

# Problem of Learned Non-Learning

Analytical overview of critical factors in  
primary and secondary education in BiH

**MARKO MARTIĆ/ SLAVICA TUTNJEVIĆ**

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- The results of this analysis indicate that previous attempts of education reform pertaining to curricula and teacher education have failed to offer adequate responses to increasingly dynamic changes in the environment.
- The focus of the creators of the curricula on the contents learned rather than on student competencies has led to students being pressured by insisting on reproductive knowledge and the mere acquirement of information while the creative potential of students is being reduced to the level of “walking databases”.
- At the time when information are available to students at least as much as they are to educators, textbooks are insufficient as teaching tools, while other forms of learning become a necessity. In order to improve the teaching process all available information sources should be used in innovative ways
- This analysis particularly address the problem of initial education of educators in BiH. The curricular reform and reform relative to training of teachers and educators are urgently needed in all parts of the state. The initial education of educators in BiH must be transformed, in terms of change in the approach to education of future educators, and curricula should move away from the contents learned and be formed in relation to competencies that an educator should have. This means that university education of teachers should include a multitude of courses in the field of pedagogy, psychology, didactics and methodology to be able to teach students how to learn and seek out information, how to use the information, as well as how to train them for self-education and raise their awareness of the importance of continuous development.



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## 1. Introduction

In nearly all societies education is considered an essential tool for growth and development of both an individual and society as a whole. By virtue of the International Charter of Human Rights, it is incorporated in basic human rights, because it represents foundation for development and preservation of personal dignity of each individual. The Charter envisions that everyone has the right to education, which is free and compulsory, at least in the elementary stages. Though not compulsory, secondary education must be available to all. Therefore, the purpose of primary and secondary education is to lead towards a full development of human character, and, thus the entire society.

Toady's sytem of primary and secondary education in Bosnia and Herzegovina has inherited the old education system of the former Yugoslavia which was completely under the jurisdiction of the state, both ideologically and financially. Education was free and available to all, and as such, it was used as an auxiliary tool in achieving collective state goals. Even though it is said to have been a system used to pass on ideological values, the educational system of the former state has left behind a strong legacy of equality where all students had the same rights and obligations regardless of gender, religion, ethnicity or social status.

This system too was still primarily based on frontal type of teaching where the teacher had full authority over the students, and the students were expected to adopt the knowledge by carefully listening to their teachers. In the past century, when compulsory education was introduced in our schools, it was quite sufficient for a student to come to school, sit passively and listen to a teacher, and read or learn from the rarely available books recommended by the teacher. This truly has led to broadening of horizons, development of a personality of each student and progress of society as a whole, and the teacher was indeed the one who had far more books and knowledge than the student. But nearly 70 years later, the world has changed so profoundly that we may undoubtedly say that coming to school, sitting passively, listening to a teacher and learning from a textbooks recommended by

the teacher is simply not enough anymore. On the contrary, depending on the quality of education and teacher's personality characteristics, it may even be detrimental, because it creates a risk of developing authoritarian, uncreative and un-resourceful personality who is not a knowledge seeker, but rather someone who expects others to be responsible for instilling knowledge into him or her.

Review of Strategic Directions for Education Development in BiH with Implementation Plan for 2008-2015 and Education Development Strategy of the Republika Srpska 2016–2021 suggests that decision makers are quite aware of the changes in environment and the challenges these changes bring with regard to the education system in BiH<sup>1/2</sup>.

In the Federation of BiH, the document from 2008 has already established education development priorities, focusing on modernisation of curriculum, teaching and learning, education and management technologies, evaluation of educational achievements, and initial and continuous professional development of the teachers at all levels of education system.

In the Republika Srpska, a somewhat more recent document offers vision, mission and strategic objectives in all segments of education that truly inspire hope that education will soon look quite differently. As a result of this education, all students will master quality knowledge and skills that may be interconnected and applied in further education and everyday life: "Education will foster intellectual, moral, physical, emotional and social development of an individual, and development of self-aware and independent, initiative-taking and responsible individual who is willing to learn, defend one's position and align it with others, and who is capable of continuing one's education, and who can find and apply knowledge, think creatively and create."

