cycle of compulsory education, general secondary education and basic adult education included 195 participants (135 from primary schools and 60 from secondary schools) teachers who teach in Albanian and Hungarian language.

### **Development of standards for Serbian as non-native language and implementation of a new curriculum for the Serbian language - as a non-native language for primary and secondary schools, taking into account the initial understanding of the Serbian language.**

The Institute for the Evaluation of the Quality of Education has formed an expert commission that has drafted a document of educational standards - within the project Development of general standards of achievement for Serbian as a non-native language for the end of the first, second and third cycle of education, which includes functional basic adult education. The project lasted from

January 2015 to June 2016, with the support of the Department for Democratization of the OSCE Mission.

The decision on the final document containing the educational competences for achievement (basic, intermediate and advanced) was adopted by the Commission based on: (1) the research in December 2014 through focus groups (teachers of Serbian language as a non-native language and representatives of National Minority Councils) - organized by the Institute in cooperation with the Ministry of Education, Science and Technological Development and the OSCE Mission; (2) expert assessments by Commission members; (3) Study visits by all members of the Commission and representatives of the OSCE to schools and national councils in the north and south of the Republic of Serbia where the Serbian language is taught in as a non-native language in May 2015; (4) empirical research in November 2015; (5) public discussions, with the presentation of the concept and purpose of educational standards, with the teachers of Serbian as a non-native language and representatives of National Minority Councils - in May and June 2016 in Bosilegrad, Bujanovac, Novi Pazar, Subotica, Novi Sad and Ruski Krstur , organised by the OSCE Mission, as well as (6) based on the necessity of a future perspective, that is, the development dimension of educational standards that should improve the quality of teaching of Serbian as a non-native language in primary and secondary schools.

In empirical standard review, 104 primary schools and 43 secondary schools, 2,634 students of the eighth grade and 2,165 students at the end of secondary education - whose native languages are: Albanian, Croatian, Hungarian, Romanian, Bulgarian, Russian and Slovak.

In considering the important aspects of the future document, in June 2016, the Commission redefined the construct of standards of achievement: competencies, standard areas, statements of standards and their indicators, based on three levels of educational achievement according to the complexity of knowledge and the presumed process of thinking.

The Democratization Department of the OSCE Mission provided the Institute with financial assistance for the implementation of this project and organised study visits and a series of meetings in 2015 and 2016 with the representatives of National Minority Councils, teachers and principals of primary and secondary schools in support of the Institute for Evaluating the Quality of Education and the Ministry of Education, Science and Technological Development.

The Institute for the Advancement of Education, within the framework of the preparation of the new Teaching Curriculum 5-grade classroom, prepared a proposal for the subject Serbian language as non-native. For the first time, and in accordance with the requirements of national minorities, two programs have been prepared:

- PROGRAM A - For students whose native language is a non-Slavic language and who live in homogeneous environments (basic level of standard);
- PROGRAM B - For students whose native language is a Slavic languages and who live in multinational environments (intermediate-advanced level of standards).

In addition, the Institute has signed a Cooperation Agreement with the Organization for European Cooperation and Security (OSCE) on the preparation of all other curricula for this course in primary and secondary schools. The obtained funds enable the curriculum to be prepared in cooperation with a larger number of external associates from different national minorities. The Rulebook on General Standards of Achievement for the subject Serbian as a non-native language for the end of the first and second cycle of compulsory education, general secondary education and basic adult education ("Official Gazette of RS", No. 55/17) was adopted.

The working group for the preparation of the program and outcomes for the subject Serbian as a non-native language visited schools in which the teaching of the Serbian as a non-native language is conducted: Jovan Jovanovic Zmaj, Kanjiža, primary school "Sečenji Istvan", Subotica, general secondary school "Deže Kostolanji", Subotica, primary school "10 October", Horgoš and Ljudevit Štur primary school, Kisač. Visits to the schools were organized with the aim of familiarising the members of the Working Group working on the development of outcomes and programs for Serbian as a non-native language from the first grade of primary school to the fourth grade of secondary school, with examples of good educational practice, but also to meet the problems and challenges that, especially in homogeneous environments in AP Vojvodina, occur in class.

