



Institutional and Capacity Building of Bosnia and Herzegovina Education System

**FINAL DOCUMENTS
Book 1**

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EU – ICBE Project: INSTITUTIONAL AND CAPACITY BUILDING OF BOSNIA AND HERZEGOVINA EDUCATION SYSTEM

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TRANSLATION INTO ENGLISH:

EU-ICBE Office



EU-ICBE - Institutional and Capacity Building of Bosnia and
Herzegovina Education System
EU-ICBE – Razvoj institucija i kapaciteta obrazovnog sistema u Bosni i
Hercegovini



EU-ICBE Project: Technical Assistance to the Education Reform in Bosnia and Herzegovina

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In cooperation with local institutions:

Ministry of Civil Affairs of Bosnia and Herzegovina, Sarajevo

Ministry of Education and Science of the Federation of BiH, Mostar

Ministry of Education and Science of Republika Srpska, Banja Luka

Department for Education in the Government of Brcko District of Bosnia and Herzegovina

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2. Posavina Canton,
3. Tuzla Canton,
4. Zenica-Doboj Canton,
5. Bosnia-Podrinje Canton,
6. Middle-Bosnia Canton,
7. Herzegovina-Neretva Canton,
8. West-Herzegovina Canton,
9. Sarajevo Canton,
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For the reader

Acknowledgments

Documents:

- 1. Strategic Directions for the Development of Education in Bosnia and Herzegovina, with the Implementation Plan 2008-2015**
- 2. Financial Implications and Prospects of the BiH Education Strategy by 2015**
- 3. Template for Education Planning in the Entities, cantons and Brcko District of Bosnia and Herzegovina**

To the reader:

The objective of the project of EU technical assistance to the educational reform in Bosnia and Herzegovina "Institutional and Capacity Building of Bosnia and Herzegovina Education System" (EU-ICBE), was to assist the development of institutional capacities in the BiH education sector, through strengthening the efficiency and effectiveness of educational management and administration, at all levels of decision-making, for realization of their respective, constitutionally and legally established responsibilities and functions. Also, the aim of the Project was to establish and support the development of effective structures for coordination of education sector at the local and international level, through strengthening of mechanisms for their more efficient communication, better cooperation, timely information exchange and the implementation of joint activities and harmonized policies in the education sector of Bosnia and Herzegovina.

The EU-ICBE Project was implemented in the course of period from April 2006 until February 2008. The Project activities were carried out within the framework of three major project components:

- 1. **Component 1** – State level capacity building for coordination of education sector – Strengthening of the capacities of Sector for Education within Ministry of Civil Affairs of Bosnia and Herzegovina*
- 2. **Component 2** – Capacity building of the entity, canton Ministries of Education and the Department for Education of Brcko District BiH*
- 3. **Component 3** - Capacity building of the Agency for Preprimary, primary and Secondary Education, Pedagogical Institutes and educational inspection services*

Within the framework of each component, adequate documents were developed as expert proposals of the EU-ICBE Working groups. The documents are intended for educational and other authorities and educational public as a basis for discussion, consideration and passing of adequate decisions in accordance with the legally established procedures and competencies.

A number of the documents is included in this publication (1-3). They are key documents related to the project component 1 mainly.

The other documents, developed as the results of the activities in all three components, were handed over to the competent educational authorities for further procedure and are not included in this publication:

- 1. Advisory bodies/councils for education in Bosnia and Herzegovina, including proposals of model of the Agreement on the Establishment of General Education Council in Bosnia and Herzegovina and the Council's Rules of Procedure.*
- 2. Specification of Functions – groups of duties and tasks in the sector for Education within the BiH Ministry of Civil Affairs Elements for structuring of the internal organizational units.*
- 3. Framework – elements and templates for the elaboration of the 2008 Action Plan of MoCA SE (from the point of view of the EU-ICBE project results)*
- 4. Development of functions of entity and cantonal Ministries of Education and the Department for Education of Brcko District BiH (and annexes: Table of distribution of functions according to the competencies of the BiH education sector coordination structures; Template for education development planning in the entities, cantons and*

BD BiH: Guidelines for school network planning: Statistical data needed for planning...);

5. *Agency for Preprimary, primary and Secondary Education – Mission and Vision (and annexes: Network of the major collaborating institutions of the Agency: Cooperation between the Agency and educational and other authorities and bodies; Review of the activities regarding the introduction of externally evaluated matura exam in BiH; Review of common core curricula in BiH; Model of an act on internal organization of the Agency for Preprimary, Primary and Secondary Education);*
6. *Guidelines for the development of functions and reorganization of Pedagogical Institutes;*
7. *Pedagogical inspection in Bosnia and Herzegovina – Conditions and recommendations for its development;*

For their unfailing support and contribution to the implementation of Project activities

EU-ICBE project wishes to thank

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4. *Pedagogical Institutes*

Other local and international organizations that the cooperated with in the course of implementation of Project activities

EU-ICBE Steering Committee members

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**Strategic Directions for the Development of
Education in Bosnia and Herzegovina,
with the Implementation Plan, 2008-2015**

FINAL DOCUMENT

Note:

The final version of the document was approved by the EU-ICBE Steering Committee in the meeting held on 11th December 2007, and includes the adopted amendments made by the SC members to the original document of the Working Group. The document was handed over to the BiH Ministry of Civil Affairs for further legally established procedure for its consideration and adoption by the competent educational authorities in Bosnia and Herzegovina.

Abbreviations

BiH	Bosnia and Herzegovina
BD BiH	Brčko District BiH
CARDS	Community Assistance for Reconstruction, Development and Stabilization
DEI BiH	Direction for European Integration BiH
ECTS	European Credit Transfer System
EEA	European Education Area
EMIS	Education Management Information System
ENIC	European Network of National Information Centers on Academic Recognition
EPPU	Economic Policy Planning Unit
EU	European Union
EU-ICBE	Institutional and Capacity Building of Bosnia and Herzegovina Education System
EUROSTAT	Statistical Office of the European Union
FBiH	Federation of Bosnia and Herzegovina
FMON	Ministry of Education and Science of the Federation of BiH
GDP	Gross Domestic Product
ISCED	International Standard Classification of Education
MCP BiH	Ministry of Civil Affairs of Bosnia and Herzegovina
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
NARIC	National Academic Recognition Information Centre
OSCE	Organization for Security and Cooperation in Europe
PISA	Program for International Student Assessment
PRSP	Poverty Reduction Strategy Paper
RS	Republika Srpska
SRS BiH	Medium-term Development Strategy BiH
TIMSS	Trends in International Mathematics and Science Study
UNDP	United Nations Development Program
VET	Vocational Education and Training

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Newly established bodies within the coordination structures

Core institutions

Quality assurance and support to education development

Education inspection

Education research

Education statistics and indicators

Financing education

International cooperation and EU integration. Coordination of donor resources.

5. EDUCATION DEVELOPMENT PLAN BY 2015

Preschool upbringing and education

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Education of children and youth with special needs

Education of children and youth with difficulties

Support to development of gifted children and talented youth

Secondary education

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Development of education management, governance and leadership. Development of the institutional education management and coordination structure.

Development of institutional structure of assessment and control in education and expert support to development of the upbringing-educational institutions.

Education research and development

Education statistics development

Financing education, increase in financial resources

Education legislation

References

Annexes

The document provides major development directions for education in Bosnia and Herzegovina by the year 2015. It relies on to date achievements the reform of education based on the Medium Term Development Strategy of Bosnia and Herzegovina¹, recently adopted strategic development documents pertaining to individual areas of education², the data provided by the Functional Review of Public Administration of Education Sector in Bosnia and Herzegovina³, as well as on other relevant documents⁴ and materials pertaining to the education development at the entity, canton and BD levels.

Furthermore, it is based on the global approach to education as defined by the UN Millennium Declaration (Millennium Development Goals), as well as on the EU goals with respect to the improvement of quality and efficiency of education and science, their availability and mobility within the common European area.

The Implementation Plan of short-term (2008), medium-term (2009-2010) and long-term (2011-2015) objectives is an integral part of the document.

In addition to the document, a template was produced for its implementation at the entity/canton and Brcko District levels. Therefore, it is to be expected that the development plans, that is, the corresponding strategies and action plans, will be designed at the said levels and even further on at the level of an upbringing-educational institution. The document is a starting point for the design of education strategies in those fields of education that, for the period 2008-2015, still lack them. As the document includes objectives and activities of important and common interest for the further development of education in Bosnia and Herzegovina, it is expected that it would constitute an integral part of the BiH Development Strategy - Education Sector, the development of which is currently being discussed about.

Bosnia and Herzegovina aspires to develop a knowledge-based society enabling, at the same time, the development of each individual's full potential. It is essential to include all societal, social, economic and political stakeholders in this process, and create partnerships between them through an active co-ordinated approach and, taking into consideration the lifelong learning principle, cultural and traditional values of all BiH citizens.

At the moment, it is extremely important, in order to ensure that the reform process is implemented in accordance with the proposed plan, that a broad consensus is achieved on all changes that should be undertaken in BiH education.

¹ BiH Medium Term Development Strategy, 2004-2007, (PRSP), revised text, Council of Ministers of BiH;

² The BiH Preschool Upbringing and Education - Strategic Development Directions, Council of Ministers, 2005; BiH VET Development Strategy, Council of Ministers of BiH, 2007

³ Functional review of Public Administration of Education Sector in Bosnia and Herzegovina, BiH General Education Development Project of EU, 2005;

⁴ Strategy and Concept of Changes in the Upbringing-Education System of Republika Srpska, Ministry of Education, Banja Luka, 1998;

Strategic Development of Education: Progress Report, Priority Steps, FMoES, 2006

EU Integration Strategy of Bosnia and Herzegovina, Council of Ministers of BiH, 2006;

European Partnership with Bosnia and Herzegovina – Priority program, 2006.

The BiH Public Administration Reform Strategy, Council of Ministers of BiH,, 2006

1. STATE OF BiH EDUCATION

1.1. Description of educational attainment of population

According to the results of the most recent census, carried out in 1991, 9,9% of the BiH population were illiterate. The data from the Living Standards Measurement Survey, (UNDP, 2001) show that approximately 5% of the BiH population are illiterate. Therefore, currently there are no reliable data on the BiH population literacy rate.

Furthermore, there are no reliable data on the structure of BiH population according to education levels. According to the data provided by the BiH Household Budget Survey (UNDP, 2004), 8,7% of BiH citizens are without any education, 34% have completed primary education only, 49,7% secondary, 5,1% post-secondary and 4,3% have completed higher education.

According to the MICS Survey (UNDP, 2006) 9% of the population is included in preschool upbringing and education and the net enrollment rate in primary education amounts to 97,2%. The net enrollment rate in secondary education is 76,2% and 54% of students graduate from secondary school on time.

In higher education, the net generation enrolment rate is barely 24%.

1.2. Statistical indicators by education system levels

According to the statistical report of the BiH Agency for Statistics (Education Statistics, Newsletter No. 1/2007), the situation in BiH education is as follows:

Preschool upbringing and education

	in 2005	In 2006
Total number of preschool institutions	193	197
Total number of employees	2167	2180
Total number of children	12 989	13 384
Total number of girls	6 112	6299

Mainstream primary education

	2004/2005	2005/2005
Total number of schools (eight and nine year education)	1 887	1 888
Total classes	16 396	16 443
Total combined classes	1 863	1 497
Total teachers	22 136	22 258
Total teachers hired on temporary basis	3 954	3 858
Total pupils	380 696	374 725
Total girls out of the total number of pupils	184 872	182 319

Primary education for children with special educational needs

	2004/2005	2005/2006
Total number of special schools	65	64
Total classes	217	211
Total combined classes	89	82
Total number of teachers	306	316
Total teachers hired on temporary basis	59	54
Total number of pupils	1 370	1 261
Total girls out of the total number of pupils	580	489

Secondary education

	2004/2005	2005/2006
Total number of secondary schools	303	304
Total classes	6 052	6 021
Total teachers	11 184	11 167
Total pupils	164 743	162 434
Total girls	81 985	80 976
Total graduates	44 773	43 363

Higher education

	2004/2005	2005/2006
Number of HE institutions	113	137
Total number of students	84 475	91 201
Number of fulltime students	62 233	66 939
Number of part-time students	22 242	24 262
Number of graduates	8 127	10 003

There are no reliable data regarding the number of students who graduate within the regular time frame. It is estimated that students usually study for 5-7 years before attaining their study certificate. A large number of them drop out, mostly following the first study year. In 2005 there were 298 MA degree holders and specialists and 126 PhD holders. The numbers were increased in 2006, to 315 and 126 respectively.

Therefore, there is a huge gap evident between certain levels in terms of inclusion in the upbringing-education system, as well as evidence that the BiH system lags behind relative to the average inclusion level in most European countries, especially in the fields of preschool upbringing and education and higher education. On the other hand, a high and long-lasting unemployment rate of secondary school graduates raises the question of the usability of knowledge acquired through the system and its adaptability to labor market demands.

1.3. Infrastructure and logistics

At present, conditions of school facilities in BiH are not favorable. A large number of school buildings were constructed more than thirty years ago. War-torn buildings were mainly reconstructed using international community loans and donations but without taking into account the need to equip schools with modern teaching aids. Specific problems relating to the maintenance of school facilities, and especially to capital construction of the upbringing-educational institutions, are not being adequately resolved due to the lack of financial resources.

The teaching in primary schools in Bosnia and Herzegovina is implemented in central and branch school buildings. The latter (mainly lower primary school grades) are largely situated in rural areas and in most of them teaching is implemented in combined classes.

Due to the lack of space, the teaching in most of the primary and secondary schools in BiH is organized in two shifts, while in some densely populated areas, even in three. This is an obstacle to the development of school as a place of a whole-day stay and learning, and it hinders students' engagement in free-time and extracurricular activities in school and its correlation with local community. The lack of school premises also has negative impacts on the quality of the teaching process.

Regarding school gyms and sports playgrounds, the situation is also quite unfavorable and has negative effects on the physical development of the school student population in Bosnia and Herzegovina. The exception to the rule is Brcko District BiH, where each primary and secondary school has a gym.

Lecture-delivery instruction and memory-reproductive learning are the prevailing teaching methods in BiH schools, the main cause being the lack of adequate teaching aids and teacher training in the implementation of modern teaching technologies.

With regards to the implementation and utilization of Information and Communication Technologies, the situation is quite adverse. A relatively small number of schools do have computerized classrooms, with the accompanying software support that can be used in a daily teaching process.

Due to the lack of financial resources, some municipalities/cantons are neither able to fund the transportation of pupils to and from their respective schools, nor to participate in the accommodation and food costs of university students in dormitories. Although primary education is compulsory and free of charge, parents buy textbooks and school kits. Only a few municipalities/cantons ensure, in accordance with their own plans, that textbooks for the disadvantaged and Roma children are provided. For all primary school children in Brcko District textbooks are free of charge, while the transportation is free for all primary and secondary school pupils who live more than 3 kilometers away from school.

In terms of the overall material conditions, higher education institutions are in the most unfavorable situation (lack of modern literature, ICT equipment, labs, etc.). The worst situation of all is that faced by teacher training colleges.

1.4. Teaching staff

In the academic year of 2005/2006, the total number of teachers working in BiH primary education was 22 258. The pupil-teacher ratio was 17.2 pupils per a teacher. 305 teachers worked in primary education for children with special educational needs and the ratio was 4.5 pupils per teacher. There were 11.170 teachers working in secondary education and the pupil/teacher ratio was 15 pupils per teacher.

On the one hand, with a relatively small number of pupils per teacher, this could point to the possible accomplishment of an adequate level of quality in the teaching, but, on the other hand, it points to a high level of expenditure in education.

The number of teachers without adequate qualifications is going down steadily. However, in some parts of the country, there is still the lack of teachers of foreign languages, mathematics, arts and some specific professional subjects. There is a considerable lack of young assistant teachers in higher education institutions as well as that of full-time professors and assistants in more recently established universities.

At the moment, teacher training is not standardized. Teachers are not licensed systemically, as professionals in their respective domains, and there have been no financial or any other instruments developed to act as incentives to encourage improvement in the competitiveness-based quality of teachers' work.

Although within any particular level of the education system teachers carry out the same tasks, their salaries vary across Bosnia and Herzegovina. Generally, teachers' salaries are lower than the salaries of other budget beneficiaries. Faculty teachers have very low wages and that is the reason why many of them accept working at several faculties/universities simultaneously.

1.5. Education system management

The BiH Education system management implies two sub-systems:

1. Management of the education process organization, from the financial, legal and administrative aspect, and
2. Quality management, with respect to teaching content, methods of working, evaluation of pupils' achievement, etc.