1 Strategic Directions for Education Development in BiH with Implementation Plan for 2008-2015, available at: [http://fmon.gov.ba/Upload/Dokumenti/93c849e5-2b36-4d2e-8cfb-54b062eac6ff\\_Strate%20C5%A1ki%20pravci%20razvoja%20obrazovanja%20u%20Bosni%20i%20Hercegovini%20sa%20planom%20implementiranja,%202008.%E2%80%932015..pdf](http://fmon.gov.ba/Upload/Dokumenti/93c849e5-2b36-4d2e-8cfb-54b062eac6ff_Strate%20C5%A1ki%20pravci%20razvoja%20obrazovanja%20u%20Bosni%20i%20Hercegovini%20sa%20planom%20implementiranja,%202008.%E2%80%932015..pdf)

2 Education Development Strategy of the Republika Srpska 2016-2021, available at: [http://www.vladars.net/sr-SP-Cyrl/Vlada/Ministarstva/mpk/PAO/Pages/Osnovno\\_obrazovanje.aspx](http://www.vladars.net/sr-SP-Cyrl/Vlada/Ministarstva/mpk/PAO/Pages/Osnovno_obrazovanje.aspx)

Unfortunately, anyone who has spent just one day in a typical primary or secondary school environment in our country will find it difficult to identify elements of such education in our schools save in the case of rare individuals who, only by their personal efforts, transcend the system that made them and change it step by step. In that sense, the key question raised by this analysis – do the future teachers, during their education have the possibility to adopt the necessary knowledge and skills to work with today's generations of students and are the adequate methodological tools, primarily curricula, available to them?

The paper is conceptualized in such a manner that in the opening chapters, the state of primary and secondary education is presented pertaining to competences, institutional framework, basic trends and indicators including the number of students and teachers as along with a depiction of financial frameworks.

The second part of the document considers the most important factors contributing to quality of education with special overview of teacher education, curricula and outcome-based learning. Finally, the closing chapters of the document present some responses of primary and secondary education to dynamic changes in the environment. Those responses include the previous education reforms, attempts to harmonise education policies with the needs of labour market, as well as the review of European and regional experiences in reforms and innovations. The main recommendations and opportunities for progress were identified based on the findings and analyses presented in the document.

## 2. Review of situation in primary and secondary education in Bosnia and Herzegovina

### 2.1. Competences and institutional framework

Institutional framework and distribution of competences over education in BiH are governed differ-

ently, in line with its system of government. These differences include administrative, financial and legal aspects of education as well as contents, methods and manners of assessment of education processes and learning outcomes. The Republika Srpska, ten cantons in the Federation of BiH and Brčko District of BiH have full competence over education. Bodies vested with competences are as follows: in the Republika Srpska, there is the Ministry of Education and Culture; in Brčko District of BiH it is the Department for Education of the Brčko District of BiH Government, while in the Federation of BiH relevant bodies include ten cantonal ministries of education.

There is also the Pedagogical Institute of the Republika Srpska at the level of this entity – an additional administrative organisation under the Ministry of Education and Culture. It has competences over a number of administrative activities in primary and secondary education in RS, such as the following:

- Development of curricula for preschools, primary and secondary schools and boarding schools,
- Monitoring and evaluation of quality in preschools, primary and secondary schools and boarding schools,
- Pedagogical, counselling, instructional, remedial, and supervisory activities in preschools, primary and secondary schools, and boarding schools (detailed description of competences is available at the website of the RS Pedagogical Institute<sup>3</sup>).

The Federal Ministry of Education and Science acts as an umbrella institution at the level of the Federation of BiH. The Ministry coordinates and plans the activities of cantonal ministries with regard to administrative, technical and other activities set out in the law that governs the competences of the Federation pertaining to education and science.

<sup>3</sup> Website of the Pedagogical Institute of the Republika Srpska: <https://www.rpz-rs.org/252/rpz-rs/Opste/informacije#.WjQJAd-nHIU>

In the context of primary and secondary education, these competences include: coordination and planning of pedagogical standards and spatial norms; equipment and teaching aids; planning of pedagogical standards and spatial norms; equipment and teaching aids; diploma recognition and equivalence of foreign diplomas and study certificates; vocational education and training of the teaching staff; primary and secondary education textbooks; standards pertaining to pre university and university students; innovations, development and improvement of technologies; coordination in exercising the youth rights in the areas of education and science, and other activities set out in the law. All other activities, including the ones that, in RS, are under the responsibility of Pedagogical Institute of the Republika Srpska, fall within the competence of cantonal ministries.