The Working Group for developing the curriculum and the outcomes for the subject Serbian as a non-native language, in cooperation with the OSCE, drafted a curriculum for all eight grades of primary school, as well as for all four grades of secondary school and general secondary school (in A and B format). It is planned that a public discussion with all National Minority Councils will be organised in the upcoming period in order to improve the document and prepare it for further procedure.

Until October 3, 2017, all curricula for pre-university education were developed (12 programs in A format and 12 programs in B format), as well as the expert-methodical instruction. During October, a public discussion begun with all national minorities who attend classes in their native language and have a compulsory subject in Serbian as a non-native language.

As a result, the IIE received positive opinions from the following National Minority Councils: Bosniak, Slovak, Ruthenian, Croatian and Hungarian, but the Hungarian National Minority Council sent a number of proposals and comments that the WG considered and adopted (to which a separate document was delivered) , and made the latest version of the Serbian Program Proposal as a non-native language.

The Working Groups for the Development of Standards for Native Languages of National Minorities have completed the proposal of the standard. All working groups organized a presentation of standards proposals and interviews with teachers who teach their native language. Teacher suggestions and proposals are embedded in the final version of the standard. The obtaining of opinions from the National Minority Councils on the draft standard is in course. So far, a positive opinion has been received from 6 National Minority Councils (Hungarian, Ruthenian, Bosnian, Croatian, Romanian and Slovak), and 2 more are expected (from the Albanian National Minority Councils and Bulgarian National Minority Councils). Upon obtaining the opinions, the proposal will be sent to the National Education Council for adoption.

## **Implementation of programs in teaching and extracurricular activities that encourage the learning of Serbian as a non-native language.**

Within the project "Implementation of the recommendations of the Study for Improving Teaching and Learning of Serbian as a Non-Native Language in Primary Schools in Preševo, Bujanovac and Medveđa", the most important activities and recommendations completed during the school years 2014/15 and 2015/16 are:

- provided textbooks for Serbian as a non-native language, additional teaching resources for students of higher grades of 16 primary schools in Preševo, Bujanovac and Medveđa, and teacher handbooks (2015);
- three cycles of student achievement testing during the school year 2015/2016 have been completed in order to monitor the results of the abovementioned activities; analysis of test results;
- organised and held a school and district competition in the subject Serbian as a non-native language in Preševo and Bujanovac (2016);
- completed extracurricular cultural and scientific activities for 31 students from Preševo and Bujanovac who participated in the district competition (as part of the visit of the students of AP Vojvodina to the national competition in the Serbian language as a non-native language in Novi Sad) (2016);
- Serbian-Albanian Albanian-Serbian dictionary developed for primary school children (small illustrated dictionary with over 6000 entries, examples of their use and relevant grammar information, currently in the digitalization phase) (2015 and 2016);
- execution of training in the field of interculturality attended by 33 teachers (2016).

During school year 2016/2017, in the municipalities of Preševo and Bujanovac in four primary schools (Ibrahim Kelmendi, Seljami Halači, Muharem Kadriu and Naim Frašeri), 6 assistants for the Serbian language were hired. Teacher and teaching assistant participated in the teaching of the course Serbian as a non-native language. At the beginning of May 2017, students of these schools were tested to assess their achievements. The results were obtained, but the RG meeting is waiting for the authors of the tests to present the results, compared to the last year, which should serve as the basis for the preparation of a new project. Within the framework of the project implemented by the OSCE Mission in the Republic of Serbia, the Coordination Body of the Government of the Republic of Serbia for the Municipalities of Bujanovac, Preševo and Medveđa and the Ministry of Education, Science and Technological Development with the aim of supporting the teaching of the Serbian language as a non-native language in the municipalities of Preševo, Bujanovac and Medveđa within which the Albanian-Serbian/Serbian-Albanian dictionary was printed. The High Commissioner of the OSCE Mission for National Minorities, officially handed over to the MOESTD a printed version of the Dictionary, and in October 2017, distribution is planned for schools in which classes are conducted in Albanian language in Preševo, Bujanovac and Medveđa. The Serbian-Albanian Albanian-Serbian Small Dictionary/ Fjalor i Vogël was promoted and distributed in 16 primary schools with Albanian language in the municipalities of Preševo, Bujanovac and Medveđa. The OSCE High Commissioner on National Minority Issues, whose office, together with a team of experts, has developed the Dictionary, donated to each department in 16 primary schools a printed copy of the Dictionary. In addition to that, in cooperation with

