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Principles and general objectives of education

The main general objectives of education include: developing the students’ intellectual capacities according to their abilities and needs; fostering their health and developing their physical abilities; providing them with an understanding of nature, society and the environment, as well as the importance of preserving it; preparing students for work, further education and independent learning; making the students aware of the Serbian nation, traditions and culture; instill in students the respect for human and civil rights, their appreciation for the moral values of a democratic, humanistic and tolerant society; and developing critical thinking and individual responsibility. Another objective is the incorporation into the process of European integration.

Current educational priorities and concerns

The Republic of Serbia was part of the Federation of Yugoslavia jointly with Montenegro, until the latter proclaimed its independence from the federal union in June 2006.

The special programme ‘The conception of education development in the Republic up to 2000’ included the main education development guidelines up to 2000 as well as the analysis of the most important elements of the education system, priorities of changes, and measures and activities which should enable the realization of social policy in this field. The improvement of quality and the rationalization of the education system at all levels, as well as an increased efficiency were the requirements identified for the further development of education.

In October 2000, the new government identified education as a priority area in the reform process. At the beginning of 2001, the new Ministry of Education and Sports was established by merging the former ministries of Education, Higher Education and Sports. Its first and most important task was to develop the reform agenda for the highly centralized and stagnating education system. The main goal of the education reform is to reorganize the school system so that it can substantially contribute to the economic revival, democratic development, and future European integration of the country. This is to be achieved through: (i) the decentralization of the education system; (ii) the democratization of the system, by means of stakeholders’ involvement and the introduction of civic education in the curriculum and school activities; (iii) the improvement of the quality of education at all levels, by introducing quality assurance systems, quality teacher education and state-of-the-art curricula; (iv) the establishment of a seamless coordination between education and the economic sector; and (v) the improvement of infrastructures.

The overall reform process has taken place in three, partially overlapping "waves". The first wave, which ended in September 2002, focused on decentralization.
and democratization, the professional development of teachers, quality assurance, education for democratic citizenship, reform of secondary vocational education and higher education. During the second wave, started in September 2002, concepts concerning the principles and goals of education, the structure and implementation of the curriculum, and the organization of the education system were developed and elaborated. The third wave represented the beginning of reform initiatives. These included the development of strategies for the education of minorities (Roma) and children with special needs; it also included the development of strategies for evaluation and accreditation of higher education institutions.

In February 2003, the national curriculum framework was publicly presented, and was endorsed by the Government a few months later. In June 2003, the Government adopted the new Law on the Foundations of the Education System. In September 2003, the curriculum reform started to be implemented in the first grades of elementary schools. In the same year, the Government established the Center for the Professional Development of the Educational Staff, the National Standards and Evaluation Center, the Center for Vocational Education and Training, and the Center for Adult Education. The National Standards and Evaluation Center is responsible for: (i) setting standards for educational outcomes, school quality and teachers’ self-evaluation; (ii) establishing a national examination system, including final exams; (iii) offering support to standard-based classroom assessment to regions, local communities, schools and teachers in evaluation and self-evaluation activities.

The vision of education reform in Serbia has been directed towards the creation of an education system: capable of gathering and including significant actors and answering to their real needs; decentralized, efficient, effective, and transparent; employing highly professional, reflexive, creative and motivated education staff; offering a high quality curriculum; promoting the culture of evaluation, self-evaluation, and school development; nurturing fairness, tolerance, and constructive communication; capable of meeting special educational needs and the needs of ethnic minorities; and which includes the perspective of lifelong learning. (MES and DSED, 2004).

**Laws and other basic regulations concerning education**

The most important laws which constitute the normative basis of the education system are: the Law on Social Care for Children (No. 29/2001, amended several times, first issued as No. 49/92); the Law on Elementary Education (No. 22/2002, amended several times, first issued as No. 50/92); the Law on Secondary Education (No. 23/2002, amended several times, first issued as No. 50/92); the Law on Special Education; the Law on Vocational Tertiary Schools; the Universities Law (2002).

In June 2003, the new Law on the Foundations of the Education System (No. 62/2003 and 64/2003) has been adopted, and amended in 2004 (No. 58 and 62/2004). The 2003 Law envisaged the introduction of a nine-year elementary education programme, but this idea has been abandoned because of the insufficient preparation for such a change. (MES, 2004). The 2002 Universities Law has been replaced by the new Law on Higher Education (No. 76/2005) approved in September 2005, effective starting from 2006/07.
In accordance with these laws, a series of statutes has been passed and various matters important for the realization of the educational process (assessment of students, appraisals and rewards to be given, enrolment into secondary school, standards concerning the lessons of teachers, in-service teachers training, etc.) were formulated. Statutes are sub-acts regulating more closely certain segments of education; their passing and application are the competence of the Ministry of Education.

Compulsory education lasts eight years (primary school) and caters to pupils aged 7-15.

**Administration and management of the education system**

The **Ministry of Education and Sports** (MES) is responsible for: the implementation of laws and other regulations; decisions on legal matters, management and professional supervision; adoption of statutes, curricula and other documents; execution of professional work; work improvement, planning, programming; development of education as well as its financing. The implementation, management and supervision of the laws on elementary and secondary education, as well as the regulations which have been passed on this matter, are within the competence of the Ministry of Education.

In the framework of the decentralization policy, the administration of the education system is assured by fourteen **Regional Departments** of the MES whose main function until recent years has been the inspection of the education system. The role of these departments has recently changed as they have been involved in coordinating reform implementation, and in helping in the development of new policies, procedures and activities. The role of the municipalities has been strengthened, as they are now involved in school management, teachers’ professional development, inspection, and the construction and maintenance of school premises.