At the state level, the Ministry of Civil Affairs BiH harmonises the plans and defines education strategies at inter-entity and international level. In addition, the Agency for Preschool, Primary and Secondary Education at BiH level, was established in 2007. The activities of the Agency are focused on quality assurance in education system in BiH, by establishing student achievement standards, evaluating achieved results and developing Common Core Curricula for preschool, primary, and secondary education.

And finally, additional bodies for education sector coordination are established at the joint level of all authorities: the Conference of Ministers of Education in BiH and the Council for General Education in BiH. The Council for General Education in BiH is a professional and independent advisory body for decision makers pertaining to the preschool, primary and secondary education policies. It is composed of representatives of preschool, primary and secondary education teaching staff, faculties for teacher education and pedagogical institutes, Agency for Preschool, Primary and Secondary Education in BiH as well as representatives of trade union organizations. They have no active website or published reports on their work as of yet.

When it comes to regulatory framework at the state level, four framework laws have been adopted:

1. Framework Law on Higher Education in BiH,
2. Framework Law on Preschool Upbringing and Education in Bosnia and Herzegovina,
3. Framework Law on Vocational Education and Training in Bosnia and Herzegovina, and
4. Framework Law on Primary and Secondary Education in Bosnia and Herzegovina.

All laws and regulations enacted at the level of the Federation of BiH, of the Republika Srpska and Brčko District of BiH need to be harmonised with the state level framework laws.

Education in BiH is divided in four levels: preschool, primary school, secondary school and higher education. Primary education is compulsory under the Framework Law on Primary and Secondary Education. The compulsory nine-year primary education in the Republika Srpska was introduced in 2003-2004 academic year, while in the Federation of BiH, the introduction of the nine-year system was completed in 2009-2010 academic year. Pursuant to this same Law, primary education is free and available to all children; however, this provision does not include free textbooks, food and transportation for all children, but is most commonly applied in accordance with the social status criteria of a child, and is dependent upon the available financial resources.

Under the Framework Law on Primary and Secondary Education in BiH, secondary education is accessible to all, in accordance with academic achievement in primary school, personal interest and abilities.

As for secondary schools, there are comprehensive (grammar schools, art schools and religious schools) and vocational i.e. trade schools (medical training, economics, technical vocational schools and other).

Children with special needs may acquire primary and secondary education either in regular or special schools, in line with regular or special-needs curricula.

## 2.2. The number of students and teachers

Despite continued efforts to change the current situation in education in BiH, it saw no considerable improvement in any of the major areas where work has been done for the past 20 years. This is also reflected in the statements made at the last Conference of Ministers of Education in BiH held in December 2017, where the following conclusions were reached:

- segregation and discrimination are still present in BiH schools,
- education is insufficiently focused on increasing the employability and harmonising education with labour market needs,
- education quality control is insufficiently developed,
- there is a considerable lack of harmonisation between curricula at all levels, and education is insufficiently based on learning outcomes<sup>4</sup>.

The representatives of international community and organisations who took part in education system reforms, who also attended the Conference

of Ministers of Education in BiH (OSCE mission representatives, US Ambassador, and Head of the EU Delegation in BiH), had the opportunity to give their assessment of the current situation in the education system. They share the view that the current situation is characterised by “fragmented administration, separate institutions and ethnically biased curricula in the education system of BiH”<sup>5</sup>, in addition to the obsolete teaching materials and insufficient training of the teaching staff. Therefore, this means that, regardless of many previous attempts, education reform must be a priority at all levels of government. Devastating trends that see decreasing numbers of students in primary and secondary schools and increasing numbers of young people leaving the country also call for urgent education reform at all levels in Bosnia and Herzegovina. Regarding the primary and secondary school enrolment trends, data below are tangible indicators of present situation, and the decline trend of primary school enrolments in BiH.

As indicated in Table 1, the total number of primary school students is continuously decreasing, whereas the enrolments in first grade saw moderate growth in the time period from 2012 to 2014, only to start declining again in 2014. According to the information collected for the purpose of analysis

Table 1: Number of students in primary schools in BiH for the time period 2012/2013-2016/2017 academic years <sup>6</sup>

Year	Number of students in primary schools	Number of students enrolled in first grade of primary schools
2012/2013	304.881	31.875
2013/2014	302.133	32.038
2014/2015	296.891	33.623
2015/2016	291.342	33.304
2016/2017	287.729	32.414

4 Conclusions of the Conference of Ministers of Education in BiH available at: <http://www.vijeceministara.gov.ba/saopstenja/ministri/default.aspx?id=27027&langTag=bs-BA>

5 <http://www.osce.org/bs/mission-to-bosnia-and-herzegovina/362261>

6 Agency for Statistics of BiH, Communication no. 1 dated 30/05/2017, Communication no.2, dated 9/7/2017, Communication no. 2 dated 12/12/2014, Communication no. 2 dated 6/12/2013.