the Service of the Coordination Body of the Government of the Republic of Serbia for the Municipalities of Preševo, Bujanovac and Medveđa, which helped the development of the dictionary, the presentation of the printed and the digital versions for computers and smartphones in two primary schools in Bujanovac and Preševo was organized. The dictionary is bilingual, illustrated and adapted to the basics both in content and graphically. It contains more than 12,200 entries with over 16,600 meanings, 21,300 examples of word usage in the sentence, as well as relevant grammar information and a summary of the grammar of both languages. In addition, the digital version for PCs and smartphones has recorded pronunciation of more than 23,800 words in both languages, and in addition to being easily accessible outside the school, it enables easy search, interactivity and continuous improvement of the content. Small Dictionary/Fjalor i Vogel is available in digital edition on the website: <http://dictionary.hcnm.org/dict/>

**Strengthening language capacities and learning vocational terminology for students belonging to national minorities in the language of a national minority in order to gain access to the labour market and professional development.**

With the Faculty of Philosophy of the University of Novi Sad, MOESTD has started mapping the needs of higher education institutions that implement curricula in the languages of national minorities. In this reporting period, we collected data from 5 faculties, of 14 that work within the University of Novi Sad.

Since its founding, the Faculty of Philosophy of the University of Novi Sad has been conducting curricula in the languages of national minorities: Slovak Language and Literature, Hungarian Language and Literature, Romanian Language and Literature, and Russian Language and Literature; with the completion of these studies, the students acquire not only teacher competences, but also competencies for others recognizable occupations (translation, proofreading, work in media houses, etc.).

Students are allowed to use professional literature in the languages of national minorities from the rich library fund of the Library of the Faculty of Philosophy. In addition to that, within the Centre for Language Languages, the faculty can strengthen their linguistic capacities and learn the professional terminology they need for further professional development.

The Faculty has significant cooperation with the universities in the countries of the national minority's countries and with the following universities:

- Western University in Timisoara, Romania (Erasmus + and Bilateral Cooperation);
- University of Szeged, Hungary (Erasmus +);
- University of Prešov, Slovakia (Erasmus +);
- University of Pécs, Hungary (Bilateral Cooperation);
- Matej Bel University in Banjska Bistrica, Slovakia (Bilateral Cooperation);
- Technical University in Constanta, Romania (Bilateral Cooperation);
- Faculty of Philosophy, University of Osijek, Croatia (Bilateral Cooperation);
- Faculty of Philosophy, University of Rijeka, Croatia (Bilateral Cooperation);
- Panonija University in Vesprem, Hungary (Bilateral Cooperation);
- Faculty of Teacher Education, University of Rijeka, Croatia (Bilateral Cooperation);

- Hungarian University Sapientia in Transylvania;
- Faculty of Technical and Social Sciences Tirgu-Mures, Romania (Bilateral Cooperation);
- Hungarian Institute II Ferenc Rakoci in Ukraine, Department of Philology, Berehove, Ukraine (Bilateral Cooperation).