The two sub-systems are recognized in the functioning of the entity and cantonal level Ministries of Education and professional institutions (Pedagogical Institutes, Education Standards and Assessment Agency, etc.).

In general, education management is carried out at several levels. The constitutional competencies in education are concentrated at the level of the entity of Republika Srpska, cantons of the Federation of Bosnia and Herzegovina and, and, in line with the Final Brcko District Award, at the level of Brcko District of BiH.

1.5.1 Competencies and institutional structure

State level

The **Ministry of Civil Affairs** of Bosnia and Herzegovina (MoCA) is the administrative authority responsible, among other things, for education at the level of Bosnia and Herzegovina. Its competencies are regulated by the Law on Ministries and Other Administration Bodies in BiH.

The BiH Ministry of Civil Affairs has competencies in the following duties and tasks:

- Carrying out duties with respect to designing and implementation of regulations, duties and tasks under the jurisdiction of Bosnia and Herzegovina, and to the establishment of basic principles of activity coordination, harmonization of entity government plans and defining the strategy at the international level,
- Participation in the activities of international organizations,
- Realization of international obligations and preparation for concluding international treaties or agreements in the field of education.

The Ministry is also responsible for bilateral agreements on supplementary education intended for children of BiH citizens living abroad, and the development of the supplementary education curriculum.

In accordance with the provisions of the state-level framework and other laws in the field of education, MoCA is responsible for supervision of the implementation of legislation. In the absence of direct and legally established mechanisms, carrying out the supervision by the BiH Ministry of Civil Affairs is possible only in close and immediate cooperation with the competent educational authorities at all levels. Furthermore, pursuant to the provisions of the Framework Law on Higher Education in Bosnia and Herzegovina, the Ministry is responsible, in consultation with other competent Ministries, for the coordination and development of higher education in the country.

With the international community's assistance, the **BiH Conference of Education Ministers** was established with a mandate to provide advice, and to review and coordinate education policy. As the full membership of the Conference meets infrequently and as its Coordination Body meetings are not held on a regular basis, the effectiveness of the Conference and its activity within the defined mandate are significantly limited.

Brcko District BiH

Education Department of Brcko District Government is responsible for the organization and functioning of the education system in Brcko District.

Republika Srpska

The RS Ministry of Education and Culture is responsible for entity education policy, legislation, administration and financing, the entity representation in processes of education coordination in Bosnia and Herzegovina, for the implementation of documents adopted at the state and international level, etc.

Federation of Bosnia and Herzegovina

The competencies of the Federation of Bosnia and Herzegovina in education are determined by its responsibility for ensuring the right to education. Therefore, in accordance with its legal responsibilities in education, the **Ministry of Education and Science of the Federation of BiH** carries out administrative, expert and other duties, cooperation and coordination of activities with cantons, related among other things to preprimary, primary and secondary education; pedagogical standards and norms; textbooks; teacher training and professional development; higher education standards and norms; scientific-research activities with the aim of improving the upbringing-educational work, pupils' and students' living standards etc.

Cantons

In accordance with their constitutional competencies in terms of education policy, financing education and passing laws, education in the cantons is regulated by the relevant cantonal laws and regulations. Responsibility for education resides with **cantonal Ministries of Education** (many of them are also responsible for education, science, culture and sport). Their size and capacity for carrying out the functions varies from one canton to another.

Municipalities in Bosnia and Herzegovina

Regulations in the education field apply differently to the local level competencies in education sector. This relates to the organization and financing of the education process, maintenance of school facilities, and participation in creating the part of curriculum important for the local community. Although some municipalities were granted a wider scope of competencies they quite often fail to implement them due to the lack of financial resources.

1.5.2. Education quality management

The existing and the recently adopted framework laws in the field of education specify the principles for the establishment of structures for defining and implementation of standards of education and quality assurance. Therefore, the process of reorganizing the current and establishing the new professional institutions in the field of educational standards should commence as soon as possible.

When it comes to higher education field, there are currently no institutional structures that would deal with the quality of education at this level. However, adequate bodies (councils, commissions), deal with issues such as quality of education or educational standards and analyses of the state of higher education at universities and competent ministries.

The situation is somewhat different in the field of preprimary, primary and secondary education. Education quality monitoring and support to its development are realized through the work of Pedagogical Institutes and the Standards and Assessment Agency for the Republika Srpska and the Federation of Bosnia and Herzegovina.

Pedagogical Institutes

At the moment, there are eight Pedagogical Institutes in Bosnia and Herzegovina: The Pedagogical Institute of Republika Srpska, one Institute for Education and six Pedagogical

Institutes in the Federation of BiH (hereinafter referred to as Institutes). Their capacities vary a lot and are insufficient. Except for three of them (the Pedagogical Institute in Bihac, the Pedagogical Institute in Mostar and the Institute for Education in Mostar), all other Pedagogical Institutes act within the Ministries of Education. There are plans to establish a pedagogical institute of Brcko District BiH.

Pedagogical Institutes carry out different types of activities: curricula development, introduction of new approaches and methods into the upbringing-educational process, teacher training, control and assessment of teachers' and schools' activities, etc. Professional supervision dominates the work of most Pedagogical Institutes, whereas support to education quality development has been pushed into the background. As the functions of the Pedagogical Institutes are not clearly defined, very often they overlap with those of the Ministries of Education.

Education Standards and Assessment Agency for Republika Srpska and Federation of Bosnia and Herzegovina

The Standards and Assessment Agency (SAA) was established in 2000, by decisions of the FBiH and RS Governments. In the course of the first few years of its existence, the Agency was funded by a World Bank loan but, currently, it is funded entirely by both BiH entities. The Agency is dealing, first of all, with external primary school pupils' performance assessment and, secondly with students' achievement standards. Reports on the assessments carried out to date show differences in the quality of pupils' knowledge per subjects, as well as huge regional differences. As the role of the Agency is limited by its organization and capacities, its activity has not been harmonized at the level of Bosnia and Herzegovina, and the process of setting educational standards is evolving at a slow pace. Moreover, the Agency has not succeeded yet to impose itself as a significant source of data and information important for education policy making.

1.6. Education inspection

Inspection supervision over the implementation of law, organization and the work of the upbringing-educational institutions is carried out by the education inspection services within the competent Education Ministries.

In Brcko District of BiH, education inspection is separate from the Department for Education and operates within the Public Security Department.

Due to the quite limited capacities and overlapping of the supervision functions, the current education inspection services carry out administrative supervision mainly.

Therefore, the status and competencies of educational inspection are not in line with the request that the inspection should constitute an important quality management factor in the BiH education system, as is the case with a large number of the European Union member countries.

1.7. School management

The schools in Bosnia and Herzegovina are managed by School Boards which, due to the lack of a genuine decentralization of the education system, cannot have significant influence on overall school functioning and development.

BiH schools are managed by school principals who, pursuant to the current legislation, in addition to the general qualifications, do not, at present, need any additional formal qualifications in the field of school management. The lack of managerial competency in school principals and school management teams is an obstacle to the development planning process which other countries have been implementing to a large degree. Therefore, it is essential to set standards and ensure the professional education and development of school principals and other school management staff members.

In higher education, the management system has not been harmonized. At present, only four public Universities (Tuzla, Zenica, Banja Luka and East Sarajevo) and several private ones in Republika Srpska are functioning according to the integrated university principle. The appointment of rectors, deans, and university and faculty management bodies is verified by the state bodies, which indicates undue influence being exerted on academic autonomy.

1.8. Financing education

Education in BiH is financed from the public resources of entity, canton, BD and municipality budgets mainly, depending on competencies. Practically, in terms of allocations, this means that there are thirteen separate education budgets in BiH: two entity budgets, one in BD BiH, and ten cantonal ones.

The amount of resources allocated from the state level budget is almost nonexistent. Republika Srpska and the Federation of BiH spend approximately 4% and 6% of their respective GDPs on education, whereas the budget of the Department for Education of Brcko District BiH (with the divisions for preprimary, primary, secondary education and joint affairs) amounts to 11,2% of the District budget.

In most of cantonal budgets, education expenditure is the biggest budget line. However, in spite of the high percentages, the resources can not be considered sufficient or significant as the overall respective budgets of the entities, cantons and BD BiH are low and limited.

At all levels and across all jurisdictions responsible for education in BiH, significant disparities in per student spending have been identified. The same applies to salaries and allowances of education staff.

The obligatory school budget lines are resources for gross salaries and allowances of school staff and for material costs. Criteria for planning the financing of primary and secondary education are quite similar in both BiH entities. Salary and allowance resources are planned on the basis of number of staff, established in accordance with pedagogical standards, number of classes and curriculum hours. The greatest share of the resources is directed toward expenditures for energy and public utilities, thus leaving a very small amount for supplies and maintenance of school facilities. Equipment and facilities amortization costs are not planned at all.

From the total education budget resources, 88% are earmarked for staffs' gross salaries and allowances, approximately 8% for material expenditures and 4% for capital investments. Donor and loan resources for capital investment in education are almost nonexistent. Adequate financial resources do not accompany education reforms and the resources designated for professional development of teachers and school management are insufficient. Institutions own sources of financing are getting more important and significant, especially when it comes to preschool and higher education, as the public revenues intended for the two levels are insufficient.

The treasury system has increased transparency and accountability in spending both public budget allocations and own earnings and more regular realization of obligations toward employees and suppliers. But, on the other hand, due to treasury business procedures, it slows down consumption of own revenue of schools and prevents reallocation of the budget item in which savings are made, over and above the legally allowed level (10% of the total school budget plan), for some other purposes. Under the circumstances, planning the resources for salaries, allowances and material costs is an extremely difficult endeavour in schools and ministries.

Reporting on and monitoring the efficiency of investments in education at school, canton, entity and state levels on the basis of measurements and international efficiency standards, have not been developed, yet. If the total GDP percentage invested in education is analyzed, a conclusion may be drawn that despite nominal growth of public education expenditures, real growth as a share of GDP is rather low.

1.9. Education reform process to date

The education reform process evolves at an uneven and slow pace. The goals set by the Medium-Term Development Strategy of BiH, 2004-2007, have not been achieved in the education sector either to the required nor to a sufficient extent, especially in the areas of public administration in education, financing education, completion of legal framework according to the education system levels, higher education reform, realization of the equal right to education and, within that area, elimination of any form of discrimination in education, etc.

In Republika Srpska, a nine-year compulsory education program was introduced at the end of 2003/04 school year, and in the Federation of BiH from 2004/05 successively. In Una-Sana, Bosnia-Podrinje, Tuzla, Zenica-Doboj and Sarajevo cantons, teaching is implemented for all pupils in grades 1, 2 and 3, in accordance with the new nine-year program for compulsory upbringing and education, whereas in Posavina and Herzegovina-Neretva cantons, this only applies to part of the school student population. In Canton 10, implementation of the compulsory 9-year primary education commenced in the 2006/2007 school year. The Middle-Bosnia and West-Herzegovina cantons implement the eight-year compulsory program. In addition to the eight-year program, schools in Brcko District BiH implement the nine-year compulsory education program as well.

The number of vocations in secondary vocational education was streamlined and new curricula developed for some vocations in accordance with a modular methodology.

In terms of improving the education quality level, the first step was taken by introducing an external evaluation system. Since the 2003/04 school year, the Standards and Assessment Agency has been implementing external evaluation and setting educational standards. So far, standards have been established for pupils' attainment in mother tongue and mathematics. Setting the attainment standards in science-related subjects is under way. In 2007, the BiH pupils will take part in the TIMSS program. The Agency has also conducted a survey into the interests and possibilities of implementing a state Matura program.

As other sectors also failed substantially to implement the goals set by the MTDS, the document was revised in 2006 identifying priority measures, the measures that require special attention and the measures to be accomplished by the end of 2007⁵.

⁵ EPPU – Medium Term Development Strategy of BiH, Revised document, May 200

Measures that require special attention:

- Enforce implementation of common core curriculum, in conformity with the BiH laws on primary and secondary education
- Provide all necessary conditions for complete and quality implementation of 9-year primary education, starting from the 2006/2007 school year.
- Abolish practice of organizing "two schools under one roof"
- Adopt the BiH Framework Law on Higher Education,
- Establish funds for primary education , starting from the fact that it is free and compulsory, establish a solidarity fund, too;
- Establish entity-level higher education funds

New measures

- Strengthening of Sector for Education within BIH Ministry of Civil Affairs according to recommendations of the Functional Review of Education Sector in BIH and transformation of entity and cantonal ministries of education according to the Review
- Adoption of the law on pre-school upbringing and education in BIH
- Adoption of the law on secondary vocational education and training in BIH
- Adoption of the law on higher education in BIH
- Adoption of the law on Agency for Education in BIH
- Drafting the law on financing of higher education in BIH

2. CHALLENGES OF THE ENVIRONMENT

2.1. Impact of societal, social and economic changes on education; Transition, globalization, internationalization and decentralization

The time in which we live is characterized by numerous changes and challenges to which education has to provide answers. We will make a list of some of the most important challenges:

- expansion and diversity of technological and technical innovations that require different and new vocations;
- demographic changes;
- the need for lifelong learning;
- frequent change of place of residence caused by seeking new job opportunities and better living conditions;
- changes in consumption patterns;
- an increased awareness of environmental protection and natural resources;
- lack of energy; and
- an increased poverty.

The lifelong learning concept has been developed as a consequence of societal changes, rapid transition of the society into a "knowledge-based society", demographic changes and a pronounced need for permanent upgrading of the existing and attainment of new knowledge and skills. Lifelong learning implies permanent acquisition of knowledge throughout one's life. It is carried out through formal, non-formal, and informal forms of learning/education. This means that one should always keep in mind that the school is not the only venue intended for learning and that it is necessary to support other places and ways of studying, too. The main goal is to establish an efficient and flexible accreditation system for education service providers and certification of the acquired knowledge and skills.

On the other hand, economic globalization refers to a distribution of work at the global level, changes in the structure of vocations, new occupations and needs for knowledge, and an increase in competency levels. Internationalization is one of the ways of responding to globalization. Sharing experiences and international cooperation in education play a significant role. On the other hand, the ever-increasing informatization enables faster and easier access to information and wide-ranging skills and knowledge. An increased access to information and media require broader basic knowledge and a critical insight in order that information could be transformed into knowledge. The public and media interest in education require education transparency.

In the sphere of education, there is a visible step toward not only territorial but also a functional decentralization and the strengthening of school autonomy. In a decentralized education system, management is implemented by means of goals and results, in order to promote equality and reproduce a common value base. Such an approach requires new forms of school management and governance and programming of the upbringing-educational work.

To that end, in addition to traditional basic skills, the European Union identified five "new basic skills" that should be developed in every young and adult person:

- Nature-scientific literacy
- Foreign languages

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- Establishment of ENIC centre for information and recognition of academic certificates
 - Functional work of BIH Agency for Education
 - Functional work of Agency for Higher Education in BiH
 - Adoption of the strategy for development of secondary vocational education and training in BiH.
 - Drafting of the law on financing of primary education.

Note: Measures not implemented by the end of 2007 will be the subject of this strategic document.

- ICT skills
- Technological culture
- Entrepreneurial and social skills

In this context, an individual has to learn how to learn, think, be and act. All that should contribute to the social integration of the individual, his/her active role in society, an increase in his/her adaptability at work, more comprehensive personal fulfillment and self-actualization.

These challenges require new ways of education planning and implementation, its evaluation and quality assurance.

2.2. Changes in the labor market

Unemployment is the burning problem of Bosnia and Herzegovina. When the structure of the unemployed is analyzed, it becomes obvious that an extremely high percentage of them can not find jobs owing to their very low level of education or lack of adequate qualifications. That is why it is extremely important to harmonize the changes in education with those in the labor market. Bosnia and Herzegovina is still in a period of transition and structural changes are taking place in the labor market. Huge companies are slowly disappearing and the key role in the economy is being taken over by small and medium-size enterprises. The augmented needs alter the consumption mode of thought and contribute to the expansion of services.

Such changes affect significantly the flexibility of and the higher competencies needed from the labor force. With that in mind, more active participation of employers in creating and implementing the education reform processes is becoming more and more necessary. Changes in education must not be carried out without the participation of social partners. On the contrary, they are the ones that should significantly influence the changes, in order to have the employable, competent and flexible working force. Such an approach to social dialogue, which can also be seen as "business dialogue", will motivate the private sector to start investing more seriously in education sector, especially in informal and non-formal education.

To that end, it is of paramount importance to adopt as soon as possible a state qualification framework which will then have to be harmonized with the meta-framework of professional qualifications of the European Union.