The recently established **Institute for Educational Quality and Evaluation** is responsible for defining and proposing educational standards, monitoring students’ learning achievement, evaluating the performance of teachers and educational staff, and organizing the participation of the country in international assessment exercises. The **Institute for Educational Improvement** has also been established in accordance with recent legislation.

The school managing bodies and their competence are defined by the laws on primary and secondary school. These are the school board and the principals. The **school board** passes the school statute, approves the school curriculum, adopts the report on work, makes decisions on school business activities, on investments, announces open competitions to fill the position of school principal, and gives opinions on candidates for teachers and school principal. The **school principal** manages the school and is appointed by the Minister of Education. His/her authority and responsibility refer to the overall scope of school work and educational activities. The school principal manages the school, organizes the educational activities, supervises the work of teachers and professional associates, convenes the sessions of
teachers’ councils, orientates the work of professional bodies, and cooperates with all stakeholders.

The Law on Vocational Tertiary Schools envisages that postsecondary schools have managing bodies and professional bodies. Managing bodies include the **school principal** and the **Board of Management**, while the professional body is the **Teachers’ Council**. The school principal manages the school, makes decisions concerning the employment and dismissing of the teaching staff and is responsible for the realization of the curriculum and school work legality. The Board of Management is appointed by the Government. It consists of at least five members—not less than three of them belong to the school teaching staff. The Board of Management passes the school statute, makes decisions on school business activities, announces open competition to fill the position of school principal, adopts the annual account, makes decisions on use of investment maintenance assets and performs certain other jobs. The Teachers’ Council includes all teaching staff. It proposes curriculum and monitors its realization, brings special programmes for some types of in-service teacher training as well as programmes for work with gifted students, programmes for development and research, i.e. art work in order to improve the teaching process, and perform certain other jobs.

Universities, faculties and higher vocational schools can be founded by legal persons and, in that event, the managing bodies are appointed by founders. The role of university, its scope of work and basic work conditions and objectives are regulated by laws, while the overall organization and activities are more closely elaborated by their statute.

Universities have managing and professional bodies. The university president (rector) manages the university, while the top managing body of the university is the University Council, consisting of the representatives of associated members and founders representatives. The professional bodies are scientific-teaching councils which are divided by scientific fields and include representatives of relevant higher educational establishments. The Council consists of the university representatives and representatives appointed by the university founder. The mandate of its members is two years. Its competence includes: passing of the university statute, adopting the curricula and financial plan, studying the reports on work and business activities, giving consent to the statutes of faculties, proposing the students enrolment plan to the government, making decisions on awarding an honorary doctorate, making decisions on founding the university establishments, promotion of students standard activities, etc.

The **Accreditation and Quality Evaluation Commission**, established under the new Law on Higher Education of 2005, is now responsible for quality assurance in higher education jointly with the **Higher Education Council**.
Pre-school education

Pre-school education caters to children aged 1-6.5 years. Until recent years, pre-primary education was not compulsory. In 2003, pre-school education became an integral part of the education system, and according to the 2004 amendments to the Law on the Foundations of the Education System, in principle the last pre-school year is the first compulsory year of the reformed education system offering nine years of compulsory education.

Primary education

Primary education lasts eight years and caters to pupils aged 7-15. Children enter the primary school when they reach the age of 7. The law envisages the possibility that some children may be admitted to Grade I at the age of 6 on the basis of a doctor’s, psychologist’s or pedagogue’s assessment of their level of maturity. Primary education is compulsory and is divided into two cycles, Grades I-IV (classroom teachers) and Grades V-VIII (subject teachers). At the end of primary education,
pupils sit the final exam and if successful they are awarded the certificate of completed primary school.

**Secondary education**

Secondary education is offered in general education grammar schools (four-year programme), vocational education schools and art schools. Secondary vocational schools offer general and vocational (theoretical and practical) education programmes lasting two, three (in principle, without direct access to higher education) or four years, and prepare students for work and/or further education. Secondary art schools offer four-year programmes in the fields of music, visual arts and ballet. Access to the different types of secondary education depends on the results of the entrance exams. At the end of secondary education (all modalities) students sit the matura examination. The vocational matura examination consists of two parts, theoretical and practical, and assesses general, vocation-related theoretical knowledge and skills, while the practical part tests proficiency in practical vocational skills.

Higher education consists of university education (faculties and art academies) and non-university education (higher vocational schools). Higher vocational schools offer two- or three-year programmes. Until 2002/03, universities offered the following courses: basic studies (lasting four to six years); specialized studies (one to two years); master’s studies (usually two years); and doctoral studies (at least three years). In line with the implementation of the Bologna process, the 2002 Universities Law introduced two types of undergraduate degrees (three to six years of study). According to the new Law on Higher Education of September 2005, by 2009 all higher education institutions will be obliged to follow the three-cycle pattern of the Bologna process.

The school year generally begins in September and finishes in June; it is divided into two terms. At the primary level it consists of thirty-six five-day teaching weeks (180 working days) for pupils in Grades I-VII and thirty-four weeks (170 working days) for pupils in Grade VIII; an additional teaching week is envisaged for sports, cultural and recreation activities. At the secondary level, the school year comprises thirty-seven teaching weeks (185 working days) in the first three forms of grammar school (and four-form vocational school) and thirty-two weeks (160 working days) in the fourth form (thirty-four weeks in the case of four-form vocational schools).