We continue the needs mapping activity at the beginning of a new school year, with the aim of strengthening the capacity for learning vocational terminology for students from national minorities in the language of the national minority,

#### Education of refugee students in the Republic of Serbia

In terms of access to education, student registration, the principle of equal treatment, prevention of xenophobia and intolerance, the Republic of Serbia applies the provisions of international law, as well as domestic legislation. In the Ministry of Education, Science and Technological Development, a Working Group was established to provide support to the education of refugee students and asylum seekers in the institutions of the education system, whose task is to improve the process of inclusion in the educational system of children of migrants and to provide quality education. Coordination of activities with other institutions has been enhanced: the health sector, the MIA and the Commissariat for Refugees. A high level of cooperation with international organizations (Unicef, OSCE, Save the Children) and NGOs (Danish Refugee Council, Group 484, Indigo, SOS Village, Novak Đoković Foundation) has been achieved. The Minister has issued the *Expert Instructions for the Inclusion of Refugees/Asylum Seekers in the system of education*. This bylaw provides the procedure for inclusion of students, providing support and monitoring. The inter-ministerial working group for solving the problem of mixed migration flows has been formed by the Ministries of Labour, Health, Education, Defence, MIA and the Commissariat for Refugees. In the amendments to the Law on Foundations of the Education System (*Official Gazette of RS, No. 88/2017*) and the Law on Primary Education (*Official Gazette of the Republic of Serbia, nos. 55/2013 and 101/2017*) and in the Law on Secondary Education (*Official Gazette of the Republic of Serbia Nos. 55/2013 and 101/2017*) enabled the systematic inclusion of student migrants and asylum seekers.

During the school year 2016/17, 101 students in 6 primary schools were included in the educational system of the Republic of Serbia, while in the school year 2017/18, 503 students were included in 45 primary schools, 83 were provided with educational support in transit centres. In the current school year, 95% of refugee children of primary school age are in refugee centres. Several cycles of professional training of employees in education in the field of support to the learning of migrant children have been delivered. A proposal of the MADAD 2 project has been prepared to the European Commission, which supports and promotes the process of involving students in the education system. The continuous monitoring of the inclusion process, support for employees and students is implemented.

## Changes in the Social and the Educational Context from the Period of the Adoption of the Strategy

The strategy adopted in 2012 was developed in cooperation with a large number of educational experts and experts from other fields, and for each part of the education system an analysis of the current weaknesses and strengths was made, and the direction of the reform was identified in which each part of the system should be moving. The goals and commitments that were set then did not change substantially until 2018, but new possible mechanisms for achieving strategic goals and contextually-driven threats emerged.

The Action Plan for the implementation of the Strategy for the Development of Education in the Republic of Serbia was adopted at the beginning of 2015, but the implementation of a number of activities it encompasses commenced even before the formal adoption; however, the systemic coordination mechanisms and implementation monitoring were defined then, as well as the roles and responsibilities of all relevant institutions, and in particular the sectors within the Ministry of Education, Science and Technological Development.

Although Serbia has not reformed education by adopting the Strategy, it has been implementing education reform with considerable support from international institutions and organizations for many years now. The available indicators of the quality of education show that the effects are not satisfactory in all domains. According to the PISA survey in 2012, 30% of 15-year-olds are functionally illiterate and Serbia's absence from the PISA cycle in 2015 makes it impossible to report and adequately monitor the trend of the population of children regarded as functionally illiterate at the time of completing compulsory education. This is especially important in light of the fact that Serbia is currently 60th out of 130 countries according to how well and efficiently it develops its human capital, as stated in the Global Human Capital 2017 index, i.e. it is positioned below all EU countries.

Since 2012, the Government of the Republic of Serbia has been changed several times, during the 2012, 2014 and 2016 elections, and there was a government reconstruction. The education sector, led by Žarko Obradović in 2012, was by 2018 led by three other ministers, including the current one. Education during this period has always been mentioned as a priority, although the potentials of the education sector and the importance of individual levels of education are seen differently in different constellations. The areas that were replaced as the key to the development of the society were higher education, secondary education, pre-school education, education of national minorities, and secondary vocational education with a focus on dual education as a specific approach with emphasis on learning through work. With the emphasis on acquiring qualifications necessary to the labour market and the development of personnel for new occupations, the development of entrepreneurship and other transversal competencies is encouraged. Very often the activities related to restoring reputation to the teaching profession, improving the working conditions and quality of staff were referred to as areas of action.