3. EDUCATION FOR SOCIAL COHESION AND ECONOMIC GROWTH AND DEVELOPMENT OF BOSNIA AND HERZEGOVINA

3.1. Education as the basis of socio-economic development of BiH

There is a crucial task ahead of Bosnia and Herzegovina's education system – how to help the country emerge from relative poverty and make it a pleasant and prosperous country. There are also challenges concerning the promotion of internationalization and globalization in education, whilst preserving the traditional and cultural values of peoples and citizens. This includes the values that are favorable for the development of a feeling of togetherness; acceptance of and respect for differences; solidarity and responsibility for sustainable development; encouraging a work-ethic amongst the citizenry and developing democratic society as a whole.

Education is not consumption but a primary production, the effects of which are a long-term investment in processes that will result in other important products. In order to carry out the task in the best possible fashion, it is essential to bring together all elements of education, along with the gradual harmonization of the education system and consistent respect for the concept of lifelong learning. Development of a single system of school and professional career

counseling that will provide individuals with information, orientation and counseling services in all phases of their respective careers is also crucial.

It is important to make the traditional education system more open and flexible and to enable individuals to apply their own individual approaches and styles of learning, adjusted to their own capacities, needs and interests. To that end, it is necessary to focus attention towards the utilization and implementation of adequate strategies for children and youth with special needs, to assist their increasing inclusion in education and society. In the process, a more important role should be given to family, local community, social partners, employers, etc.

It is necessary to encourage individuals to recognize the importance of practical action and an active attitude, including the implementation and transformation of theoretical knowledge and ideas into practice and a positive attitude to work. To act, to be active and enterprising, to have a vision of a better life and society, without waiting for others to make that happen, is one of the vital paths for Bosnia and Herzegovina to get out of poverty and to develop a democratic society.

The only safe investment in Bosnia and Herzegovina is the investment in human resources. Human beings are the fundamental resource and potential of Bosnia and Herzegovina. Investing in human resources is based on creating conditions for the development and advancement of the individual. Each individual should have his/her own professional development plan, whereas the employers and the working environment should support and encourage the individual to learn. Investing in people does not only result in an increased GDP but also in enhanced participation by citizens in professional and public life.

Modern ICT-based education offers significant potential for innovations in teaching and learning. A society that learns can be better and more consistently developed by embracing actively these innovations. Therefore, significant changes are ahead of the teaching profession, and teachers could become guides, mentors, advisers and mediators.

In the rest of the world, a new way of guiding and advising is being developed and it is best characterized as mediation. For successful guidance, it is necessary to have a vision, good information and evidence-based knowledge. That is why it is vital to develop a high quality accreditation system for education providers, in order to enable recognition of the BiH education certificates and qualifications within the new global society, creating in that way conditions for greater mobility of individuals and better utilization of their knowledge, competencies and skills.

The globalization of social relations guides an individual inevitably toward cooperation. To a considerable degree, joint work expands the possibilities of sharing experience and learning from each other. If we wish to create sincere relations, then cooperation should grow into partnership. In addition to mutual relations and in order to build a responsibility mechanism into the system, it is necessary to use a proactive coordination approach, through which we will make all subjects in education equitable, but also equally responsible for the processes ahead of us, without fear that somebody's authorities will be neglected.

Substantial differences in education and fluctuating economic and social conditions may curb opportunities for the continuation of education and lead to the exclusion of individuals and groups from the education system. That is the reason why one of the greatest risks is exactly the issue of adjustment to the needs and rapid changes in society.

Also, the challenges of the international labor markets and the poor economic situation in the country may result in large numbers of young people leaving the country, especially the most highly educated ones.

In order to prevent such risks, a harmonized action is required:

- We will strengthen the life long learning principle at all levels of education system;
- It is necessary to incessantly emphasize the social and economic dimension of education, as a most-effective investment;
- It is necessary to improve, in accordance with the best practice in EU countries, the adaptability and flexibility of the education system, its mobility and quality assurance in education,.

3.2 Demographic changes in Bosnia and Herzegovina by 2015, and economic development perspective

In the course of the period 1997-2005, the birth rate in BiH dropped by 43,3%.

In 2005, a natural birth rate growth of only 225 new inhabitants was recorded. In all cantons of the Federation of BiH, over the last year, a drop in the birth rate was recorded, especially in cantons like Posavina, Bosnia-Podrinje, Herzegovina-Neretva and Canton 10. In Republika Srpska, the situation is even worse.

The reasons behind the decline in the birth rate are manifold, but the most pronounced ones are the unfavorable economic situation and the high unemployment rate. Fewer and fewer young people today are choosing to get married or have family.

It can be expected that this negative demographic development will carry on until 2015.

In 2005, the nominal rate of the increase in GDP was 7,6%, and 11,2% in 2006. The real rate of increase in 2006 was 5,5% which is somewhat faster than in the neighboring countries. Participation of the public sector (including education) in the 2006 growth rate was 10,3%. Estimates show that the nominal rate of the GDP growth will be 7,6% in 2007⁶.

In 2005, the per capita GDP was 4.108 BAM, and 4.568 BAM in 2006.

Industrial production has had a slightly upward trend which means that some re-industrialization of the country is taking place. Services provided in the tourism and catering sectors are also on the rise. The first three-month period of the year 2007 saw large-scale activity in the construction sector.

In 2005, the number of unemployed in BiH was 508 000, and 516 000 in 2006. In March 2007, the number of employed amounted to 661 097, which is a 2,1% increase in relation to the same period in 2006. It is estimated that Bosnia and Herzegovina has 3,8 million people.

4. MAJOR DIRECTIONS OF EDUCATION DEVELOPMENT

4.1. Development of education sector

Bearing in mind the current situation in BiH education, the following priorities in education development are imperative:

- raising the educational level of the BiH population and the competency of its workforce;
- improving the effectiveness of the education and training system;
- preventing social exclusion of children and youth;
- expanding education and training opportunities for adults, and ensuring the quality and revitalization of research in education.

It is to be expected that all interventions in education would result in raising the level of economic growth level, reducing the unemployment rate and raising the living standard in BiH.

⁶ Bosnia and Herzegovina: Economic Trends, Annual Report, EPPU-MTDS, March 2006
Economic Trends, January-March 2007

With this as the starting point, support will be provided to an increase in coverage of children by the preschool upbringing and education, as well as to an expansion of the nine-year compulsory education.

Post-compulsory level opportunities for continuation of education will be expanded by introducing various programs of general and secondary vocational education. Because of the standardization of learning outcomes and mobility toward higher education, all pupils at four-grade secondary schools will have an externally evaluated Matura exam. In addition to general secondary grammar schools (gymnasia), other types of general secondary schools will be developed as well.

The development of vocational education will start within the framework of compulsory nine-year primary education and will be implemented in accordance with the VET Strategy 2013. Various opportunities will be created for professional development of secondary vocational school graduates, as well as for continuation of their education in the field of their vocation, within the framework of higher education and at universities, together with adequate counseling and support. In secondary vocational schools, special emphasis will be placed upon the development of entrepreneurship and the achievement of practical experiences and skills by students, through the establishment of school companies and centers for career development.

Inclusion of children with special needs in education will be improved through ensuring adequate school infrastructure, programs and teacher training. At the state and other levels, special institutions will be established as resource and expertise centers for children and youth with more pronounced developmental and learning difficulties.

The discovery, identification and monitoring of the development of gifted and talented pupils and young people will be supported continuously within the regular teaching process, extracurricular and out-of-school activities. In time, special centers/research stations for the institutional care of the talented will be established.

The state of Bosnia and Herzegovina has to establish mechanisms of care for the education of the children of the Diaspora, by identifying their educational needs and ensuring adequate textbooks and teaching staff.

Higher education reform will be implemented in accordance with the international documents accepted and signed by Bosnia and Herzegovina, which imply:

- *organizing three cycles of studies (undergraduate, masters and Ph.D studies)*
- *curriculum modularization*
- *consistent implementation of ECTS*
- *ensuring mobility of students and teaching staff*
- *establishing the integrated university*
- *introducing diploma supplements*
- *developing research activities at universities*
- *better cooperation with the economic sector, etc.*

In addition to the activities that will be carried out by the higher education institutions, adequate support, provided by the executive and legislative bodies, is needed. The bodies should ensure legal, financial and other conditions for the successful reform of tertiary education.

Adult education and training will be developed in order to meet the educational needs of the adult population and labor market through formal, non-formal and informal types of education.

Adequate resources and quality will be ensured through standard setting and provision of support and advisory services at all levels of education.

In accordance with the democratization of education, private institutions, institutions for professional development and the part of the civil sector providing educational services will all become part of education system, provided that they meet specified criteria and standards.

In parallel with the development of an education provider component, another component will be developed to regulate, monitor and manage provision of those services through education policy making, planning, financing, standard setting, accreditation and certification. This component includes all Ministries of Education in Bosnia and Herzegovina, institutions under the competence of the Ministries, as well as the establishment of new institutions/bodies. To that end, the core public administration functions in the education sector (executive; support and development; control and assessment) will be separated and coordination of the entire education sector will be assured. Education administrative development will be carried out in accordance with the public administration reform in Bosnia and Herzegovina and the requirements of the education system.

In addition to the need for cooperation and coordination within the education sector, it is of particular importance for Bosnia and Herzegovina that the education sector cooperates with other sectors, and in particular with those of social policy, economy, agriculture, labor, etc.

International cooperation and interaction, and especially meeting the necessary conditions for the integration of BiH into the European Union, are extremely important in education. It is essential to include the youth in this process.

The key factor in the implementation of education reform is high quality and motivated teaching staff. That is why it is very important to improve the initial education of teachers and educators and to ensure their permanent professional development.

The adequate wage rate in the education arena, which will ensure employees' feeling of dignity and be a motivating factor in the implementation of education reform, will be insisted upon. The foundation for the implementation of these changes is the principle of competitiveness. In accordance with that, a system of performance evaluation and quality measurement will be created, simultaneously serving as the basis for professional development of each and every teacher.

For all these changes it is necessary to secure the adequate support of the executive and legislative bodies that should ensure legal, financial and other conditions.

4.2. Modernization and development of teaching and learning at all levels of education system

With the aim of improving the level of education standards, focus will be placed on modernization of the content and methods of working, evaluation of achievements and continuous professional development of teachers at all levels of the education system.

- *Quality of learning and teaching will be improved in preschool upbringing and education, primary and secondary education as a foundation for life long learning.*
- *Learning content will be unburdened from unnecessary facts and will be more related to life, science and technology. Implementation of child-centered methodologies including critical thinking, problem solving and knowledge implementation skills will be encouraged, taking into account the comprehensive (holistic) developmental approach to each individual, including the influence of the upbringing-educational institution, family and social environment.*

- *Programs oriented toward objectives and, even more, toward learning outcomes will be developed along with programs for specific groups (for early education, minorities, persons with developmental and learning difficulties, for the talented, for prequalification needs, etc.).*
- *Systems of internal evaluation (including self-evaluation), integral and external evaluation will be established in order to develop, supervise and improve education process effectiveness and an overall monitoring of the upbringing-educational institutions' activity and the work of teaching staff. Internal evaluation will be carried out by schools, in cooperation with all participants in the education process (pupils, parents, teachers, local community). Self-evaluation reports are the foundation for integral evaluation, carried by inspection services, based on previously established and harmonized indicators. External evaluation will be carried out through standardized procedures at the end of grades 6 and 9 of primary school, and at the end of the final grade of secondary school.*
- *Pupils' achievement standards will be established for primary and secondary education;*
- *Development of ICT education and studying foreign languages will be improved;*

4.3. Access equality and equity in education

The BiH Constitution, entity and canton Constitutions and the Statute of Brcko District BiH guarantee the right to education. In accordance with the laws currently in effect, primary education is compulsory and free of charge.

Everybody has to have an equal right to upbringing and education, empowerment and development in accordance with his/her own potential. The right to basic education that is constituted by the compulsory nine-year education as a minimum, as well as empowerment for inclusion into labor, will be ensured throughout the country. Special attention will be aimed toward identification of and early intervention in individuals with learning difficulties.

- *Education authorities and local community will cooperate in order to enable equality of access to primary education for all across the country, with a special emphasis on improvement of the situation in areas with minorities, returnee children, demographically endangered and war torn areas, rural and mountainous areas, etc.*
- *Education tailored to minority needs will be ensured. Education of national minority and Roma children will be implemented in accordance with the State Action Plan on Educational Needs of Roma and Other National Minorities in BiH;*
- *Social and private initiatives for opening upbringing-educational and especially preschool institutions will be encouraged.*
- *Supplementary teaching for children of BiH citizens living abroad will be improved.*

In Bosnia and Herzegovina, a relatively large number of pupils and students drop out of formal education or do not complete it in time. On the whole, that group of young people is quite vulnerable as it is exposed to poverty, the risk of social exclusion and of the adoption of socially unacceptable behavior. That is the reason why the following will be undertaken:

- *Evidence keeping and monitoring of the number of pupils/students (especially girls) who drop out from formal education will be put in place;*
- *Permanent and diverse forms of counseling and orienting pupils in the course of the education process will be carried out;*

- *Through the development of interim programs, flexibility of secondary education will be encouraged in order to enable transfer from vocational to grammar schools and vice versa, as well as enrolment in higher education, especially to university after completion of secondary vocational school;*
- *In cooperation with social and other partners, a system of monitoring and individual counseling of all those who have not enrolled in secondary school will be developed;*
- *Continuation of schooling after the completion of secondary vocational education will be encouraged and higher education will be developed in professional area;*
- *Access to higher education will be made objective through the introduction of externally evaluated state Matura exam;*
- *In cooperation with economic and other partners, efforts will be made to try to ensure fellowships and loans for students coming from socially and financially disadvantaged groups;*
- *Securing equal access educational opportunities in different parts of the country will be taken into account (school availability, financial equity in education, adequate infrastructure, qualified teachers, etc.).*

4.4. Developing links between education and the sphere of labor

Along with ensuring single education and employment policies, it is necessary to develop a single system of school and professional counseling, and to support innovative work.

- *Regional, interdisciplinary networks ensuring the necessary cooperation between education systems, research and the employment sector will be established;*
- *Societal, economic and social partnership at the state, local and sector levels will be created through a permanent analysis of conditions in the labor market and the monitoring of its demands;*
- *Education for entrepreneurship will be introduced as a developmental content within the existing subjects at all levels of the education system, with targeted professional development of and support to teachers and the upbringing-educational institution, in order to develop such content. Emphasis will be placed on empowering those adults with lower educational achievements, and in particular on persons with special needs and Roma, in order to involve them more fully in employment;*
- *Real and virtual companies will be opened in secondary vocational schools to develop students' entrepreneurial spirit and to offer practical experiences in the field of market economy;*
- *In regular and ongoing contact with pedagogical-psychological services in schools and centers for professional orientation and employment agencies, career centers within secondary schools will be a basis of the system of professional youth orientation.*
- *Career centers will be established within higher education institutions.*

4.5. Encouraging permanent professional development of teachers, principals and other staff in the upbringing-educational institutions

Since a professional, competent and communicative staff motivated towards permanent self-development stands behind any successful education reform, it is of paramount importance to

improve their initial education and professional development. The aim is to have teachers and educators with at least first university cycle diploma, to encourage their further education and educate staff for other needs in education. That would simultaneously meet the new requirements for professional competencies in education and would improve the standards of quality in the educational-upbringing process.

Therefore, it is necessary to start modernizing the study programs for initial teacher training with specific emphasis on accomplishments in: teacher profession and science; in pedagogical and methodological competence; in the utilization of ICT in education; in proficiency in foreign languages as a fundamental precondition for the internationalization of education; through the establishment of MA and Ph.D. studies in the requirements of education. It is also necessary to develop a special study program for teachers in secondary vocational schools in order to enable them to move away from the current approach of their additional pedagogical-psychological and didactical-methodological training.

Educational authorities are responsible for professional, pedagogical and psychological education and the empowerment of teachers towards the independent implementation of upbringing-educational activity. On the basis of the accredited training programs, professional development for those areas defined as significant for education policy implementation will be financed from the public budget. The priority areas are:

- curricula development in accordance with reform requirements;
- implementation of modern methodological approaches;
- implementation and utilization of ICT;
- improvement of practical work;
- gaining knowledge and skills for work with children with special needs;
- development of entrepreneurial skills;
- development of collaborative relations between schools and exchange of best practice;
- cooperation between school, parents and local community;
- project design and management.

With respect to other areas, responsibility resides with employers, that is, the upbringing-educational institutions and individuals. They will need to ensure funds for the additional professional development, too.

Vocational Teacher licenses will be introduced and they will be renewable. In addition to a teacher's successful performance at work, the major condition for extending the license will be the teacher's participation in the professional development system.