**The financing of education**

Most of financing resources for education come from the Republic revenues and municipal budgets. Besides government revenues, some secondary schools have income from fees paid by part-time students, while universities and postsecondary schools have income originating from tuition fees. The participation for accommodation of students in students’ dormitories is part of the income received by these establishments.

In 1995, the budget of the Republic participated with 84.6% and the budgets of municipalities with 15.4% in the government funds allocated for education. The
salaries of employees in primary, secondary, post-secondary and university education (except for the fees paid by students) are financed from the State budget. Pupils’ and students’ costs are mostly financed from the State budget (85%) except for the participation for food and accommodation in students’ dormitories (15%). Primary and secondary schools are financed from government revenues through the Republic and municipality budgets. Salaries of employees in primary and secondary schools (the same applies to all other levels of education) are financed in the normal way from the Republic budget, as is in-service teacher training, investment maintenance (partially) and investments in primary and secondary schools. Current expenditures of primary and secondary schools are financed from municipality budgets as well as a part of investment maintenance and building of new primary and secondary schools.

At the secondary, postsecondary and university level there are several private, self-financing institutions. The setting of fees and financing is within the domain of competence of each establishment.

During the 1990s, the share of the overall educational expenditure in the GDP was maintained at a level below 4% that is from 3.5% in 1990 to 3.2% in 1999. Aggregate annual government education expenditure per student declined during the 1990s in line with the general decline in GDP; secondary education suffered the greatest decline, with expenditure per pupil falling by 57% between 1990 and 1999. According to the Law on Budget of Serbia for 2001, education expenditure represented 17.44% of total budget. (MES, 2001).

The educational process

Recently, a new curriculum has been developed. In March 2002, the MES created the Central Commission for the Development of Curricula, which prepared and presented the draft strategy for developing the curriculum for compulsory and secondary education. It was prepared on the basis of the general strategy and action plan for educational reform, the results of international reviews on the Serbian education system, feedback from local consultation processes and research results. The Council for Reform endorsed the paper in September 2002. The document is the first concept of the national curriculum framework.

Some of the major changes and innovations proposed by the document are: (i) giving more space for the professional initiative of teachers and schools; (ii) shifting the focus from content to educational goals and outcomes, processes and activities; and (iii) basing instruction on learning areas rather than on fragmented subjects. Public debates regarding the document then ensued; commissions for learning areas were formed, and the process of preparing the framework and related documents began.

In February 2003, teams were formed to develop curriculum implementation strategies and teacher training programmes. In March, piloting for the curriculum reforms started in gymnasia. In April 2003, the draft National Curriculum Framework was published. Public debate followed. In September 2003, the final version of the National Curriculum Framework for the Compulsory Education was published, and

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the implementation of the new national curriculum was begun, to be fully completed by 2008.

**Pre-primary education**

Pre-school education is part of the education system and, at the same time, constitutes an integral part of the system of social care for children. Until 2002, pre-school education was under the jurisdiction of the Ministry of Social Affairs. According to the New Law on Pre-school Education, in principle the last pre-school year is the first compulsory grade in the reformed education system.

In mid-1996, in accordance with the Law on Social Care for Children, the Minister of Education adopted a new pre-school education programme for children aged 3-6 years, i.e. the Programme for Pre-school Care and Education. This new programme offers professional and pre-school teachers a common orientation for their individual work on the basis of real conditions and requirements in the environments where they live and work. The programme consists of two different models: model A and model B. The choice between the two is made by the pre-school teachers and their associates.

The curriculum in pre-school establishments consists of 240 teaching hours (lessons) per year.

According to the data of the Ministry of Education, the gross enrolment ratio was 23.3% in 1995/96. In 1999/2000 there were 1,661 pre-schools with a total of 164,749 children enrolled (all forms of pre-school education). (MES, 2001).

**Primary education**

The aim of primary education is to provide general education and upbringing, harmonious personal development and preparation for adult life and further general and vocational education. In primary education pupils should: acquire readiness for citizenship, work and further education and self-education; learn the basic elements of modern general education; acquire knowledge, apply skills, and make creative use of leisure time; develop intellectual and physical abilities, independence and interest in acquiring new knowledge; be aware of the basic principles concerning the development of environment, society and human belief; develop awareness of the need to protect health, nature and human environment; develop love of the truth, patriotism and other ethical characteristics of an individual; be encouraged to establish human and cultural relations with other peoples irrespective of their sex, race, religion, nationality and personal belief; cherish and develop the need for culture and preservation of cultural inheritance; acquire the basic knowledge of appropriate behaviour in all occasions.

Primary school curricula are approved by the Ministry of Education. The curriculum includes compulsory and optional subjects, their schedule by grades, weekly and annual number of lessons and other types of educational processes. The curriculum defines the contents of each subject, including teaching aims and objectives as well as instructions on how to attain them. School boards, after having

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consulted the municipality, make decisions on which optional subjects and foreign languages (both compulsory and optional) will be taught in schools.