In the work program of the Government of RS published in 2017, it is stated that education should *"create young people for the future, young people who are team players, who have the capacity to analyse problems and find solutions for them, young people who have the courage to make decisions, and young people who think"*. It

is pointed out that, through education, it is important for young people to regain strength and ability to make informed decisions, bearing in mind that not all of them have the same starting position and that fairness must be reflected in the wide availability of all levels of education. It has been pointed out that digitalisation, as one of the general directions of development, must be rooted in the education system both in terms of improving the information and communication infrastructure of educational institutions and in terms of changes in the school curricula. Creating unique databases, electronic documentation, and school equipping should jointly contribute to a more efficient and more transparent education system and better policy planning in this area<sup>146</sup>.

It is also important to emphasize that, despite the fact that SEDS refers to the consideration of the introduction of compulsory secondary education, Serbia remains one of the few countries where compulsory education lasts only 8 years (plus one year of the preparatory pre-school program). Secondary education is not yet mandatory in all EU countries up to 18 years, but most of the countries have extended the duration of compulsory education to 10-12 years, students do not leave school before the age of 16<sup>147</sup>.

When it comes to financing education from the budget of the Republic of Serbia, this sector has been financed in the same way and in a similar amount for years, with the majority of funds going to salaries, leaving little space for investment in development. However, there is a significant inflow of foreign funds into the field of education, and there is also a shift in the approach to investment in education, a more clear reference to the links between education and the world of work allows for the influx and combination of resources from other sectors, and so from 2012, numerous development projects of varying size and duration are directly implemented, although their ultimate goal is to support the development of the economy.

### **Demographic trends and network of schools**

According to estimates in mid-2016, the number of inhabitants in the Republic of Serbia is 7,058,322 of which 51.3% are women, and 48.7% are men. The trend of depopulation continued, and the population growth coefficient, compared to the previous year, is negative and amounts to -5.2%<sup>148</sup>.

Consequently, depopulation and internal migration have a significant impact on reducing the number of students in certain schools, and as the diversity of secondary schools can be found only in large urban centres, a significant number of secondary school students are forced to independently finance transportation or accommodation in order to attend distant schools. Bearing this in mind, but also the fact that there is ample evidence that the network of schools in Serbia has not been sufficiently optimized, in 2018 the Ministry of Education, Science and Technological Development started activities related to the optimization of the network of schools aiming to increase its efficiency but without threatening the principles of equality and accessibility in education.

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<sup>146</sup> Program of the Government of the Republic of Serbia Prime Minister candidate Ms. Ana Brnabić, June 28, 2017

<sup>147</sup> European Commission/EACEA/Eurydice, 2017. Compulsory Education in Europe – 2017/18. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union

<sup>148</sup> <http://www.stat.gov.rs/sr-latn/oblasti/stanovnistvo/procene-stanovnistva/>

## Macroeconomic Trends

According to the Statistical Office of the Republic of Serbia (SORS), the total gross domestic product (expressed in relative prices) in 2017 was higher by 1.9% than in 2016. In the fourth quarter of 2017, the overall GDP was higher by 6.2% than the average for that year and higher by 2.5% than the total GDP achieved in the fourth quarter of 2016. The average net salary in the period January-July 2017 increased by 0.9%. The differences between the average salaries in the public and private sector, primarily as a result of faster growth of private sector wages, are also reduced.

## Trends in the labour market

In 2017, the average number of employees was 2.794.700, and the number of unemployed was 435.200. In the same year, the employment rate of the population aged over 15 was 46.7%, the unemployment rate was 13.5%, which gave a rate of activity of 54% and a rate of inactivity of 46%.

The Employment Action Plan emphasized that it is of particular importance for productive employment in the coming period that the Government of the Republic of Serbia recognized the need for harmonization of employment, education and scientific and technological development policies in order to adjust the level of knowledge and skills and employment according to the needs of the labour market.

When it comes to the position of young people (15-24) in the labour market, due to negative demographic trends, there was a decrease in the inactive or the total population of that age, which led to an increase in youth employment and unemployment rates by 1.3 and 0.4 p.p., respectively. The employment rate of young people in 2017 was 20.9%, and the unemployment rate was 31.9%.