Teachers' associations will have a significant role in improving the quality of teaching, establishing links with the labor market and improving the profession as well as in the licensing and re-licensing process.

The education reform process will result inevitably in a so called "technical surplus" of teachers. One of the possible ways of taking care of them is to establish special funds and to carry out changes in current labor-related legislation (decrease of teaching-hour norms in proportion with the working experience period, subsequent payment for missing working experience period, prequalification and additional education, etc.).

Teachers' trade unions should play an important role in the said processes.

It is necessary to secure an equality and quality based sustainable system of financing for this kind of teachers' professional development system.

4.6. Coordination of public administration in the education system

The structure of the education system is institutionally fragmented, vertically and horizontally. This fragmentation makes the necessary process of coordination of public administration in education sector more complex.

The core functions of education management (education policy and planning, support and development, control and evaluation) are not clearly separated. Therefore, the overlap between some of the functions should be eliminated and some of the existing functions should be made more practical and modern. Moreover, there is no efficient realization of EU integration and of international cooperation related functions.

With a view to ensuring the necessary coherence of the education system, achieving its higher transparency, measurability and recognition in international relations, it is necessary to move from the current voluntarily coordination to a more effective and consistent one, especially in the domain of education policy and EU integration.

Starting from the constitutional and legal responsibilities for education and using the existing institutions, it is possible to strengthen the public administration coordination process in the education sector through a more explicit definition of its functions. This can be achieved by developing capacities at all levels and introducing some new functions, institutions and bodies, as the mechanisms and structures for support to the management, planning, monitoring and development of education system in Bosnia and Herzegovina.

The major preconditions for successful coordination of the education sector in Bosnia and Herzegovina are:

- Institutional development at all levels of decision-making, with the aim of a more efficient realization of their functions, especially with respect to the development of the entire BiH education sector, getting closer to and participating in the EU integration processes and taking part in various forms of international cooperation;
- Planning and taking decisions on the basis of relevant indicators, enabling an objective insight into and evaluation of the state of all levels of education system, labor market needs, needs of education and training, international trends in education development and other aspects of education system;
- Development of human resources and other capacities in education sector, with the aim of modernizing and raising the quality of educational standards and providing professional and other support to its further development.

4.6.1. The newly established bodies within the education sector coordination structures

BIH CONFERENCE OF EDUCATION MINISTERS

It is necessary to establish the BiH Conference of Education Ministers as the permanent and highest advisory body to the established structures for coordination of education sector in Bosnia and Herzegovina. This Conference will include the BiH Minister of Civil Affairs, entity Ministers of Education, cantonal Ministers of Education and the Head of the Department for Education of Brcko District BiH.

The main tasks of the Conference are to form an opinion about, provide advice and recommendations for harmonization of: education policies and strategic education development plans; education legislation; activities related to defining, implementation, monitoring and development of educational standards and their harmonization with European and international standards; strategies and action plans at the international level (for EU integration of BiH education, regional cooperation and cooperation at a broader international level), etc.

The Sector for Education within the Ministry of Civil Affairs of Bosnia and Herzegovina will provide professional and administrative-technical support to the work of the Conference.

BiH EDUCATION COUNCILS

In accordance with the progress of the education reform process in Bosnia and Herzegovina and with a view of opening education toward the public, special advisory councils for education will be established at the state level, for the corresponding levels, that is, types of education. In line with the practices and experiences of the European countries, the councils will serve as a large advisory platform for educational authorities in implementing the initiated education reforms and communicating with the public.

The Sector for Education in the BiH Ministry of Civil Affairs will provide administrative-technical support to the work of the Education Councils.

BiH RECTORS' CONFERENCE

By establishing the BiH Rectors' Conference, composed of licensed and accredited university rectors, a representative and advisory body will be secured for representing the shared interests of all universities in Bosnia and Herzegovina and for the implementation of the higher education reform process in the country.

4.6.2. Core institutions

MINISTRY OF CIVIL AFFAIRS – SECTOR FOR EDUCATION

It is necessary that the MoCA Sector for Education be prepared and that it should have adequate capacity for carrying out the functions related to:

- 1) ***Coordination of activities of education sector in Bosnia and Herzegovina pertaining to:*** development and harmonization of education policies and strategic development of education system; harmonization of education legislation: defining and monitoring implementation of education standards; economic/financial aspects of education system, etc.
- 2) ***Coordination of activities regarding the EU integration and international cooperation in education:*** realization of international obligations; defining education policies in the field of EU integration and international cooperation, promoting and ensuring participation in European and other international assistance programs and their implementation;
- 3) ***Education indicators and statistics:*** establishment of relevant state-level data bases in accordance with EUROSTAT and reporting on education indicators and statistics for BiH education benchmarking.

To that end, the role and tasks of the Sector for Education would be twofold:

- 1) to carry out the state-level functions pertaining to coordination in education and international cooperation; and to
- 2) cooperate and provide expert and other support to the competent educational authorities, especially in the fields of:
 - education system planning;
 - participation in international activities;
 - applying for EU assistance programs and other international support programs;
 - monitoring and reporting on the development programs' results;
 - reporting on the results of comparability of the BiH education system in international studies and statistics; and

- education statistics and analysis.

The Ministry of Civil Affairs – Sector for Education would carry out the necessary, education-related, state-level cooperation between sectors and institutions.

MINISTRY OF EDUCATION AND CULTURE OF REPUBLIKA SRPSKA

The Ministry should focus its activities and tasks on policy making, strategic and evidence-based planning, legislation development, financing education, and general administrative issues.

With the aim of strengthening the responsibility of those at lower decision-making levels, for ensuring education and its quality, it would be necessary to carry out the reallocation or transfer of some functions in education administration and planning to the regional/municipality, i.e. to school level.

MINISTRY OF EDUCATION AND SCIENCE OF THE FEDERATION OF BiH

The Ministry should redefine the current coordination and advisory functions in accordance with the anticipated procedures for coordination of the education system in BiH and the changes taking place at the cantonal level. To that end, the Ministry's role and functions in the pursuit of agreements is recognized as central. This would ensure efficient coordination of the FBiH education sector activities and provide cantons with the expert and other support for successful implementation of policies agreed on at the level of BiH.

THE DEPARTMENT FOR EDUCATION OF BRCKO DISTRICT BiH

With the aim of developing the education system, the Department for Education of Brcko District BiH should place focus on full participation in the process of coordination of the education system at the level of BiH, as well as on the delegation of some educational administration and planning functions to the local – school level.

CANTONAL MINISTRIES OF EDUCATION

Policy development, strategic and evidence-based planning, legislation development, financing of education and general administrative matters are the main issues on which the cantonal Ministries of Education should concentrate.

Dealing efficiently with the above mentioned issues also requires the delegation of certain duties and tasks to the municipal, that is, school level.

4.7. Quality assurance. Support to education development

AGENCY FOR PRE-PRIMARY, PRIMARY AND SECONDARY EDUCATION

In order to realize professional activities in the field of education related to the setting the knowledge standards, the assessment of results and the development of common core curricula in preprimary upbringing and education, primary, secondary general and secondary vocational education and training and adult education and training, the Agency for Preprimary, Primary and Secondary Education will be established at the level of Bosnia and Herzegovina.

Among other things, the Agency would have competencies in:

- setting assessment standards;
- setting standards of educational achievement;
- coordinating the implementation, monitoring and evaluation of common core curricula content in the framework curricula;
- developing common core curricula, including learning principles, objectives, outcomes and the desirable approaches and procedures in the upbringing-educational process of common interest for students, in the framework curricula;
- reporting on the state of education in Bosnia and Herzegovina;
- taking part in international development projects and research in education (TIMSS, PISA etc.).

The Agency will carry out its activities independently and in cooperation with other institutions in the field of education.

PEDAGOGICAL INSTITUTES

Pedagogical Institutes continue to function as professional institutions, with the tendency to grow again into independent institutions, separated from the administrative structure of education ministries. Pedagogical Institutes carry out the following functions:

- Curricula development;
- Professional development of teachers, collaborators and management of the upbringing-educational institutions;
- Advisory services for the development of education and improvement of the educational-upbringing process in schools;
- Support to schools for the implementation of educational standards and curricula;
- Organization and implementation of assessment, together with the Agency and schools; and
- Research and development project activities in education, etc.

It is necessary to abandon the traditional approach to professional-pedagogical supervision and to direct it gradually toward the internal and external evaluation of the upbringing-educational institutions and the teachers' responsibility for the quality of the upbringing-educational process;

In order to increase the levels of functioning and quality of support to development of preschool and school institutions, the upbringing-educational process and human resources, it would be desirable that Pedagogical Institutes specialize in the agreed professional fields, act on a larger scale, and take part in the design and implementation of relevant projects.

On the other hand, with the aim of achieving quality assurance within the range of educational services, it is necessary to carry out sustainable networking of the activities carried out by the Agency for Preprimary, Primary and Secondary Education, Pedagogical Institutes and other cooperating institutions.

AGENCY FOR HIGHER EDUCATION DEVELOPMENT AND QUALITY ASSURANCE

The Agency for Higher Education Development and Quality Assurance will be established with a view to introducing the European Higher Education Area criteria and standards in accordance with the Bologna Process.

Among other things, the Agency would have competencies in:

- Defining the HE institution accreditation criteria, passing minimum standard norms in higher education and assessing harmonization of the accreditation decisions with the established standards and norms;
- Providing recommendations with regard to the criteria and standards for the establishment and closing down of the higher education institutions, restructuring study programs and licensing higher education institutions and study programs;
- Keeping the state registry of the accredited higher education institutions;
- Setting the quality standards, quality analysis and providing recommendations for improvement of the HE study and institutions' standards of quality;
- Identifying a format and the general content of diploma and diploma supplements;
- Representing BiH in international organizations for higher education quality.

CENTER FOR INFORMATION AND RECOGNITION OF CERTIFICATES

The Center would have competencies in carrying out tasks related to the provision of information and the recognition of higher education certificates within the framework of Lisbon Convention and would be a part of the international recognition and information centers (ENIC/NARIC).

4.8. Education inspection

In accordance with international practice, educational inspection should play a crucial role in ensuring equality and equity in education, through an integral approach to the evaluation of the upbringing-educational institutions, based on internal evaluation and indicators related to:

- presence of conditions for education institutions to be able to carry out their activities;
- realization of the upbringing-educational process at all levels of education;
- meeting the conditions for selection of teachers, associates and preschool educators; for their professional development and success in professional exams;
- upbringing-educational institutions management and governance;
- realization of curricula and the established standards and norms regulating the upbringing-educational activity;
- implementation of extracurricular activities;
- realization of experimental programs;
- realization of enrolment in the upbringing-educational institutions;
- pedagogical records, documentation and school public certificates;
- monitoring the upbringing-educational process in times of teachers' strikes.

To that end, it is necessary to ensure all assumptions for the independent work of the education inspection in the future, including the agreed and harmonized criteria and standards at the BiH level, for realization of the inspection supervision and harmonization of and updating the education inspection regulations.

4.9. Research in education

By a combination of circumstances, research in education has been almost totally neglected. In addition to that, it should be pointed out that, currently, there is no systemic project/program monitoring, evaluation and coordination carried out for the purpose of education development.

Therefore, it is necessary to:

- *Reaffirm all research activities in education;*
- *Create new sources and mechanisms for support to research and introduction of innovations in educational-upbringing process;*
- *Enhance the connection with the science sector that might finance research of special interest for education sector.*

4.10. Education statistics and indicators

The lack of statistical data and adequate indicators on education in Bosnia and Herzegovina is a major obstacle for the setting of concrete goals in educational development and its monitoring. The short-term goal is to combine existing statistical data produced in the statistical institutions of RS, FBiH and BD BiH. Educational authorities will, in cooperation with the institutes for statistics in the RS and FBiH, develop the education statistics in accordance with the EUROSTAT procedures and requirements. Moreover, the necessary statistical indicators have to be based on the development goals indicated in this strategic document. The Education Management Information System (EMIS) was introduced through a World Bank funded project but it is not functioning fully across the whole territory of BiH.

That is why it is necessary first of all, in the coordination of further development of statistics, to take into consideration the infrastructure that has already been established, in part, through

EMIS. In the coordination process, the main guidelines should be in line with the EUROSTAT methodologies and indicators.

Experts in the statistical institutions will support the development of EMIS in order to define the basic data produced by schools in accordance with international definitions.

As the next census in BiH is planned for 2011 cycle in line with EUROSTAT recommendations, statistical institutions will have to carry out evaluation on the number of children and youth in various age cohorts, in order to obtain the basis for planning of educational and school networks.

4.11. Financing education

It is essential to increase financial allocations for certain purposes in education and to improve quality of education in line with the requirements of strategic development of education. Given the conditions of the existing school network, other structures in education and the considerable reduction of cohorts of school children and youth, a more efficient school network should be planned. Also, methods and incentives should be developed for reallocation of savings toward other purposes and in accordance with requests for qualitative improvement of the education sector. Otherwise, the current circumstances will produce a very inefficient school network, smaller classes and an increase in per-student expenditure.

Based on the principle of the functional decentralization of public spending and the varied utilization of the existing and planned resources for financing the BiH education sector, in RS, cantons and BD BiH there is the need to strengthen the planning and measures for:

- Reallocation of savings and spending, for permanent improvement of the education sector quality level;
- Setting the criteria and standards for monitoring and awarding the management, teaching and other staff in educational institutions accordingly, in order to make utilization of their respective budgets more efficient and successful and to redistribute spending with the aim of improving education and training;
- Changes in the education administration staff structure in accordance with core functions and required expertise.

The main guidelines in planning and measures for reallocation of resources and spending are as follows:

- Evidence-based planning and optimization of school and educational institutions in order to achieve better results in both educational and economical terms;
- A decentralization of budget related decision-making process to the school level, in order to provide the school administration with an opportunity to reallocate the budget in accordance with current needs of the school;
- The budget procedure should provide benefits to the educational authorities (administration) and school administration (schools) from the resources saved through some of the budget lines which could then be used for some more urgent purposes;
- Financing of schools can be improved by increasing the schools' own revenues. The treasury system incentives that encourage and motivate schools to create their own revenues should be established throughout the country. The main incentive would be to allow school administration to use the revenues to improve working conditions and quality standards in teaching, the learning environment, libraries, in-service teacher training, etc. The revenues would be included in the total school budget and would be subject to auditing;
- In the medium term, financing per pupil/university student should be the ultimate arrangement for economic planning, in order to establish transparent and evenhanded budgeting in schools and other upbringing-educational institutions.

4.12. International cooperation; Coordination of donor resources; and EU integration

Bearing in mind the organizational structure of BiH education, at the moment there is no systemic approach to international cooperation in the field of education. As EU integration is the top priority of Bosnia and Herzegovina, organized activities in education, aimed in that direction, are becoming the burning imperative.

On the other hand, the education sector is quite attractive for foreign donors assisting in reform processes. However, at any of the decision-making levels, there is neither a systemic record of the need for donor intervention in the BiH education sector nor a coordinated approach to donors by education authorities in Bosnia and Herzegovina. The lack of needs assessment records and a relevant data base on international assistance programs, projects and their results makes even more difficult the preparation of new projects and applications to EU and international community programs aimed at further support to the education reform process in Bosnia and Herzegovina.

The best practice that those countries in the region, which have already established their own systems, have undertaken in this field will be used in setting up the donor and international cooperation coordination system in BiH education. To that end, the first step is to establish a data base of donations and international cooperation in the BiH education sector, which will be maintained and updated on a regular basis in order to ensure institutional memory at all levels of educational administration. All levels of educational authority and the upbringing-educational institutions will be included in this data collection process and in the exchange of relevant information. The data compiling process will be carried out by the Organizational Unit of the Ministry of Civil Affairs of BiH. The data base on international cooperation will be available to the BiH Directorate of European Integrations and Ministry of Foreign Affairs, whereas schools, municipalities, canton and entities will be provided with access to useful information.

The EU integration process implies a lengthy journey, starting with the preparatory phase towards signing the Stabilization and Accession Agreement, then filing the application, filling in questionnaires, negotiations, through to a candidate status and membership.

Based on the experiences of EU membership candidate countries, Bosnia and Herzegovina will have to focus on a series of concrete activities with the view to accelerating the EU integration process. The priority steps are: establishing a working group composed of the core institutions' experts who will be working on the design and implementation of the BiH education sector's Action Plan for EU Integration and International Cooperation; a European description of the BiH education system will be designed using the European Commission Questionnaire intended for all EU membership applicant countries. To that end, the Organizational Unit of the BiH Ministry of Civil Affairs will cooperate with the BiH Agency for Statistics as the key institution for collecting statistical data. Harmonization of education legislation with the corresponding EU directives and regulations will be carried out in parallel with the preparation of the European description of BiH education. And finally, within the activities of EU integration of the BiH education sector into European Education Area, it is necessary to build an absorption capacity in Community Programs financial assistance. This implies establishing a separate State Agency for Community Programs.