The weekly lesson timetable of primary education is shown in the table below:

**Primary education: weekly lesson timetable (1998)**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Number of weekly periods in each grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>Serbian language</td>
<td>5</td>
</tr>
<tr>
<td>Serbian language for pupils of</td>
<td>(2)</td>
</tr>
<tr>
<td>national minorities</td>
<td></td>
</tr>
<tr>
<td>Other language (mother tongue)</td>
<td>(5)</td>
</tr>
<tr>
<td>Foreign language</td>
<td>-</td>
</tr>
<tr>
<td>Art</td>
<td>2</td>
</tr>
<tr>
<td>Music</td>
<td>1</td>
</tr>
<tr>
<td>Nature and society</td>
<td>2</td>
</tr>
<tr>
<td>Nature</td>
<td>-</td>
</tr>
<tr>
<td>Society</td>
<td>-</td>
</tr>
<tr>
<td>History</td>
<td>-</td>
</tr>
<tr>
<td>Geography</td>
<td>-</td>
</tr>
<tr>
<td>Physics</td>
<td>-</td>
</tr>
<tr>
<td>Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>Biology</td>
<td>-</td>
</tr>
<tr>
<td>Chemistry</td>
<td>-</td>
</tr>
<tr>
<td>Technical education</td>
<td>-</td>
</tr>
<tr>
<td>Physical education</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total weekly periods</strong></td>
<td>18</td>
</tr>
</tbody>
</table>

Each teaching period lasts 45 minutes.

In addition to compulsory and optional subjects, primary school pupils are exposed to other types of upbringing and learning, including: meeting with the class teacher (one weekly lesson); sports (one lesson per week; one week during the school year for sport, recreation and cultural activities); social work in Grades I-V (five to fifteen lessons per year); excursions (one to three days per school year); singing (Grades I-IV: 111 lessons per school year; upper grades: 136 lessons per school year); orchestra (eleven lessons per school year); additional work (for gifted pupils, one weekly lesson); remedial instruction (for pupils with learning problems, one lesson per week); special care (one or two weekly lessons for pupils with physical and psychological impairments); preparatory instruction (for pupils sitting the examination, five days before the examination date with two lessons per day for each subject); social and free activities with their mates (one lesson per week); preparation for participation in competitions (from one to three days); cultural and other activities (one to three days).

At the primary and secondary levels, the monitoring of pupils’ and students’ performance and assessment process is carried out every day. The assessment is carried out at least two times during one term and at the end of the school year when the general pedagogical opinion and final grades are given. If the subject syllabus includes several fields, or theory and practice, the performance and progress of students are monitored in each field separately and, at the end of the term and school

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year a unique, final mark is given. The student’s general achievement is calculated on the ground of the arithmetical mean of non-failing marks in compulsory subjects. The marks given for student’s behaviour and optional subjects do not make a part of the student’s general achievement. Students who achieve exceptionally good results can progress in their education faster than others.

Besides assessment during regular instruction, students are also assessed at examinations. Examination content depends on the type of examination and the syllabus concerned. The examinations can be: the makeup exam in the subject in which the student failed to achieve a sufficient grade during instruction; the class exam in subjects in which the student has not received any grade during instruction; the remedial exam in the subject in which the student failed to master in his/her previous education; and the final exam at the end of schooling. Each of these examinations is taken in the presence of the commission appointed by the school principal; this commission includes at least two members who are experts in the subject in which the examination is taken.

According to legislation, pupils progress to the next grade in case they have non-failing marks in all the compulsory subjects and foreign language as the optional one. Pupils in Grades I-IV are promoted even in case they have failing mark in no more than two compulsory subjects. The decision on this matter is made by the teachers’ council. The drop-out rate is particularly high in rural zones among female pupils. Pupils who turn 15 without completing primary education can continue their education in adult education schools.

According to official statistics, in 2003/04 there were 3,587 primary schools (including satellite schools) with 667,570 pupils enrolled. (Kovács-Cerović, 2006).

**Secondary education**

The general and vocational knowledge and abilities for further education and preparation for work, based on the scientific, technological, cultural and artistic achievements, are provided in secondary schools. The ethic and aesthetic values are fostered; the physical and spiritual individual abilities are developed; the awareness about humanistic values, personal and social responsibility is developed, and the health protection cherished.

As mentioned, secondary education is offered in general education grammar schools (four-year programme), vocational education schools and art schools. Secondary vocational schools offer general and vocational (theoretical and practical) education programmes lasting three (master level, without access to higher education) or four years (specialist level), and prepare students for work and/or further education. Secondary art schools offer four-year programmes in the fields of music, visual arts and ballet. Access to the different types of secondary education depends on the results of the entrance exams. At the end of secondary education (all modalities) students sit the matura examination. The vocational matura examination consists of two parts, theoretical and practical, and assesses general, vocation-related theoretical knowledge and skills, while the practical part tests proficiency in practical vocational skills.

Compiled by UNESCO-IBE (http://www.ibe.unesco.org/)
Secondary school curricula are defined and approved by the Ministry of Education. The curriculum includes compulsory and optional types of educational activities. The compulsory types of activities are: instruction; additional work; remedial work; practice and practical activities; preparatory and socially beneficial work. The optional subjects are: languages of the national minorities with elements of national culture for students belonging to national minorities attending instruction provided in Serbian; second (or third) foreign language; subjects necessary for further education; vocational training or personal development of students. The following optional subjects are also available for students in Form IV: astronomy; descriptive geometry; art; music; history of art; pedagogy; developmental psychology; ethics; drama; demography; geology; classical Greek; general linguistics. According to legislation, a student can have four optional lessons per week. The weekly lesson timetable for each type of grammar school is shown below.