## Labour market indicators for youth (15-24)

<b>Population in the age group 15-24</b>	<b>2016</b>	<b>2017</b>
<i>Activity rate in %</i>	30.3	30.6
<i>Employment rate in %</i>	19.7	20.9
<i>Unemployment rate in %</i>	35.0	31.9
<i>Inactivity rate in %</i>	69.7	69.4

*Source: APC, SEDS*

The share of young people who are not employed but are not in the education and training system either, in the total youth population aged between 15 and 24 (the so-called NEET rate) is 17.2% and it is by 0.5 pp lower than in the previous year. .

## **NEET rate for youth (15-24)**

<b>Population in the age group (15-24)</b>	<b>2016</b>	<b>2017</b>
<b>NEET rate - participation %</b>	17.7	17.2

*Source: APC, SEDS*

## **Changes in the legal framework**

During 2016, the implementation of the Action Plan was influenced by institutional and personnel changes as a result of early parliamentary elections and the formation of a new Government of Serbia.

The system of education in the Republic of Serbia is regulated by a set of laws: Law on the Foundations of the Education System, Law on Pre-school Education, Law on Primary Education, Law on Secondary Education, Law on Adult Education, Law on Adult Education in Higher Education, the Law on Student Standards and the Law on Textbooks. In the period from 2015 to 2017, most of these laws have been amended.

The drafting of the new Law on the Foundations of the Education and Training System was initiated with the aim to adapt the concept of development of the entire education system to the time and conditions in which this process can take place in the Republic of Serbia. The principles and tendencies of education that are stated in the previous law and which are directed towards the general development, improvement and transformation of education in accordance with the needs of the society, while respecting the traditional values of our educational system, while respecting the need for harmonization and acceptance of the tendencies of the development of the European school system; education in developed countries - are also retained in this law. This law clearly defines the obligations of the institution in the context of providing additional support to students from vulnerable groups.

In addition to the new umbrella law, the following were adopted: the Law on Higher Education, the Law on Textbooks, the Law on Educational Inspection, the Law on the National Qualifications Framework, the Law on Dual Education and the Law on Pre-school Education, and the Law on Amendments to the Law on Primary Education, the Law on Amendments to the Law on Secondary Education, the Law on Amendments to the Law on Pre-school Education (published in the Official Gazette of RS, No. 101/17).

The Rulebook on criteria and procedure for enrolment of students - members of the Roma national minority in secondary schools under more favourable conditions for achieving full equality was adopted in 2016, and from the school year 2017/18, the enrolment of Roma students under more favourable conditions is prescribed by the Rulebook on enrolment of students in Secondary School (Official Gazette of RS, No. 38/17). The Rulebook on closer criteria for recognizing forms of discrimination by an employee, student or a third person in the institution has been adopted (Official Gazette of the Republic of Serbia, No. 22/2016).

## **EU accession - Progress under Chapter 26**

The latest Progress Report states that some progress has been made in improving teaching curricula and establishing a national agency for Erasmus +. During the next year, Serbia should in particular increase the participation of children in early development programs, especially children

from vulnerable social groups, and complete the establishment of a national qualifications framework, the last of which was done in 2018.

The project "Inclusive Preschool Education" started with preparations in 2016, aiming at the very first recommendation from the Progress Report. Improving access to pre-school education for children aged three to five and a half years, especially those from vulnerable social groups, will be achieved by increasing spatial capacities - by building new ones, renovating/adapting and replacing available spatial capacities. The quality of inclusive pre-school education as a support to the comprehensive development and well-being of all children will be supported by project activities related to the broad implementation of new basics of preschool education, promotion of initial education and professional development of professional staff as well as improvement of the quality evaluation system preschool education in order to support the well-being and overall development of children.

In the 2018 Progress Report, special attention is paid to the need to reduce early school abandonment and to align programs of secondary and higher education with labour market needs, as well as to improve the position of persons with disabilities in the field of employment and education. The position of Roma students is still an area where further work needs to be done, as there is still a violation of basic human rights and a reduced access to education. The description of the activities and the results achieved in these areas are presented in detail in the individual chapters of this report.