5. BiH EDUCATIONAL DEVELOPMENT PLAN BY 2015

GENERAL OBJECTIVES:

- 1. Adoption of the document by the competent authorities of Bosnia and Herzegovina by the end of 2007, as a basis for the educational reform in Bosnia and Herzegovina from 2007 to 2015;*

2. *Designing educational development plans at all levels of decision-making, based on this document, economic development projections and the anticipated employment levels, and their implementation, by 2015;*
3. *Drafting a plan of an optimal network of the upbringing-educational institutions by the competent BiH authorities, by the end of 2009;*
4. *Improvement of education system computerization process, by 2010:*
 - *all primary and secondary schools have at least one ICT classroom and free Internet access;*
 - *utilization of ICT in administration and realization of higher education*
 - *establishing electronic data base of education inspection,*
 - *functional redesigning and harmonization of EMIS at the BiH level, in accordance with EUROSTAT indicators.*
5. *Ensuring equity of access and participation in education process, by 2010 at the latest; (in accordance with the Action Plans of the competent educational authorities):*
 - *removing unsuitable names of the upbringing-educational institutions;*
 - *elimination of the phenomena of "two schools under one roof";*
 - *consistent implementation of common core curriculum content in curricula;*
 - *elimination of disputable content from some history, geography and mother tongue textbooks;*
 - *ensuring conditions for all children in BiH to be included in the education system;*
 - *implementation of the adopted documents on the educational needs of children returnees, Roma children and members of other national minorities;*
 - *ensuring conditions for the work with children with special needs;*
 - *elimination of three-shift working pattern in the upbringing-educational institutions;*
 - *increase in the employability of teacher returnees, etc.*
6. *Development of varied evaluation systems (internal, integral and external evaluations), by 2010:*
 - *introducing internal evaluation practice in the upbringing-educational institutions, (by the end of 2008);*
 - *implementation of the external evaluation and assessment in primary and secondary education (by 2012)*
 - *inclusion in the international evaluation programs, initiated in 2007;*
 - *strengthening the role of educational inspection in the integral evaluation of the upbringing-educational institutions (by 2012).*
7. *Harmonization of textbook policy, by 2010*
8. *Integration of the BiH education in the EU Education Area, by 2015.*

5.1. Preschool upbringing and education

Given that an early start of the systemic upbringing and education is the key factor of an individual's development and care of society, it is essential to carry out rapid revitalization and development of this segment of the education system, which, first of all, implies an increase in preschool education and upbringing enrollment rates and modernization of the early childhood education and upbringing program.

The objective of preschool education and upbringing, as an integral part of the overall education and upbringing system in Bosnia and Herzegovina, is to ensure optimal and equal conditions for every child to develop his/her intellectual and physical potential in the course of the early childhood period.

In accordance with the BiH Education Strategic Development Directions, it is necessary to:

- Ensure staff related, spatial and material conditions for including children in all preschool upbringing and education programs, and obligatorily in a pre-primary school preparatory program.
- Modernize and implement continuous professional development of preschool educators;
- Special attention should be paid to greater inclusion of children with socially and economically disadvantaged background, as well as children with special needs.
- Ensure the key role of municipality in technical organization of the preschool upbringing and education;
- Establish links between preschool institution and primary school;

Short term objectives:

1. *Implementation process of the Framework Law on Preschool Upbringing and Education in Bosnia and Herzegovina is under way;*
2. *Preschool upbringing and education enlargement plan designed;*

Medium term objectives:

1. *Common core curricula developed for preprimary upbringing and education program;*
2. *Enrolment rates of preschool programs increased to 20%, and the number of the enrolled in preparatory programs increased to 40%;*

Long term objectives

1. *Number of the enrolled children in preschool programs increased to 50% and the number of children enrolled in preparatory classes to 100%;*
2. *All preschool institution principals have completed minimum training/qualification for managing the upbringing-educational institutions.*

5.2. Compulsory education

Significant progress has been made in the primary educational reform process: curricula are being relieved of unnecessary content, child-centered teaching methodology is implemented, cooperation between schools and local community is getting stronger, etc.

The aim is further modernization and quality improvement in primary education, which will enable optimal development of any individual, completion of compulsory nine-year education and continuation of schooling.

Short term objectives:

- *Evaluation of the implementation of nine-year compulsory education and Framework Curriculum implemented;*
- *Action Plan for reducing of the drop out rate designed;*
- *External evaluation in all primary schools introduced.*

Medium term objectives

- *Compulsory nine-year education implemented in all parts of Bosnia and Herzegovina;*
- *Curricula for all grades/subjects of the nine-year compulsory education developed;*
- *Pedagogical standards and norms adopted;*
- *Drop-out rate reduced to 7,5%;*

Long term objectives:

- *Enrollment and completion rates in compulsory education increased to 100%;*

- *All lower primary grades pupils study one foreign language starting not before the 3rd grade and another one in the higher grades but not before the 7th grade of primary school;*
- *All primary school principals have completed minimum training level for managing the upbringing-educational institutions.*

5.3. Education of children and youth with special needs

Education of children with special needs is carried out in accordance with the framework education laws in Bosnia and Herzegovina, taking into account the education inclusion principles.

5.3.1. Education of children with difficulties

Depending on a categorization degree, children and youth with development and learning difficulties are educated in mainstream preschool institutions and schools, in special upbringing/educational and rehabilitation centers with an extended specialist treatment or in child tailored and available hospital wards, at home, etc. Inclusion in the mainstream schools may be partial or complete.

Short-term objectives:

- *The agreement on common principles and criteria for establishing of and financing special upbringing-educational institutions reached;*
- *Adequate system of recognition and identification of children with special needs established with the view of ensuring a consistent implementation of contemporary education principles for such children (inclusion, exclusion, combined approach);*
- *Adequate support ensured for teachers and parents for the work with children with special needs (establishment of adequate centers, mobile expert teams and the like);*
- *Framework program content developed in accordance with special needs of children and, based on them, extended specialist treatment programs, occupational work programs, as well as individually tailored program contents.*

Medium-term objectives:

- *Additional legal, pedagogical and other acts, necessary for the full implementation of the right to education of children and youth with special needs, adopted;*
- *Training programs for teachers and preschool educators within the framework of their initial education and permanent professional development developed;*
- *Free architectural access for children with disabilities to the upbringing-education institutions ensured;*
- *Programs intended for inclusion of parents and volunteers in the activities with children with special needs developed.*

Long-term objectives:

- *All teachers completed the training in individualization and inclusion in education;*
- *Permanent education of children and youth with developmental difficulties enabled.*

5.3.2. Support to the development of gifted children and talented youth

In the context of their respective educational needs and development, we do not think as much as is necessary about the gifted and talented. The lack of interest in the exceptionally competent and creative young people is likely one of the frequent reasons for leaving the country.

Starting from the fact that every child has the right to education in accordance with his/her potentials and that the gifted and talented children and youth are the crucial factor of reconstruction and development of our country, it is necessary to establish and develop a systemic care for them, within the framework of regular teaching process, extracurricular and out-of-school activities as well as in the course of their professional and scientific career.

Short-term objectives:

- *Public tender for school-level projects supporting the development of gifted children and talented youth announced;*

Medium term objectives:

- *Teacher and preschool educator training programs designed for the work with gifted and talented children and youth within the framework of the initial education and permanent professional development of teachers;*
- *Support provided to the establishment of centers for professional support to gifted children, their parents and teachers;*
- *Support provided to the development of framework and individually tailored programs for the work with gifted and talented children and youth;*
- *Fellowships secured for education of young talented people, as well as financial support for participation in relevant development programs and activities.*

Long-term objectives:

- *Conditions ensured for inclusion into relevant international programs/projects;*
- *Research centers/networks of centers for support to the development of gifted children and talented youth established.*

5.4. Secondary education

Secondary education system includes programs of secondary grammar schools (gymnasia), art and religious schools, four-year vocational schools (technical, medical, etc.), three-year vocational schools as well as adult education and training programs.

Changes in regional demographic developments and the economic and social requirements impose the need of establishing the most cost-effective school networks.

Short-term objectives:

- *General secondary (gymnasium) education enrolment plan designed for 3- and 4-year vocational schools, by the beginning of 2008/2009 and for each subsequent year, on the basis offered development strategic documents, data provided by the Employment Agency and HE enrolment plans.*

Medium-term objectives:

- *Enrolment rate in secondary education increased to 85%;*
- *Enrolment rate in general secondary education increased from the present 20% to 30%;*
- *Share of the 4-year vocational education increased from the present 30% to 40%;*

Long-term objectives:

- *Enrolment rate in secondary education increased to 90%;*
- *Enrolment share in gymnasia and four-year vocational schools increased to 80%;*
- *Possibilities for students to enroll from 3-year to 4-year secondary school ensured;*
- *All secondary school principals have completed a minimum qualification level for managing the upbringing-educational institution.*
- *Externally evaluated Matura exam introduced at the end of 4-year secondary education.*

5.4.1. General secondary education schools

In the existing grammar schools (gymnasia), students gain very broad general-education knowledge in general-, language- and science- oriented programs. Experiences show that type of school is an excellent foundation for raising the general education level of population, for continuation of education at higher education institutions or inclusion in qualification programs.

With the view of improving quality and functionality of knowledge acquired in gymnasia, it is necessary to modernize learning content and approach, to offer a wider scope of programs and other types of general education schools, (sports, technical, arts gymnasia, etc.).

Short-term objectives:

- *A draft plan for reform of general secondary schools designed.*

Medium-term objectives:

- *New framework curricula including optional subjects developed.*

5.4.2. Vocational schools

Although the process of vocational education and training reform has been implemented in BiH since 1998, the first steps have just been taken with respect to modernization of curricula and rationalization of the number of vocations. The fragmentation of professional profiles and vocations is the reason behind the fact that this type of education is more expensive than the general secondary education. On the other hand, students who graduate from these schools do not acquire general education and are not prepared to deal with labor market challenges, not only in BiH but regionally and internationally.

Since vocational education and training is the key generator of economic and social recovery and further development of BiH and its integration in EU and global processes, the process of vocational education and training reform is going on.⁷

The aim of the vocational education and training is to ensure a capable working force and support to innovations in production.

The focus is on the following:⁸

- Transformation of vocational education with the aim of making it less specialized and more adjustable to the needs of students and labor market;
- Qualifications and programs, modifications in curricula, and modernization of school workshops;
- Permanent modernization of vocational education and training content and methods;
- Improvement of quality and efficiency in using resources;
- Ensuring education continuation opportunities following the completion of vocational schools;
- Development of normative framework, planning and management.

Short-term objectives:

- *Framework Law on Vocational Education and Training in Bosnia and Herzegovina adopted;*
- *A body for coordination and development of the BiH Qualification Framework established;*

Medium-term objectives:

- *State-level agreement between the main stakeholders concluded regarding the procedures for defining standards and vocations, curriculum development and development of competence based qualifications;*
- *Curricula developed according to the modular methodology for all the remaining vocations from the new Vocation Classification;*

⁷ In line with the BiH Vocational Education and Training Development Strategy, 2007-2013, EU VET II Project.

⁸ Activities pertaining to commencement of implementation of new EU VET III Project are under way.

- *Pilot project designed and implemented for external evaluation and assessment in final grades of VET schools, for five vocation clusters;*
- *Forming of virtual and real companies initiated in all secondary vocational schools;*
- *Forming of career development centers initiated in all vocational schools in Bosnia and Herzegovina, in function of professional orientation of primary school pupils.*

Long-term objectives:

- *Framework for quality assurance in vocational education and training developed;*
- *Lifelong Qualification Framework developed reflecting the European Qualification Framework principles;*
- *Vocational schools' network rationalized;*
- *Links between vocational education and the sphere of labor established.*

5.5. Higher education

5.5.1. Universities and advanced schools

Higher education development objectives are:

1. Functional integration of university;
2. Establishment and development of a monitoring and quality assurance system in higher education;
3. Tighter links between higher education and scientific-research activity;
4. Mobility of students and teaching staff;
5. Introducing Diploma Supplement;
6. Improvement of students' standard.

In accordance with the Bologna Process, Lisbon Convention and other relevant international documents in the field of higher education:

1. a system of easily recognizable and comparable academic and vocational degrees will be developed, as well as the diploma supplement, for the purpose of faster and easier employment and international recognition, as well as recognition of earlier learning for the access to and ECTS credits for support to the lifelong learning;
2. a single three-cycle study system will be developed at universities with the aim of gaining appropriate academic vocations, and the first study cycle at the advanced schools for the purpose of gaining the appropriate professional vocations;
3. a monitoring and quality assurance system will be established and developed and support will be provided to encourage cooperation with European countries in that particular field;
4. a state-wide Higher Education Qualification Framework will be passed;
5. functional integration of HE institutions will be carried out through the strengthening staff and information infrastructure;
6. introduction of ECTS will be finalized as the key instrument of mobility and comparability in Higher Education;
7. utilization of modern technologies in Higher Education will be developed.

It is necessary that universities pass their respective development strategies that will, taking into consideration the above listed issues, place the focus on:

- curricula modernization and introduction of new teaching methods and forms of work;
- provision of modern infrastructure and equipment;
- encouraging graduation in the study time limit;
- connection between teaching and scientific-research work at all levels of education;
- permanent renewal and rejuvenation of the teaching/scientific staff;
- making student outcomes assessment more objective;
- an increase in the number of highly educated citizens in BiH; and

- harmonization of enrolment policy with the labor market demands.

Short-term objectives:

- *Implementation of the BiH Higher Education Framework Law under way;*
- *Study on the reasons behind the high drop-out low graduation rates in HE drafted;*
- *Diploma Supplement designed and compulsory;*
- *MA study established in accordance with the Bologna Process;*
- *R&D institutional network (Institutional Contact Points) developed in all HE institutions;*

Medium-term objectives:

- *The Agency for Development of Higher Education and Quality Assurance established as well as the HE quality assurance system;*
- *Qualification Information and Recognition Center established as well as the foreign HE diploma recognition system;*
- *Functional integration of university implemented;*
- *External evaluation of quality of higher education programs and institutions implemented;*
- *Modularization of study and teaching programs implemented;*
- *Lisbon Convention implemented on the whole;*
- *Doctoral study established*

Long-term objectives:

- *The process of including BiH Higher Education in the European Higher Education and Research Area completed, with efficient enrolment and graduation rates and sufficient funding for research and international educational and scientific cooperation and exchange;*
- *Enrollment rate increased to 32%;*

5.5.2. Development of education and professional development of educators and teachers

Education and continuous professional development of teachers and preschool educators are the key factor of quality education. By a combination of circumstances this important sector of education system remained almost neglected by reform processes, especially in the domain of initial education and training. Therefore, it is necessary to develop a strategy of teaching staff education and professional development, which be based on the international standard and in line with the Bologna Process and the lifelong learning principles.

Short-term objectives:

- *Analysis of the state of level and type of education and qualifications and professional development of teachers and other staff members carried out;*
- *Development of a strategy of education and professional development of teaching staff⁹ commenced;*
- *Modernization of the initial education and training of teachers and educators is under way;*
- *MA study established in accordance with the Bologna Process.*

Medium-term objectives:

- *The strategy of education and professional development of teaching staff adopted;*
- *Teacher training market liberalized and the conditions and standards for accreditation of service providers established*

⁹ In 2004, the OSCE/UNICEF Working Group worked on the preparation of the starting document for the strategy and operational plan of professional training and development of teachers.

- *Special study program developed for training of professional subject teachers in secondary schools;*
- *A plan of additional training of teachers who graduated from two-year study programs adopted;*
- *Doctoral study established.*

Long-term objectives:

- *Postgraduate study programs for broader education needs designed;*
- *Training centers established within the teacher education faculties;*
- *Licenses for teacher profession introduced and reissued.*

5.6. Adult education and training

There is a great deal of fragmentation in the adult education structure with only few institutions dealing with professional development and lifelong learning.

As the adult education and training, in the context of lifelong learning, contributes to the socio-economic revitalization, better employment opportunities and competitiveness in the knowledge market, as well as to the increased mobility and professional flexibility of individuals, a systemic approach to its development is a necessity.

Therefore, the adult education and training is becoming an integral part of the education system, based on the principles of openness and equitable access.