<table>
<thead>
<tr>
<th>Subject</th>
<th>Number of weekly periods in each form</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General (I)</td>
</tr>
<tr>
<td>Serbian language and literature</td>
<td>4 4 4 4</td>
</tr>
<tr>
<td>Foreign language I</td>
<td>2 2 4 4</td>
</tr>
<tr>
<td>Foreign language II</td>
<td>2 2 2 2</td>
</tr>
<tr>
<td>Latin</td>
<td>2 2</td>
</tr>
<tr>
<td>Constitution and civic rights</td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>2 2 2 2</td>
</tr>
<tr>
<td>Geography</td>
<td>2 2 2 2</td>
</tr>
<tr>
<td>Biology</td>
<td>2 2 2 2</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4 4 4 4</td>
</tr>
<tr>
<td>Physics</td>
<td>2 2 3 2</td>
</tr>
<tr>
<td>Chemistry</td>
<td>2 2 2 2</td>
</tr>
<tr>
<td>Computer studies</td>
<td>1 1</td>
</tr>
<tr>
<td>Computer practice</td>
<td>1 1</td>
</tr>
<tr>
<td>Music</td>
<td>1 1</td>
</tr>
<tr>
<td>Art education</td>
<td>1 1</td>
</tr>
<tr>
<td>Physical education</td>
<td>2 2 2 2</td>
</tr>
</tbody>
</table>

Total weekly periods: 30 30 30 31 30 30 30 30 30 30

Each teaching period lasts 45 minutes.

In grammar school, students cannot have more than thirty lessons per week, except when they receive instruction in the languages of national minorities (up to thirty-two lessons). The student repeats the grade in secondary school if he/she, at the end of the school year, has at least three failing marks in compulsory subjects and in case he/she does not take the makeup examination or class examination or fails to pass them. At the end of each form, the student who has non-failing grades is awarded a certificate.
on successfully completed schooling for that grade. At the end of successfully completed secondary education, students are awarded a diploma.

Secondary vocational education schools offer students general and vocational (theoretical and practical) subjects and prepare them for work and/or further education. Three- and four-year secondary vocational education programmes consists of an average of 30-32 lessons per week over 39 working weeks per year.

According to the European Training Foundation, secondary education is offered in 127 general education schools (gymnasia) and 333 vocational schools. Vocational schools offer a choice of around 312 profiles, grouped in 15 sectors. The main problem with the secondary education system is that it is structured around educational profiles and course contents that now correspond to an obsolete economy. Vocational schools are under-funded, have old equipment and teachers are not up-to-date with their technical and didactical skills. Student orientation is very limited. In addition, the content and quality of skills and knowledge that the education system transfers to young people is consistently criticized by employers due to a lack of problem-solving skills, entrepreneurial spirit, excessive theoretical knowledge and inadequate general and specific technical skills. (ETF, 2006).

In January 2001, the Ministry of Education and Sports launched the reform of vocational education and training (VET). The strategic priorities for VET reform encompass: (i) decentralization and democratic school management; (ii) aligning VET with future needs of the economy; (iii) innovating curriculum delivery and pedagogy (critical thinking, team-work, creative application of knowledge); and (iv) devolving education management to local governments. The basic functions of the National Center of Vocational Education are to develop and improve vocational education in Serbia. The Centre prepares various models of vocational education for both the formal and non-formal sectors; processes and analyzes the results of pilot programmes; and attempts to link secondary vocational education to developed European systems.

Vocational education curricula are being renewed. General subjects of vocational education will account for 40% of the whole curriculum. Furthermore, pilot schemes in the following sectors have been introduced: agriculture and food processing; health; mechanical engineering; building and construction; electrical engineering; economics; chemistry and graphic industry; transportation; forestry and wood processing. VET schools must also become flexible and open also for vocational education of adults obtaining horizontal and vertical mobility for all within the education system.

According to official statistics, in 2003/04 there were 302,612 students enrolled in secondary education. (Kovács-Cerović, 2006).

**Assessing learning achievement nationwide**

The first assessment of students’ learning achievement was conducted in 1989. The sample consisted of 2,800 pupils in Grade VIII in 28 primary schools. Another assessment was conducted in 2000 within the “Comprehensive analysis of the primary education system in the Federal Republic of Yugoslavia”, involving a sample of 1,300 students.
pupils in 18 schools. The assessment conducted in May 2004 tested a representative sample of 4,887 pupils in the third grade in 19 schools. This test was aimed at providing reliable information on the knowledge and skills acquired by students in the Serbian language and mathematics after three years of education, in order to help in the definition of knowledge standards in Serbian and in mathematics for the lower grades of primary school, to determine the factors which impact learning achievement, and to start a regular monitoring of the quality of teaching activities. The national test of fourth grade pupils conducted in May 2006, involved a sample of 5,120 students in 125 schools. The main goal of the survey was to collect relevant data on the existing teaching-learning practices and to gain an insight on the learning achievement of pupils and the factors which affect it, in order to identify measures for improving the education system.

Serbia also participated in the 2003 and 2006 PISA exercises and in the 2003 TIMSS project. (Website of the Institute for Education Quality and Evaluation, August 2007).

According to the PISA 2003 results, the country ranks quite low in terms of reading capacity and proficiency in mathematics of 15-year-olds.

Higher education

Higher education consists of university higher education (faculties and art academies) and non-university education (higher vocational schools). The universities organize and perform scientific, art and educational activities as well as other activities in compliance with the law and its statutes. The faculty is an educational and scientific institution offering basic studies, specialized studies, master’s and doctoral degree programmes. The faculty performs independently, or in cooperation with another organization, its basic, applied and development researches.

Higher vocational schools offer two- or three-year programmes. Until 2002/03, universities offered the following courses: basic studies (lasting four to six years); specialized studies (one to two years); master’s studies (usually two years); and doctoral studies (at least three years). The primary objective of the new Universities Law, passed in 2002, was to reintroduce university autonomy. Furthermore, and in line with the implementation of the Bologna process, the Law included provisions for: two types of undergraduate degrees (three to six years of study); the freedom to define programmes and courses (approved at the university level); governance and management autonomy, with 17% of the members of the University Council appointed by the Government; some financial autonomy; some student participation in university governance; establishment of a Higher Education Council in charge of organizing the evaluation and accreditation processes.

In 2004/05 there were six public universities (including the University in Pristina, Kosovo), and 49 public higher vocational schools (of which four in Kosovo). In addition, in the private sector there were five universities, 13 separate faculties, and 11 higher vocational schools. The total enrolment in public universities was 176,339 students. In the same year public universities employed 6,391 professors, 4,880 assistants, and 5,313 non-teaching staff. The total enrolment in public higher
vocational schools was 52,814 students, assisted by 1,800 professors, 318 associates, and 885 non-teaching staff. The total enrolment in private universities and faculties was 9,649 students. (*National report of Serbia on the implementation of the Bologna process, 2004-2005*).

Public higher education is financed from two types of sources: public funds (the State budget); and institutions’ own funds derived from revenues outside the budget. Public funds allocated to a higher education institution consist of three parts: salaries, teaching and running costs, and maintenance.

Universities are autonomous establishments. This autonomy concerns their activities, management, realization of scientific, art and educational work. Universities and faculties have managing and professional bodies. The managing bodies at universities are the President of the University (Rector) and the University Council, while professional bodies are science-teaching and art-teaching councils, professional councils by scientific fields and disciplines and larger groups of related faculties. The managing bodies at the faculty are the Dean and the Faculty Council; at institutes these are the School principal and the Council. The professional body is the science-teaching, i.e. art-teaching council. The Dean manages the faculty, but there is also one (or several) Vice-Dean(s). Normally, there is a Vice Dean for instruction, scientific-research work and finance. Every two years, the Faculty Council elects, among the professors, the Dean and Vice-Dean(s). Half of the Faculty Council’s members are appointed by the founder while the other half is elected by the science-teaching/art-teaching council of the faculty. The Faculty Council is elected every two years. This body formulates the faculty by-law, work programme, accepts financial plan and annual account of assets, makes decisions on establishment or repeal of departments, accepts the report on the faculty business activities, etc.

The Science-Teaching/Art-Teaching Council of the faculty is its professional body consisting of faculty teachers and associates. It is competent for the most important matters concerning the faculty activities: defining the curriculum (basic, master’s, and doctoral studies) by departments, groups or streams, with the approval of the university; creating the scientific-researching programmes, i.e. art programmes; approving master’s theses and doctoral dissertations; determining the number of students to be admitted in the courses; defining the draft faculty statute; etc. The Dean, according to his function, is the President of this Council.

The university laws separate the professional (scientific/art and educational) function from the managing functions, so that the representatives of the university and faculty founders take part in certain managing activities only on the priority ground. Matters concerning the domain of science-teaching/art teaching activities are left to the faculty teachers and associates and to the professional bodies. For State universities, the decision on the number of students admitted in the first year of studies, as well as on standards concerning financing of the faculties/universities’ activities, is made by the Government. Evaluation of the performance of educational activities in higher education is within the competence of university managing councils and science teaching/art teaching councils in individual higher education establishments.
The 2002 Law has been replaced by the new Law on Higher Education approved in September 2005, effective starting from 2006/07. By 2009 all higher education institutions will be obliged to follow the three-cycle pattern of the Bologna process. The Accreditation and Quality Evaluation Commission, established under the new 2005 Law, is now responsible for quality assurance in higher education jointly with the Higher Education Council. (Eurydice, 2007).

**Special education**

Special education constitutes an integral part of the education system and is regulated by the laws on primary and secondary education. Special education is organized according to type of disability: children with physical and sensory impairment (physically disabled, blind/poor-sighted, deaf/hard-of-hearing); children with mental deficiency (slight, moderate, serious or heavy); children with complex developmental problems (autistic children, etc.). The type and degree of developmental impairment is assessed by a commission of doctors.

The curriculum is adapted to each type and degree of impairment, and is delivered on the basis of special methods and by using various and specific teaching materials and aids. The educational process is accompanied by correction and rehabilitation activities, exercises, speech therapies, corrective gymnastics, psychomotor exercises, etc.

The class or students’ group cannot include more than ten students. Classes for students suffering from several impairments cannot include more than six students. According to legislation, special education and care are offered in special education establishments, pre-school establishments, special classes in regular primary and secondary schools, special primary and secondary schools and other establishments specialized for care and preparation of students for work. The pre-school, primary and secondary education of students suffering from the same impairment can be organized in the same school. These types of school also provide food and accommodation. The instruction in special schools is provided by teachers specialized in working with disabled persons, psychologists and therapists.

The faculty of special education (children with special needs) at the Belgrade University trains specialists who deal with children and adults with impaired hearing, speech or vision, physically disabled persons, mentally retarded persons. The duration of the programme at the undergraduate level is four and a half years, i.e. nine semesters.