The system management and guidance in the adult education will be equally available at all levels, in all fields, and all areas in the country. Criteria and standards will be developed at the state level. The reduction of the illiteracy rate and expansion of secondary education of the adults will be in the focus. Priority groups are: the adults without primary or secondary education, the adults with secondary education that does not fit the labor market needs, persons with special needs, returnees as well as those wishing to advance in their work and profession and to improve their entrepreneurial and management skills. It is necessary urgently to initiate the development of the qualification framework that will be comparable to the European Qualification Framework.

Given the scope of the needs, the existence of various educational institutions and education service providers is necessary including private initiative and diversity of programs.

Short-term objectives:

- *Register of the existing adult education and training institutions/providers established;*

Medium-term objectives:

- *The Framework Law on the Adult Education in Bosnia and Herzegovina adopted;*
- *Standards and procedures for certification of the adult education and training institutions developed;*
- *Models of the adult education and training and evaluation of the offered programs developed;*
- *The BiH Adult Literacy Strategy adopted*

Long-term objectives:

- *Qualification framework for the adult education developed;*
- *Network of the adult education, information and counseling institutions and centers established;*
- *Illiteracy rate reduced from the current 5 % to 2 %;*

5.7. Development of educational management, governance and guidance. Development of institutional structure of educational management and coordination

Educational management

Short-term objective:

- *The BiH Strategy of Education Management Development adopted*

Conference of Education Ministers of BiH

Short-term objectives:

- *The Conference of Education Ministers in Bosnia and Herzegovina established and functional;*

BiH Education Councils

Short-term objective:

- *The BiH General Education Council established and functional;*

Medium-term objectives:

- *Council for Vocational Education and Training in Bosnia and Herzegovina established and functional;*
- *Permanent advisory body in the field of higher education in Bosnia and Herzegovina established and functional.*

The BiH Rectors' Conference

Short-term objective:

- *The BiH Rectors' Conference established and functional.*

Ministry of Civil Affairs – Education Sector

Short-term objectives:

- *Functions of the Education Sector specified and described in a clear fashion;*
- *Normative acts on the internal organization and systematization of jobs and tasks in the Sector innovated;*
- *Plan to engage new staff members adopted;*
- *Administrative procedures adopted for cooperation and coordination between MoCA SE, all BiH educational authorities and other relevant bodies and institutions in the field of education, as well as the procedures for coordination and cooperation at the international level;*
- *Means and protocols of reporting and reporting lines across all levels of education system defined;*
- *Guidelines for data collecting in line with EUROSTAT defined;*
- *Procedures for the provision of expert, administrative-technical and other support to the work of the BiH Conference of Education Ministers, Education Councils and other bodies established at the level of Bosnia and Herzegovina defined.*

Medium-term objectives:

1. *Number of staff in MoCA Sector for Education increased;*
2. *All functions necessary for coordination of education system in Bosnia and Herzegovina and monitoring the implementation of the strategic education development document, 2008-2015, established;*
3. *All functions necessary for EU integration and international cooperation of Bosnia and Herzegovina established;*
4. *Functions for Sector's cooperation with other government and non-governmental organizations and for cooperation at the regional and broader international level established.*

Ministry of Education and Culture of Republika Srpska
Ministry of Education and Science of the Federation of Bosnia and Herzegovina
Cantonal Ministries of Education
Department for Education of Brcko District of BiH

Short-term objectives:

- *Structure, functions and reporting lines within the competent Ministries redefined;*
- *Roles, tasks and activities related to cooperation with the Sector for Education in MoCA, mutual cooperation and coordination, cooperation with agencies and other expert institutions and bodies in the field of education, defined;*

Medium-term objectives:

- *Action Plans for institutional development of education ministries and the Department for Education of BD BiH, adopted;*
- *Education development plans of the RS, cantons and BD BiH adopted in line with the document on the strategic directions of education development in Bosnia and Herzegovina, 2008-2015.*

5.8. Development of institutional structure of education assessment and control and professional support to the development of educational institutions

Short-term objectives:

- *Agency for Pre-primary, Primary and Secondary Education adopted;*
- *Action Plan for reconstruction of the existing Pedagogical Institutes adopted;*
- *Action Plan for transformation of education inspection service adopted.*

Medium-term objectives:

- *Network of institutions cooperating with the Agency for Preprimary, Primary and Secondary Education established;*
- *Agency for Higher Education Development and Quality assurance established;*
- *Qualification Information and Recognition Center established and functional.*

Long-term Objectives:

- *Full organizational and functional structure of the Agency for Preprimary, Primary and Secondary Education developed;*
- *Process of restructuring Pedagogical Institutes implemented;;*

- *Full organizational and functional structure of the Recognition and Information Center developed;*
- *Education inspection transformation process implemented.*

5.9. Education research and development

Short-term objectives:

- *BiH education sector included in the international projects/programs aimed toward education research and development.*

Medium-term objectives:

- *Funding/budget lines for education research and development established.*

Long-term objective:

- *Education research and development centers/institutes established in cooperation with the science sector.*

5.10. Development of education statistics

Short-term objectives:

- *Adequate BiH education statistics established through utilization of the official statistical data of the RS, FBiH and BD BiH.*
- *The existing EMIS data base updated and included into the data collecting system at relevant levels.*

Medium-term objectives:

- *Benchmarking of the education statistical data and indicators at the levels of BiH, entities, cantons and BD BiH made in accordance with the EU indicators and the needs of education development planning needs at all levels;*
- *Procedures and content of the official educational statistics developed, with the view of following-up the ISCED and EUROSTAT requirements*

5.11. Financing education

Short-term objectives:

- *System of collecting information related to financing of education at the municipality, canton, entity and state level established;*
- *Analysis of financing education in BiH carried out;*
- *Education financing standards and criteria adopted;*
- *Financial analyses of all forthcoming interventions in education made as well as a review of possible additional sources of financing;*
- *Detailed documents on decentralization in financing education designed.*

Medium-term objectives:

- *Financial decentralization process in education implemented through the transfer of competencies for school-building maintenance to municipality level;*
- *Medium-term education financing plans adopted;*
- *Education financing requirements included into medium-term fiscal strategies in BiH;*
- *Collective contracts in education sector revised and signed;;*
- *Investment in education increased.*

Long-term objectives:

- *Education financing decentralization process implemented;*
- *Education financing requirements included in the long-term fiscal strategies of BiH;*
- *Further investments in education increased.*

5.12. Education legislation

Short-term objectives (in accordance with the list of obligations specified by the document European Partnership with BiH)

- *Framework Law on Secondary Vocational Education and Training in BiH adopted;*

Other short-term objectives:

- *Process of implementing the education framework and other laws adopted at the BiH level under way;*
- *Amendments to the Framework Law on Primary and Secondary Education in BiH adopted;*
- *Education legislation harmonized with the provisions of the education framework laws;*
- *Normative acts on the establishment and functioning of the Conference of Ministers of Education in BiH adopted;*
- *Normative acts for the establishment and functioning of the BiH General Education Council adopted;*
- *Normative acts for the establishment and functioning of the network of institutions for the implementation, monitoring and development of standards in education adopted;*

Medium-term objectives:

- *Framework Law of the Adult Education in BiH adopted;*
- *Laws on pupils and students' standard adopted;*
- *Harmonization of legislation in the field of textbook policy carried out;*
- *Education inspection regulations innovated and harmonized;*
- *All bylaws, at all levels of education, adopted;*
- *Normative acts for the establishment and functioning of other education advisory bodies/councils in Bosnia and Herzegovina adopted;*
- *Normative acts on the establishment of appropriate structures for participation of BiH in Community Programs adopted;*
- *Legal and other acts for the institutional strengthening of the existing professional and other services for support to education system adopted;*
- *Normative acts on the organization and work of Education Ministries at all levels, innovated.*

Long-term objective:

- *Education legislation in Bosnia and Herzegovina harmonized with the EU directives and regulations related to the establishment of European Education Area.*

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ANNEXES

Annex 1: Natural movement of population in BiH, 1997 – 2005

	Number of inhabitants in mid year poeriod in 000	Live births	The deceased	Natural increase	Rates on 1 000 inhabitants		
					Live births	The deceased	Natural increase
1997.	3738	48397	27875	20522	12,9	7,5	5,5
1998.	3653	45007	28679	16328	12,3	7,9	4,5
1999.	3725	42464	28637	13827	11,4	7,7	3,7
2000.	3781	39563	30482	9081	10,5	8,1	2,4
2001.	3798	37717	30325	7392	9,9	8,0	1,9
2002.	3828	35587	30155	5432	9,3	7,9	1,4
2003.	3832	35234	31757	3477	9,2	8,3	0,9
2004.	3842	35151	32616	2535	9,1	8,5	0,7
2005.	3843	34627	34402	225	9,0	9,0	0,1

Source: BiH Agency for Statistics

Annex 2 *

EDUCATION STATISTICAL DATA, SCHOOL YEARS: 2004/05 AND 2005/06 FOR B&H

a) Data relevant for education sector

INDIKATOR	2004		2005	
	total	female	total	female
Number of inhabitants (in 000):	3 842	-	3 843	-
Number of new born children	35 151	17 018	34 627	16 830
Total number expenditures in education (in 000 KM)	778 537		832 608	
Share of expenditure in budget	-		-	
Share of total public educational expenditures in GDP	5,30%		5,30%	
Number of inhabitants with in % (HBS 2004)			-	-
▪ Primary education only	34,9	-	-	-
▪ Secondary education	49,7	-	-	-
▪ Post-secondary	5,1	-	-	-
▪ Higher education	4,3	-	-	-
Total number of the illiterate	-	-	-	-
Total number of the unemploye	472 972	218 330	508 479	236 033
Number of the unemployed with:				
▪ Un-Semiskilled	178 135	86 213	187 455	87 841
▪ Highly skilled and skilled	178 502	62 412	192 217	70 288
▪ Secondary	103 452	62 629	113 062	69 167
▪ Higher	6 521	3 676	7 312	4 241
▪ University	6 362	3 400	8 433	4 496

b) According to levels of education:

1. PRESCHOOL UPBRINGING AND EDUCATION

	Total number of preschool institutions	Number of private institutions	Total number of children	Girls	Total number of preschool teachers	Female teachers	Number of children with special needs	Girls	Total of em
05	193	19	12 918	6 100	1 013	973	-	-	2 171
06	196	18	12 937	6 031	996	941	-	-	2 155

Enrollment percentage of 6-year olds in 2004/05 %
percentage of 6-year olds in 2005/06 %

Enrollment

2. PRIMARY EDUCATION

Total number of school	Number of central schools	Number of branch schools	Total number of pupils	Girls	Total number of pupils repeating a grade	Girls	Total number of pupils enrolled in grade 1	Total number of pupils who completed primary school	Total number of teachers	Female teachers	Pupil-teacher ratio
1885	580	1305	380669	184859	-	-	-	46 291	22 130	14 516	17
1888	582	1306	375690	182812	1 283	327	41 182	-	22393	14 867	17

	2004/05	2005/06
primary education public expenditures (for 2004. calendar year) – in ooo	371 915	-
of total budget of RS/FBiH/Brčko	-	-
of the expenditures in GDP in%	2,5	-
number of schools implementing nine –year compulsory upbringing and education curricula	-	-
primary school net enrollment rate (for year 2006.)		97,3
number of Roma children attending primary school	-	-
number of children with special needs, included in mainstream education	-	-
number of schools operating in three shifts	-	-
number of private primary schools (date only for FB&H)	12	12
number of teachers without adequate qualification in 2005/2006 :in primary school (nastavnik razredne nastave)	-	-
subjects Math....English.....Inormatics....)		

2.1 PRIMARY EDUCATION - CHILDREN WITH SPECIAL NEEDS/ SPECIAL SCHOOLS AND CENTRES

	Total number of school	Total number of pupils	Girls	Total number of pupils enrolled in grade 1	Girls	Total number of pupils who completed primary school	Girls	Total number of teaching staff	Female teachers	Total numbers of employ
2004/2005	66	1362	557	-	-	194	76	308	237	-

2005/2006	62	1249	489	131	43	-	-	311	230	-
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3. SECONDARY EDUCATION

SCHOOL, 2004/05	Number of schools	Total number of pupils	Girls	Total number of pupils enrolled in grade 1	Girls	Total number of pupils who repeat a grade	Girls	Total number of pupils who completed secondary school	Girls	Total number of teachers	Fe te
Grammar school	-	38 338	24 534	-	-	-	-	9 192	5 882	-	-
Art school	-	1 461	847	-	-	-	-	330	183	-	-
Religious school	-	1 666	635	-	-	-	-	349	122	-	-
Tehnickal and related	-	76796	39679	-	-	-	-	18 995	9 896	-	-
Vocational school	-	46 577	16 400	-	-	-	-	15 828	5 681	-	-

SECONDARY EDUCATION

SCHOOL, 2005/06	Number of schools	Total number of pupols	Girls	Total number of pupils enrolled in grade I	Girls	Total number of pupils who repeat a grade	Girls	Total number of pupils who completed secondary school	Girls	Total number of teachers	Fe te
Grammar school	-	39 148	25 042	10602	6727	.	.	.	.	.	.
Art school	-	1 463	848	383	200	-	-	-	-	-	-
Religious school	-	1 774	735	527	241	.	.	.	.	.	.
Tehnickal and related	-	78447	40185	20284	10183	-	-	-	-	-	-
Vocational school	-	44 360	15 315	15351	5049	-	-	-	-	-	-

	2004/05	2
Total secondary public expenditures (for 2004. calendar year) – in ooo	190 942	-
Share of budget	-	-
Share of the expenditures in GDP in%	1,3	-
Secondary school net enrolment rate (for year 2006.) in %		7
Share of gymnasium education in%	22,9	2
Share of 3 years vocational education in%	28,6	2
Share of 4 years vocational education in%	45,9	4
Secondary school net completion rate in%	-	-

Number of Roma pupils in secondary education	-	-
Number of children with special needs including mainstream secondary schools	-	-
Number of special secondary schools/centres	-	-
Number of vocational schools implementing modular curricula	-	-
Number of private secondary schools (date only for FB&H)	14	:
Number of teachers without adequate qualification level	-	-

4. HIGHER EDUCATION

	Number of university	Number of post-secondary schools	Number of faculties	Number of art academies	Numbers of religious HE institutions	Total number of students	Female	Number of students in the 1st year of study	Female	Number of students who graduated from HE
2004/2005	9	9	94	8	4	83 362	46 297	34 014	17 659	6 837 ¹⁾
2005/2006	13	12	115	8	4	89 905	34 281 ⁴⁾	35 394	12 238 ⁵⁾	8 127 ⁶⁾

1) Data relate to the calendar year 2004.

2) Data not available for RS

3) Data not available for RS

4) Data not available for RS

5) Data not available for RS

6) Data refers to calendar Year 2005.

7) Data not available for RS

8) Data not available for RS

	2004/05	2005/06
Total public expenditures (for 2004. calendar year) – in ooo	115 171	-
Share of RS/ FBiH/ Brcko budget	-	-
Public expenditures share in GDP in %	0,8	-
Number of private universities	3	7
Number of enrollment (new students)	-	-

- In public higher education institutions	-	-
- In private higher education institutions	-	-
Total number of students	83 362	89 905

Financial Implications and Prospects of BiH Strategy for Education 2015

This document is prepared by Mr. *Kari Pitkanen*, Team Leader of EU-ICBE project

Executive summary

The main obstacle in preparations of financial projections for BiH education is the lack of census. There are not reliable statistical data on the development of number of school aged children and youngsters. Some basis exists in statistics of birth rates from 1996 to 2005. This study is based on the available data on number of enrolment of students and number of students at different levels of education, data on education expenditure and education development objectives of the draft strategy for BiH education. Moreover, a lot of assumptions had to be made to produce estimations and frameworks of the future development of education and its financing in BiH. The assumptions are presented in the texts below.

According to the main conclusions based data from 2005 and 2006, the class sizes in primary and secondary education are in international comparison reasonable from efficiency point of view. However, in higher education the student teacher ratio is extremely low. The share of salaries of all expenditure is high, 80 %, giving very limited room for activities to raise the quality of teaching and learning. The data on the share of education expenditure to gross domestic product (GDP) are diverse. Even so, it could be concluded that the public funding of education is at relative international level, or, slightly higher than in comparable countries.

The challenge for the ministries of education in BiH origin from the sharply decreasing number of children and youngsters in school age. According to the available data, primary school enrolment is decreasing from 2005 to 2010 by 22 %, number of youngsters coming to secondary school age by 30 % and in higher education age 33 % by 2010 and by 40 % by 2020.

In the light of the above development, alternative assumptions and estimations are made on its financial impacts. The first assumption is that enrolment rates in all levels of education would be kept at 2005 level. According to

second assumption, other factors affecting education expenditure would remain unchanged. The impact of three alternatives was calculated: 1) the class sizes and student teacher ratios decrease in the same pace as number of students; 2) they decrease somewhat less than number of students; 3) the class sizes are kept approximately at 2005 level. The results of the calculations indicate that in 1) alternative the education expenditure would decrease from the level of 800 million KM by 39 million KM by 2015, in 2) alternative by 76 million KM and in 3) alternative by 152 million KM.

The second phase of this exercise was to make calculations on what would be the expenditure level if the objectives to increase the enrolment would be implemented following the objectives presented in the document "Directions for Strategic Development of Education in BiH with the Implementation Plan". As the result, it is calculated that the number of pupils in pre-primary education would increase by 4 000 children, in primary education, because of finalisation on 9-years education, by 7 000 pupils, in secondary education by 17 000 students and in higher education by 4 000 students. The result of the calculation is that the education expenditure would approximately stay at 2005 level even if the enrolment in relation to age cohorts is increased according to the draft strategy. The reason for this is that the enrolment and number of students would decrease heavily if the rates of enrolment would be kept like they are now.

It is assumed that the average annual growth in BiH GDP would be 3 % until 2015. If the share of education would be kept at present level, the GDP growth would gain 25 million KM additional allocation to education annually in 2008 – 2010 and 30 million annually in 2011 – 2015. So, the education budget would increase 75 million KM from 2008 to 2010 and 185 million KM to 2015. In the end of this document is an approach to how this additional funding could be used to enhance the quality and infrastructure of BiH education. In the final chapter are some references to how active education policy could facilitate the favourable development of BiH education and its funding.

This analysis is focused in education expenditure in BiH. For the moment, it is only possible to analyse and project economy of education at the state level because of lack of any basic data from the RS, cantons and BD. But it is expected that this exercise, supported by the templates produced by EU-ICBE project, will continue in all education ministries in BiH. Quality and results of education are not dealt in this study. Only in the last chapter some references are made to that most important issue.

1. Main factors affecting education expenditure

The equation in its basics is simple. First factor is the number of children and youngster in school age. The second one is participation in education. And third is duration of studies. Fourth factor is the class sizes (students/teacher ratios). And fifth is relative salary level of teachers and the money used in education for other expenditure than teachers' salaries.

If education policy could be exercised only by mathematical equations it would be easy. Optimal results could be reached without any inconveniences. But in real life, education development, finding and implementing optimal solutions are at all levels troublesome and laborious political and administrative processes. There is an evident reason for that. It is an issue of the future and success of the most valuable assets of nations and families, children and youngsters.

Even if the institutional structure, functioning and economy of the education sector can not be mastered mechanically, a framework is needed for trying to find feasible solutions in varying circumstances.

2. International benchmarking

The only way to evaluate the education system in macro terms is to use international statistics and studies on education. This kind of benchmarking of education systems is increasing.

A well-known obstacle to compare BiH education to education in other countries as well as to make analysis and estimates in the country is lack and unreliability of statistics of education and demography. This obstruction prevails throughout this study. The basic sources of data in this study are following:

1. Thematic Bulletin on Demography, Agency for Statistics of BiH, 2006;
2. World Bank Country Review on BiH; and
3. BiH education statistics 2004/2005 – 2005/2006 produced by EU-ICBE experts.

2.1. Some indicators on BiH education

To catch some of the most important indicators listed in the introduction, it is necessary to indicate the differences between the World Bank and EU-ICBE figures.

Table 1. Some indicators on economy of BiH education in 2005

	World Bank	EU-ICBE
Student/Teacher ratios		
• Primary education	18	17
• Secondary education	16	
• Higher education	9	8
Enrolment		
• Primary education	93	97
• Secondary education	73	75
• Higher education	24	-
Number of pupils/students		
• Primary education		376 000
• Secondary education		165 000
• Higher education (FBiH)		90 000
Per capita expenditure		
• Primary education KM		980
• Secondary education		1 160
• Higher education		1 380
Education spending in percent of GDP	4,3	5,3
Salaries in percent of education spending	80	-

2.2. International benchmarking and conclusions

We can come from two angles to the conclusions that *spending in education* in BiH in relation to GDP is at reasonable level. First, in some new EU member countries the GDP share of education is approximately at 5 percent level (e.g. Slovenia 5,1 %. Second, the World Bank (WB) conclusion in the above mentioned review comes to the same conclusion.

Moreover, *the class sizes* in primary and secondary education seem to follow the international averages. In secondary education, they are considerably higher than the European average figure. If we consider the low share of general secondary education (25 % of secondary total) with higher class sizes compared to vocational education, it becomes more evident that the student/teacher ratio in BiH is relatively high in secondary education. *The student/teacher ratio* in higher education is extremely low, 8 (this figure is only from FBiH), compared to OECD average, 15, or to any other country. And when we consider that the number of assistant and auxiliary staff in higher education is even higher than number of

teachers, the ratios appear alarming. Moreover, the graduation rate in universities is extremely low and indicates poor efficiency. Even if the figures from higher education are most obscure, in international benchmarking the student teacher ratio is markedly low.

Ca. 80 % of all expenditure in education are salaries while the share of salaries in countries with more advanced education systems vary from 60 – 70 %.

The situation in RS, cantons and BD varies in the light of the above indicators. Even so, the following conclusions are most relevant while considering the implementation and financing of the quantitative objectives of the "Directions for Strategic Development of BiH Education":

1. *There would not be a need to increase spending in education in relation to GDP.* But depending on the rate of increase of GDP, it can be estimated that the growth of the economy would offer an annual increase of 3 % in financing education. The annual increase in funding education quality and investment would rate from 25 million KM in 2008 – 2012 and 30 million KM in 2012 – 2015. Assuming that the public spending in education in 2007 is 850 million KM (800 in 2005), the GDP growth will increase allocations in education to 925 million KM in 2010 and to 1 070 million KM in 2015. This would mean 9 % increase by 2010 and a 19 % increase by 2015.
2. *There is not need to change, decrease or increase the average class sizes (student/teacher ratios) in primary and secondary education.* But the challenge is how to keep the level in the conditions of decreasing number of children and youngsters in school age (age cohorts). This will be dealt below.
3. *It seems evident that in higher education the numbers of teaching and other staff exceeds significantly international standards and the capacities of BiH economy.* Again, the situation will be dramatically deteriorated in the coming years if nothing is done due to sharply decreasing age cohorts of 19 – 21 year olds.
4. *The share of salaries in education spending is too high.* It can be concretely experienced in daily work of schools. There is lack of almost everything that would make the teaching and learning more motivating, attractive and effective, increase the quality of education. Also, a lot of needs for school premises renovation and new building exist. Higher education institutions need more allocations to infrastructure and implementation of research activities which in the longer run are

prerequisites for the favourable development of BiH economy and society.

5. *It is a self-evident fact that the situation inside BiH differ.* In RS, cantons and BD the challenges are different but major part of the above conclusion are valid everywhere in BiH.

3. The impacts of demographic development on education and its funding

3.1. Estimations on the development of age cohorts

Lack of census (population data) is serious obstacle for any planning of public services in BiH. Most difficult it is for education sector because the basis for quantitative planning (school network, enrolment, participation, number of students, needs for teaching staff etc.) can be laid by the basis of age cohort prognosis. The first reliable data on live births is from 1996 with a figure of ca. 47 000 babies. In 1997 the number is slightly increasing to 48 000 but thereafter it is fast and steadily decreasing to 35 000 in 2003.

So, it is possible to estimate from 1996 figures the number of children coming to *primary school age* in 2003 and so on, producing for instance from the number of children born in 2001 the enrolment estimate for 2008 which is 38 000. There are figures of born children until 2005 (35 000) but ever since the figure is unknown. So, in any case, the predictions are uncertain even if they have to be made. Moreover, the impact of migration to BiH should be taken into account, and, even more obviously, the migration inside the country. But this is sophistication which should be elaborated in RS, cantons and BD. It is possible and needed to make estimations on the impact of migration based on occurred trends and presumptions on the future development.

Even more difficult problems are faced when coming to *secondary education*. From the 1995 birth figure it is possible to make a conclusion on the number of youngsters who are leaving primary school in 2010. The statistical experts of EU-ICBE indicated a figure of 51 000 in 2010. From 2011 it is possible to forecast the number of primary school leavers basing on official statistics. It is 47 000 in 2011 from which level it will decrease to 40 000 in 2015 and to 35 000 in 2020.

As regards the age cohort of youngsters in *higher education age*, the rate of uncertainty increases substantially. EU-ICBE statistical experts indicated a figure of 60 000 in 2005 and 40 000 in 2010. For 2015, it is possible to estimate the higher education age cohort on the basis of children born in 1996 and it is 48 000. Thereafter the age cohort will decrease sharply coming to 36 000 in 2020.

On the basis of the existing data, it is feasible to make a macro analysis on what will happen to the number of pupils and students in education system if the enrolment and participation rates stay at the present levels and, most importantly, which kind of challenges and prospect it provides for the development of education system in the light of the above mentioned strategic document.

Table 2. Estimate on the development of age cohorts in BiH coming to the enrolment age to pre-primary, primary, secondary and higher education

Level	2005		2008		2010		2015		2020	
	Number	Number	%	Number	%	Number	%	Number	%	
Pre-primary	35 000	35 000		35 000		35 000		35 000		35 000
Primary	45 000	38 000	-16	35 000	- 8	35 000	-	35 000	-	35 000
Secondary	57 000	56 000	- 2	51 000	- 9	40 000	-22	35 000	-13	
Higher	60 000	46 000	-23	40 000	-13	48 000	+20	36 000	-25	

'According to the age cohort data, the deep decrease in the number of primary education pupils has already occurred and is still going on. In 2007 the enrolment in primary schools would be 40 000. In secondary education the number of youngsters in the enrolment age will from 2008 decrease 29 % by 2015 and 38 % by 2020. The number of youngsters in higher education age is also sharply decreasing from 2005, 23 % by 2008 , and still by 13 % from 2008 to 2010 but will increase 20 % from 2010 to 2015. Thereafter, again the figure would be decreased by one fourth.

3.2. Impacts on funding of education

Now, there is a difficult equation. With a little bit of exaggeration, it can be faced by two ways: 1) like driftwood without anything more than annual routine budget planning and without any aspirations to reallocation of resources for better results of education sector; or 2) by determined education policy with mid- and long-term planning aimed at reallocation of resources to achieve best results. Again, it has to be pointed out that the study is made covering the whole of BiH education system and that the situation differs in RS, cantons and BD. The following is intended to provide a general framework for all ministries in planning education systems.

First, estimation is made on the impact of the changes in age cohorts by making assumptions that the shares of enrolment in relation to age cohorts will stay at 2005 level and that the total number of students will change in the same

pace like the enrolment changes but with a delay. Three alternatives are presented on the financial implications of the decrease in the numbers of pupils and students:

- 1) So called *zero-alternative* in which no active planning and measures are taken to adjust the education system, school network and class sizes according to the decreasing numbers of students. Here only 20 % of the relative decrease in the number of students is reflected to the total expenditure of the education system.
- 2) In *second alternative*, active measures are taken to adjust the education system to the decreasing number of students. In this alternative 40 % of the relative decrease in the number students impacts the level of total expenditure.
- 3) In *third alternative*, the planning of and measures on education system are actively guided by conscious and strong attempt to allocate resources for better results. In this alternative even 80 % of the relative decrease in number of students decreases the total expenditure of education.

The estimations made in the above alternatives are approximations from international experiences and based on the expenditure structure (share of salaries) in BiH education sector. That is, if nothing is done only some part of other expenses than salaries decrease. Decreases in salary expenditures are very limited. And the class sizes (student teacher ratio) decrease almost at the same pace as does the number of students in schools. The second alternative consists measures which affect to some degree the school network and which do not sharply decrease class sizes. In third alternative, all efforts are made to adjust the school network to decreasing number of students and to keep the class sizes almost at the previous level.

Second, in the following table is estimation on the decrease of the expenditure according to the above alternatives. Even it is not an updated approach, as the starting point we have the year 2005. And even if changes have in 2006 and 2007 happened in the class sizes and school networks which we don't know, yet, we can start with the assumption that the future development indicated by student teacher ratios can, in fact should, be turned equivalent to the situation prevailing in 2005.

Table 3. The impact of decreasing number of students on education expenditure in three alternatives

	In 2005 Million KM	1. (zero- alternative)		2. alternative		3. alternative	
		By 2010	By 2015	By 2010	By 2015	By 2010	By 2015
Primary	420	19	19	37	37	74	74
Secondary	230	5	14	10	27	20	54
Higher	150	10	6	20	12	40	24
TOTAL	800	34	39	67	76	134	152

The calculation is made according to enrolment numbers and not according to the accumulated student numbers. If student numbers are used the impact on expenditure level and savings would be 2 – 4 years slower.

The same estimation formula is not applicable to primary, secondary and higher education. The purpose of the exercise is to show what could be the impact of the above figured development on the expenditure levels if nothing else but student number changes. In real life there is not such a situation where only one variable changes. The purpose of the calculation is to be basis for the estimations on the financial impacts of the the above mentioned strategic document.

3.3. Impacts on the infrastructure of education

The decreasing number of students requires planning of the use of school buildings and premises. There are several options for reallocation of school premises. The main objective should be to preserve the efficiency of school building infrastructure but also enhancing the quality of schooling has to be considered. The main points and options in studying and planning the use of school premises are:

- The use of school premises should be planned crossing the borders of the levels and parts of education system.
- The released capacity can be used for increase of enrolment and/or for getting rid of shifts.
- Connected to school network planning, merging of schools is one option.

Methods of school network planning are explained in details in other document of EU-ICBE by name "Guidelines for school network planning.

4. Impacts of and options for financial implications of BiH strategy for education

The strategy includes a lot of proposals and objectives for BiH education sector. It is a framework for planning and development of education in RS, cantons and BD and a platform for cooperation, coordination and interaction between the ministries of education and other educational authorities. Important element in the implementation of the strategy is data production and reporting between education ministries and Ministry of Civil Affairs which is also a prerequisite for progress in education sector EU integration.

4.1. Increase of enrolment

The widest impact on the expenditure and financing of education in BiH in the strategic document are the objectives to increase participation in education.

The proposals are following:

Pre-primary education

- Increasing enrolment (incl. preparatory classes) in mid-term by 30 % and in long-term by 70 %.

Primary education

- Implementation of 9 years primary education.
- Increasing participation in primary education in long-term close to 100 % and decreasing drop-out in mid-term to 7,5 %.

Secondary education

- Increasing enrolment in secondary education from 73 % in mid-term to 85 % and in long-term to 90 %.
- Increasing enrolment in general secondary education from 23 to 35 %.
- Increasing enrolment in 4-year professional education from 30 to 40 %.

Higher education

- Increase enrolment in long-run from present 24 to 32 %.

Some framework for the financial implications of the implementation of the above objectives can be made by using the indicators and estimations presented in previous chapters. The room for increasing enrolment is created by the above presented increase of GDP and the savings which would otherwise develop due to decreasing number of students if the present enrolment rates (enrolments/age cohort) would remain. In the estimation of possible savings caused by decrease of number of students, we use the cautious and maybe more realistic figure according which the decrease in education expenditure is 40 % of the percentage decrease in the number of students.

Table 4. The room produced by GDP growth and by decrease of age cohorts for the development of educational services

	Expenditure in 2005	<u>Prospects for funding 2005 - 2015</u>	
		<u>2008 – 2010</u> Increase Level	<u>2011 – 2015</u> Increase Level
Education expenditure			
share of GDP	800	+ 75	+ 120 (total + 195)
Decrease of student numbers		+ 67	+ 76
TOTAL	800	+192	992 + 196 1 188

The figures in the table are calculated assuming that education will receive its relative share of annual GDP growth (3 %) and that the relative shares in enrolment of the age cohorts remain at 2005 level. Of course, the above table is based on several other assumptions and it is theoretical, ceteris paribus calculation. But generally, it is impossible to make predictions which would in ex-post study prove to be exactly the realized development. The purpose of the estimation is to provide a framework for RS, cantons and BD to base education planning on their own data and on international approach in connecting planning of education and estimation on financing of education.

In the following table are estimations on the impact of the objectives for increasing enrolment rates in all levels of education. Again, we have to make new assumptions. *First*, it is estimated that the impact of the increase of pupils in primary schools in those cantons which have not yet implemented 9 years education is the same as their share of total number of pupils in BiH primary schools that is 17 %. *Second*, the increase in enrolment rate has to be transferred to increase in total number of pupils and students. In this, we have to make approximations. Because of the continuing increase in enrolment, we assume that in 2010 the total number of students is twice higher than the increase in enrolment in secondary and higher education. By 2015, the total number of students is 3 times higher in secondary education and 4 times higher in tertiary education compared to increased number of enrolment. *Third*, we use the average per pupil/student expenditure from above table 1. *Fourth*, it is expected that the increase of participation and decrease of drop-out in primary education means that the pupils are placed in the existing classes, so, that the raise in expenditure caused by that increase is very limited.