**Private education**

The laws regulating pre-school education envisage the possibility of opening private educational establishments. Primary music and ballet schools can be established by private entities. Secondary schools can also be established by private persons, provided that all legal requirements concerning space, equipment, teaching staff, etc., have been fulfilled.
At the pre-school level private initiatives are common. The private sector is almost nonexistent at the primary level. The Law on the Foundations of the Education System of 2003 for the first time envisages the possibility of establishing private primary schools, although only a few requests have been processed. At the secondary level, there are 15 general secondary schools and nine vocational schools in the private sector. (Kovács-Cerović, 2006).

As mentioned, in 2004/05 there were five universities, 13 separate faculties, and 11 higher vocational schools in the private sector.

**Means of instruction, equipment and infrastructure**

During the 1990s, the conflict and the financial and economic difficulties had a severe impact on the education system, causing its impoverishment and non-renewal of its financial and technical base. During the period 1992-1994 Serbia and Montenegro (at that time still part of the former FR of Yugoslavia) were faced with the serious problem of attrition of the educational infrastructure. In particular, in 1993/94 the number of educational establishments decreased, the number of educational staff was reduced, many teachers left their profession, and problems arose in investment maintenance and provision of necessary assets for salaries.

The enormous inflow of student refugees from parts of the former Yugoslavia has been an additional burden for the education system at all levels. Due to the lack of space many schools have been forced to work in three shifts, while most of the classes in primary and secondary schools accommodated 40 to 45 pupils (in some cases up to 50).

According to legal provisions, the preparation and publication of school textbooks is the competence of special institutions (publishing houses specialized in the production of textbooks and teaching materials). The plan concerning the required textbooks for primary and secondary schools is determined by the Ministry of Education, while the professional opinion on their contents is given by the relevant experts.

School textbooks are published in all the teaching languages, i.e. Serbian as well as the languages of national minorities. In accordance with the plans concerning obligatory textbooks in primary education, 2,697 titles were published in 1995/96 in eight different teaching languages. This met the needs of the entire primary school population. In addition, publishing houses also prepare additional aids (teachers’ handbooks, collections, auxiliary textbooks for pupils, etc.). In secondary education, publishing houses also provide compulsory textbooks in all the teaching languages and cover about 90% of the existing needs. In 1995/96, 1,231 titles and literature for secondary school were printed in all the teaching languages. At that time the total number of textbooks both for primary and secondary education (in all teaching languages) amounted to about 3,000 titles, i.e. about 15 million copies.

The publishing houses also provide a certain number of textbooks for higher education. The textbooks to be used in higher education are proposed by faculties, i.e. departments and professors. It has also been envisaged to oblige professors to prepare

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textbooks and literature for the subjects they teach. As a result, a large number of universities independently publish textbooks written or prepared by their professors.

The school network is unevenly located across the regions. According to 1999/2000 data, about 50% of all primary school buildings are used by only 7.6% of pupils, while 48.5% of schools accommodate 91.5% of pupils. More than 50% of primary schools cater for fewer than 50 pupils. Most of these are small rural satellite schools providing the first four years of primary education. About 36% of primary schools operate on double and triple shifts and 40% of primary students attend such schools (in Belgrade only 12% of all primary schools operate on one shift). The major part of all primary and secondary schools do not operate with the adequate infrastructure supplies and the necessary teaching equipment. The main features of the school system in this respect are the following: approximately one fourth of all school buildings are older than 60 years; in more than 50% schools there is conspicuous need for physical refurbishment; more than 25% schools are not supplied with a sewerage system, even more than 50% are not properly water supplied, 56% are without telephone lines and nearly 25% of all schools have constantly problems with heating system; fewer than one third of all primary and secondary schools have library room, which, with only a few exceptions, does not provide the relevant book and magazine contents; there are school workshop rooms in only 19% schools; the great part of all available school equipment is obsolete and out-dated. (MES, 2001).

**Adult and non-formal education**

Non-formal education consists of separate courses (for typists, cosmetologists, dressmakers, etc.) and schools for learning foreign languages. Courses for pre-qualification and additional qualification of workers with different vocational profiles are also organized. Persons older than 15 years can obtain their elementary education in adult education schools. The curriculum is approved by the Ministry of Education and the duration of the programme is four years. In 1996/97, there were twenty-three elementary schools for adults, with 163 classes and a total of 2,898 learners enrolled (of whom 774 were women).

According to the report prepared by the European Training Foundation, the former Yugoslavia traditionally had a well-developed system for the education and continuing training of adults, both as part of the formal education system and through the network of workers’ universities; training within enterprises was also quite well developed. However, over the past 10 to 15 years this training infrastructure has collapsed. It is estimated that of the 200 workers’ and people’s universities that existed in 1990, only around 20 to 25 are still active: these provide courses in vocational training, foreign languages and IT, though most of them have inadequate facilities and staff. At the same time, there is a growing diversification of training providers, including formal education institutions (secondary vocational schools and universities), chambers of commerce, NGOs, private training providers and small and medium sized agencies. The quantity of training delivered is quite limited in view of the needs of the adult population, and its scope is relatively narrow. Training within enterprises has been reduced to a minimum. It is estimated that only 31% of enterprises offer some kind of training to their staff. (ETF, 2006).
Teaching staff

Since 1993, the former pedagogical academies (tertiary-level teacher training schools) were phased out, and two-year preschool teachers’ training colleges/schools and four-year teachers’ faculties for primary school teachers (Grades I-IV) were introduced. Grades V-VIII primary school secondary school teachers are trained at universities. University teaching staff must hold a postgraduate degree. Both graduate and postgraduate degree holders can teach at the non-university education level. The faculty of special education (children with special needs) at the Belgrade University trains specialists who deal with children and adults with impaired hearing, speech or vision, physically disabled persons, mentally retarded persons. The duration of the programme at the undergraduate level is four and a half years, i.e. nine semesters. Graduate from secondary education are eligible for enrolment in higher education institutions after passing an entrance exam.