Table 5. Financial impact of increase in enrolment

<u>Level</u>	<u>Change in number of students</u>		<u>Change in expenditure</u>	
	<u>By 2010</u>	<u>By 2015</u>	<u>Million KM</u>	
			<u>By 2010</u>	<u>By 2015</u>
Pre-primary	+ 1 500	+ 4 000	+ 2	+ 4
Primary (9-years Education)	+ 7 000	+ 7 000	+ 7	+ 7
Secondary	+ 3 400	- 17 000	+ 4	- 20
Higher	- 2 400	+ 4 000	- 3	+ 6
TOTAL	+ 9 500	- 2 000	+ 10	- 3

Instead of the figures in table 4 which estimates the expenditure of education in case the relative shares of enrolment in relation to age cohorts remain at 2005 level, the above table compares the impact of increases in shares of enrolment according to the strategic document. Because of the decreases in the age cohorts and as a result of conscious education policies, the calculations show that the BiH education expenditure level would remain approximately at 2005 level even if the enrolment rates in relation to age cohorts would be increased according to draft strategy objectives. If the education sector receives its relative share of GDP growth, there would additional funding available to education sector 65 million KM (75 – 10 million KM) by 2010 and additional 120 million KM by 2015, altogether ca. 180 million KM from 2008 to 2015.

4.2. Improvement of quality and infrastructure

It is possible only to estimate at BiH level the allocations to the quality improvement. The decisions are made in RS, cantons and BD. In the following table are, according to the strategic document, some approximations on additional allocations in most important items affecting education quality. The additional allocations indicate annual increases in funding meaning that the increase could gradually grow from 2008 level 65 million KM by 2010 and from 2010 level gradually to 180 by 2015. It has to be emphasized that following table is only an example and that the actual needs will be assessed and decided by RS, Cantons and BD.

Table 6. Estimate on allocation of additional funding for improvement of education quality

Objective	Million KM	
	By 2010	by 2015
Pre-primary education		
▪ Teaching and learning material and in-service training of staff	1	2
Primary education		
▪ Teaching and learning materials	10	30
▪ In-service training of principals, teachers and other staff	10	15
▪ Special education	5	15
▪ Other	2	5
Secondary education		
▪ Teaching and learning materials	20	45
▪ In-service training of principals, teachers and other staff	5	10
▪ Other	2	8
Higher education		
▪ Teaching, learning and research and equipment	6	40
All levels		
▪ <u>Subsidies to poorest students</u>	5	10
TOTAL	65	180

The above table gives some indication on the allocation of increased funding to quality of education. The increased enrolment rates can be practically funded by the impact of decreasing numbers of age cohorts. Additional funding is allocated by the decisions of RS, individual Cantons and BD depending on their situation and education policy. However, the above exercise provides elements for the planning of the frameworks of education development and financing.

5. Planning of education and its finance should go hand in hand

In the end, some conclusions are made on the prerequisites for successful planning of education system and its funding:

1. Even if exact census data are not available and a lot of estimations have to be made, an approach similar to this document should be used in planning education system and its funding.
2. The assumptions and projections can be corrected when new statistical data are available. Planning is a continuous process which is fed by new information and, also, amended objectives.
3. This is a quantitative study. The quality is mainly improved by the committed work of principals, teachers and other staff of the schools. The administrative and service functions in the education sector are in crucial position in building incentives and prerequisites for favorable development.
4. The first priorities in pre-primary, primary and secondary education are development of curricula, vocational qualifications and standards and related teaching and learning aids according to best European practices. To assess the quality of education and to allocate funding to objects which provide most value-added to quality, evaluation and assessment activities should be increased. Also, production of more statistics on BiH education and participation in international studies (like PISA and TIMSS-S) increase knowledge on the state and quality of education in BiH.
5. Higher education sector is here touched only in macro terms by some indicators and projections. The situation in higher education should be studied in more details by experts to find out methods to increase efficiency, intensify graduation and to release funding to research activities. Research and development work made by university professors, other staff and research teams would be most valuable for the development of BiH economy and society.
6. Education planning and development is learning by doing. Intensifying cooperation and interaction between ministries of education and other educational institutions would increase the capacities in all institutions and facilitate successful education development.

**Template for education planning in entities,
cantons and Brcko District of Bosnia and
Herzegovina**

FINAL DOCUMENT

Note:

The final version of the document was approved by the EU-ICBE Steering Committee on 11 December 2007 and it includes the adopted amendments put forward by the Steering Committee members regarding the original document produced by the Working Group.

The document was handed over to the BiH Ministry of Civil Affairs for further legally established procedure for its consideration and adoption by the competent educational authorities in Bosnia and Herzegovina.

1. Introduction

1.1. Relation to a document about the BiH education development strategic directions

Relying on to date achievements in education reform in Bosnia and Herzegovina, and aiming toward the European Union objectives with respect to improvement of education and training quality and efficiency, availability and mobility within the common European area, the document entitled as **BiH Education Development Strategic Directions, with the Implementation Plan 2008-2015**, defines the major education development directions and is arranged into several core chapters:

- An analysis of the present state of education in BiH
- Development directions for the entire education system
- Objectives for different segments, levels and types of education
- Implementation plan for 2008 – 2015.

The document follows the general lines of the European Union education models and development and should serve to all educational authorities as a basis for an overall education policy and development in Bosnia and Herzegovina and for the designing education development plans in the entities, cantons and Brcko District of BiH. The development plans at these decision-making levels should follow and concretize the implementation of education reform and development in accordance with the qualitative and quantitative objectives from the BiH strategic document.

In that way, a harmonized approach of all educational authorities would be ensured in the planning process within the Bosnia and Herzegovina education sector as well as in the planning and implementing the activities in the area of international cooperation, with a specific emphasis on the EU integration process requirements and needs.

As the burden of the responsibility for planning and development of education in Bosnia and Herzegovina lies on the educational authorities of Republika Srpska, cantons and Brcko District, the intention of the proposed Template for Education Planning in the Entities, cantons and Brcko District of BiH is to serve to the educational authorities at these levels as a general guide and assistance in the designing and operationalization of their respective development plans, in accordance with the strategic document adopted at the level of Bosnia and Herzegovina.

1.2. Objectives of education policies

In carrying out their education related responsibilities and functions specified by the Constitution and law, the Education Ministries should focus more on the education policy planning and implementation and monitoring practical development in the education sector.

The roles, core functions and tasks of the MoCA SE, entity and cantonal Education Ministries and the ED BD are described in more details in the EU-ICBE project documents. The documents mostly relate to the recommended model of coordination of education sector (within Bosnia and Herzegovina and internationally) and, therefore, to the practical redistribution of functions, duties and tasks at various decision-making levels and necessary interaction of all educational authorities and other structures in realizing those functions and in the process of managing the entire education sector.

The main tasks and responsibility of Ministries of Education and the Education Department of Brcko District are planning and implementation of education policy. In general lines, the objectives of the education policies are:

- Increasing the quality of education and improving learning outcomes of pupils and students;
- Increasing participation in education;
- Decreasing drop-out;
- Increasing graduation; and
- Improving financing of education in terms of effectiveness and distribution.

The above general objectives are closely related to the demographic development where in coming years the number of youngsters in secondary school age will decline by one third. That is why school network planning should be specifically dealt in planning the network of the upbringing-educational institutions.

1.3. EU integration process

EU has set up objectives for education and training 2010 which follow the Lisbon strategy to develop the competitiveness of Europe. EU does not aim at the

harmonization of the education systems of the member countries but assesses education to be one of the main elements in creation of welfare and development in Europe. In all EU member countries as well as countries in the integration process, there are on-going processes and efforts to increase transparency and common frameworks for vocational and professional education and training and for higher education.

The education development, coherency and realism in education policies are utmost important not only for BiH education sector but, also, for the EU integration process. EC will ask for a description and a development plan of BiH education sector and very strictly monitors the progress in the sector. That is why commitment and coherency of all competent BiH educational authorities to implement the reforms are needed. This is a prerequisite for EU funding to BiH education, that is, for utilization of EU assistance programs in the education sector. The strategic document on the BiH education development directions, together with the entity, canton and BD development plans, provide a common tool for achieving the reform goals and utilization of Community programs.

1.4. The Education Planning Template

The following template/log frame provides a common approach for the planning of education development in Republika Srpska, Cantons of FBiH and Brcko District BiH¹. FMoE has a consulting and coordinating role for the planning processes in the Cantons.

The template has four major functions:

1. To serve entities, cantons and BD in the methodology of planning;
2. To ensure a common approach in planning education and monitoring development, in accordance with the BiH strategic document;
3. To promote discussion on education and its development objectives; and
4. To produce a transparent and reliable planning framework for EU integration.

The selection of elements and structures for the proposed template is in line with the framework document on the strategic education development directions in Bosnia and Herzegovina and its implementation plan 2008 – 2015. The content of the Template is not binding in all envisaged elements but leaves enough room for a more flexible

¹ *The Ministry of Education and Science of the Federation of BiH has the advisory and coordinating role in the planning processes in cantons*

approach to education planning, in accordance with the specificities and requirements of the entities/cantons/Brcko District.

Enclosed to the template are tables for collecting necessary statistical data and indicators in accordance with EUROSTAT requirements as well as guidelines on how to approach deliberations with respect to school rationalization and school network planning.

2. Logical frame for education development plans in the entities, cantons and Brcko District BiH

2.1. The description of the present state of Education

The legislation on education

- A registry and main content of the legislation
- An analysis of, needs and plans to reform the legislation
 1. Pre-school education
 2. Primary education
 3. Secondary education
 4. Gymnasium (general) education
 5. Vocational and professional education
 6. Higher education
 7. Adult education

Core statistics

The most relevant statistics related to education policies

- Data (the number of enrollment, students, schools etc.)
- Education indicators
- Financial data for education

Results, problems and challenges in education

Description on the development in education sector, success in development, most difficult problems and challenges

- Pre-primary education

- Primary education
- Secondary education
- General (gymnasium) education
- Vocational and professional education and training
- Higher education
- Adult education
- The functioning of the whole education system

2.2. Education development plan

2.2.1. Education and training supporting economic and social development

- If there existing general strategy for economic and social development, which are the main objectives and development lines.
- Which kind of objectives there are for education in such strategic document?
- What is expected from education and training to support the development?
- By which activities and measures education sector is able to produce the expected support for development, especially the usage of ICT and the studies of foreign languages?
- Which organisation/units are responsible for the activities and measures?

2.2.2. Main development directions in education

- How can education and training support the economic and social development?
- How to improve school infrastructure?
- How to increase the employability of the graduated students?
- How to increase participation in education and to decrease drop-out?
- How to adjust the secondary school network to the labour market in order to provide efficient use of financial resources?
- What are the main instruments in developing the connection between the labour markets and education sector?
- How to develop mutual relations and coordination in education?
- What are the mechanisms to provide quality assurance in education?
 - Education inspection
 - External evaluation
- What would be needed for the modernisation of teaching and learning at all levels of education, especially in terms of usage of ICT, studying foreign languages, etc?

- How the research in education can contribute to its development?
- How to provide cooperation between different sectors of public administration to prevent unacceptable behaviour of young people and social exclusion?
- How to promote institutional development and human resources in educational administration?
- How to establish sustainable and reliable data collection for education and statistics as a basis for strategic planning in education?
- How to reduce any kind of discrimination in education and how to increase access to education?
- How to use more effectively the finances for education?
- How to coordinate international cooperation, especially donor coordination?
- How to contribute in and to benefit from EU integration in education?
- How to coordinate and monitor the work of NGOs in the field of education?
- How to contribute to institutional development (own development, Conference of Ministers in BiH, Council for Education, Pedagogical Institutes, Agencies for Education, etc.?)

2.3. Education development objectives

- Education development objectives should be set in very concrete and feasible terms. Also, estimate or target on the timetable for the implementation would be needed for annual action plan and budgets.

2.3.1. Preschool education

Preschool education should be dealt in close connection to the primary education because it is about the use of the same teachers, school premises etc.

- Plan for enlargement of enrolment in preschool education
- Modernization of curricula for preschool education

2.3.2. Primary school education

The main issues in primary education are development of quality, school network, participation and graduation.

- Nine years compulsory education
- 100 % access to primary education
- Definition of structure of primary education
- Reducing drop-out from primary schools
- Involvement of external evaluation
- Adoption of the core curricula and development of the local curricula
- Plan for teaching of foreign languages

- Qualifications and certification of principles
- Professional development of teachers

2.3.3. Special education and inclusion

Description of the present state of special education and development objectives

- Development of the realistic system for categorization
- Development of specific curricula for the children with special educational needs
- Provision of physical access to the schools
- Teacher training for children with special educational needs
- Development of the specific programs for the parents (?)

2.3.4. Support for development of gifted pupils and students

Description of present arrangements and development objectives

- Call for proposals from gifted young people
- Advanced curricula for gifted
- Providing of scholarship
- Institutionalisation of the public care for gifted
- Involvement in appropriate international programs

2.3.5. Secondary education

- Enlargement of the access and enrolment in secondary education
- Increase of enrolment in general secondary education
- Improvements in anticipating and meeting the labour market needs
- Reduction of enrolment in three years VET
- Increase of four years professional education
- Decreasing drop-out
- Development measures to improve the quality of education and training

2.3.5.1. General secondary education schools

- Development of enrolment and school network
- Activities to establish State Matura
- Development of framework curricula with optional part

2.3.5.2. Vocational and professional education

- Activities regarding rationalization and modernization of vocations according to labour market needs
- Improvement of ways and conditions for realization of practical work
- Implementation of modernised structure for vocational and professional qualifications

- Modularisation of curricula
- Inclusion of on-the-job learning in vocational and professional training
- Development of pre- and in-service training of teachers
- Credit transfer system in VET
- Establishment of the real and virtual companies in VET
- Establishment of career centres in VET schools

2.3.6. Higher education

- Improvements in anticipating and meeting the labour market needs
- Decreasing drop-out and increasing and accelerating graduation
- Developing quality and modernising teaching technology
- Increasing allocations to R&D to meet regional development objectives
- Increasing enrolment in higher education
- Development of enrolment according to labour market needs
- Provision of quality assurance in higher education
- Facilitating mobility
- Renewing of equipment
- Implementation of ECTS (European Credit Transfer System)
- Integration of the University
- Development of non-academic study programs
- Strengthening of human capacities

2.3.7. Teacher education and professional development

- Modernisation of study programs and increasing quality of initial teacher education
- Identifying needs of and developing the in-service teacher training plans
- Liberalization of the market for teacher training
- Accreditation of service providers
- Development of study program for VET teachers
- Development of study programs for school principals

2.3.8. Adult education

- Building up infrastructure for education and training of adults
- Development of the accreditation for providers of adult education
- Plan for decrease illiteracy

2.3.9. Development of management of education

- Professional development of school director
- Certification of school managers

2.3.10. Development of institutional structure of education

- Functional recomposing of the Ministries and Pedagogical Institutes
- Assistance to the professional bodies

2.3.11. Development of financing of education

- Data collection for financing in education
- Decentralization
- Controlling mechanisms

2.3.12. Development of education legislation

- Revising of the legal framework and harmonizing education legislation with the EU legal regulations
- Passing new laws, including the Law on Pupils and Students' Standard
- Passing bylaws

2.3.13. Education statistics

- Development of the unique template for data collection
- Benchmarking
- Utilisation of EUROSTAT methodologies
- Developing EMIS
- Participating in statistical reporting

2.4. Efficiency, resources and funding of education

The first approximation for the development plan would be to fit it in the frames of the present funding level of education. By optimisation of the use of resources, school network, class sizes, placement of teacher and other vacancies, reallocation of student places, school premises etc. savings can be produced to be reallocated for the implementation of the development plan objectives. Also, the heavy decrease in the number of youngsters in secondary school age creates prospects for reallocation of resources and funding.

- Estimation and projection on the number of age cohorts in school age (6 – 25 years old)
- Target setting for participation at different levels and forms of education and training
- Objectives for school network
- Objectives for school and class sizes
- Objectives for pupil/student/teacher ratio
- Objectives for the average school size

- School network planning criteria
- Objectives for overall and per pupil/student expenditure level
- Teachers salaries
- Maintenance of school buildings
- Other

2.5. Optimisation of resource allocation and funding in the frames of present funding level

2.6. Funding for the development objectives and measures