In accordance with the 2005 Law on Higher Education, and within the framework of the implementation of the Bologna process, the two-year tertiary schools are to be transformed into universities/faculties for professional (applied) studies offering 180-credit programmes. Some of these schools are already in the process of preparing a new three-year curriculum; others see their future in a merger with a teachers’ faculty. With the implementation of the two-cycle pattern of the Bologna process, university degree programmes are expected to follow a 3+2 scheme, although it seems that a number of faculties will opt for a 4+1 scheme. (Kovács-Cerović, 2006).

Prospective school teachers must spend one year of teaching practice under the supervision of a mentor. After the one-year practice, all teacher candidates must pass the state examination in order to become certified teachers. The examination consists of three parts: methodological approach to teaching subjects, pedagogy and psychology, and school legislation.

Teacher training curricula encompasses three basic groups of disciplines: (i) disciplines in the field of academic education; (ii) disciplines concerning vocational education–narrow vocational education; and (iii) pedagogical and psychological disciplines (pedagogy, psychology, methodology of vocational subjects).

The number of lessons and scope of disciplines differs from one higher education establishment to another. The curriculum in teacher training colleges includes the following subjects: general pedagogy (90 teaching hours); school and family pedagogy (120 teaching hours); developmental psychology (120 teaching hours); didactics (180 teaching hours); methodology of pedagogical research (90 teaching hours); sociology of education (90 teaching hours); seven methods with practical work (1,155 teaching hours). Out of the total number of 3,940 teaching hours (not including optional subjects), 2,025 hours (51.4%) are reserved for pedagogical-psychological and didactic-methodological training.

At faculties providing pre-service education for prospective teachers (faculties of philology, philosophy, sciences and mathematics) there are significant differences concerning the number of teaching hours provided for pedagogical-psychological and
methodological disciplines, as well as the subjects offered. Most of the syllabi include pedagogy, psychology and methodology. At some faculties there are specific subjects referring to these disciplines, such as genetic and pedagogical psychology. Most study groups include methodological training (with demonstration classes and practical lessons) but with different numbers of teaching hours.

As all public employees, the working week of teachers consists of 40 hours. Teachers’ workload varies depending on the level of education. Primary school teachers have 24 hours of direct teaching and other curricular activities (elective subject instruction, preparatory and remedial classes, sport and cultural activities, meetings, school-community cooperation, etc). Sixteen hours are dedicated to keeping school records, cooperation with parents and professional development. Secondary school teachers have 20 hours of teaching or theoretical instruction with practice, i.e. 24-26 hours of practical teaching, except for native language teachers, teachers of mathematics and foreign languages (some 18-19 teaching hours per week). Extracurricular activities are almost the same as in compulsory education. Professors and assistants at public universities must have at least four hours of teaching per week. In addition, they have individual or group consultations with students, mentoring, research, exams, teacher in-service training (at teachers’ faculties), and professional self-development.

The changes in the education system, as well as the overall condition of education (in particular during the 1990s) have had a negative impact on the status, role and engagement of teachers at all levels. The lack of financing and poor working conditions, the insufficient number of teaching materials and aids, and the increasing number of students (particularly refugees and low-income students), have undermined the morale of teachers. Many teachers have left their profession, searching for better paid jobs, in particular teachers of mathematics, English language and computer science. In 1995/96, a large number of young assistants and professors in postsecondary schools left their profession.

In-service training programmes generally focus on: children and developmental psychology; methodology and didactics; teaching methods; pedagogical psychology; methods of pedagogical work; informatics; application of new teaching technology and scientific field important for certain subjects; social psychology; etc. Faculties, postsecondary schools, primary schools, pre-school establishments, professional societies and scientific and professional organizations offer in-service training programmes and organize their delivery.

According to official statistics, in 2003/04 there were 44,791 primary school teachers and 26,231 secondary school teachers in the country. In addition, preschool education establishments employed 8,715 teachers, 2,797 medical staff working in nurseries, 389 counselors, and 5,604 support staff. Women represented about 72% of primary school teachers and 61% of secondary school teachers. Teachers’ salaries decreased dramatically during the 1990s, reaching an average of US$1 per day in October 2000. Since then salaries have increased on a monthly basis to reach a net US$265 per month for primary school teachers and US$291 for secondary school teachers by the end of 2003, and becoming above-average compared to the workforce employed in the social sector. The policies developed after 2000 along with the 2003 legislation introduced a career advancement scheme for teachers. According to this
scheme, teachers can progress through four career steps: advisors, mentors, instructors and senior advisors, and a salary increase is linked to the progression. (Kovács-Cerović, 2006).

**Educational research and information**

Research in the field of education is carried out by scientific, professional and educational institutions, individual teachers, scientists, and researchers. Within the faculties of philology and philosophy and as part of their scientific research activities, especially in the fields of pedagogy and psychology, education represent a significant part of research.

The establishments dealing with the research work are pedagogical institutes, teacher training colleges/schools and other faculties and institutes providing pre-service teacher education. The topic and content of research projects include broad educational problems, from the theoretical to practical ones, and from pre-school to higher education level. Results are disseminated through publications or articles in various scientific reviews.

**References**


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