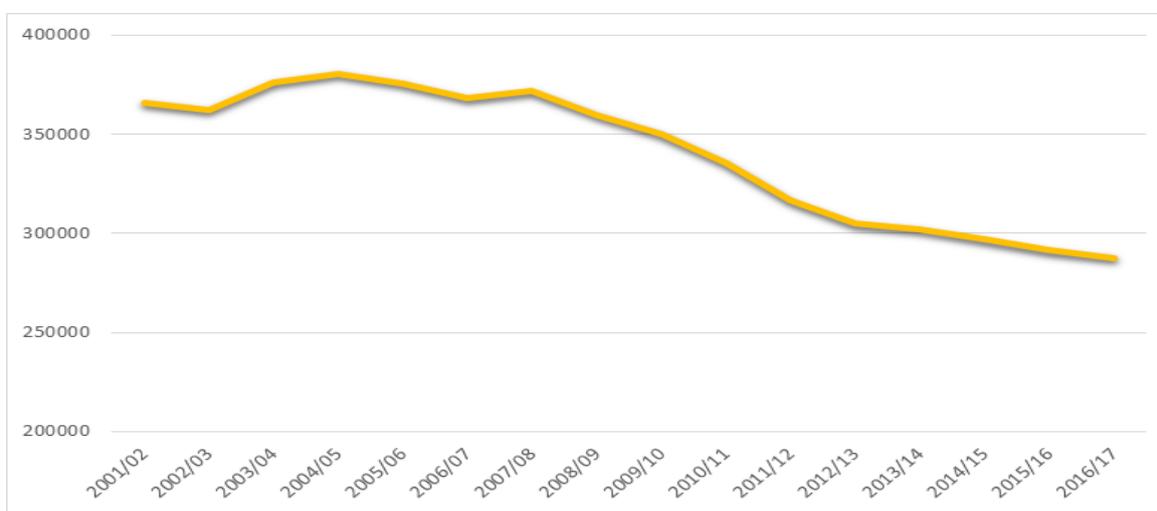
of absence from school, dropout rate and decline in number of students in the Federation of BiH in 2013, falling birth rate is considered to be the most important cause for decline in primary school enrolments and in total number of primary school students. Decline in birth rate is a result of a grave economic situation in the country and high unemployment rate of youth who plan to have a family.

Other factors that were singled out include: delayed enrolments in primary schools, children who

is that the percentage of children who are not enrolled in primary school at an appropriate age is 20% in the Federation of BiH.<sup>7</sup> However, what may be observed, if we analyse the trends in the number of students in primary schools in BiH within a longer time frame, is a sharp decline in their numbers.

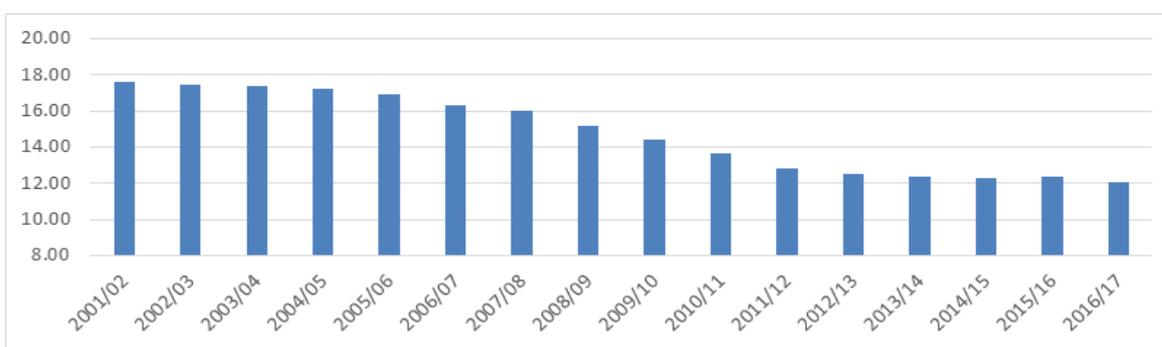
The Graph 1 indicates that 2016/2017 academic year saw 85,000 fewer students enrolled than in 2007! It is interesting to note that, compared to

Graph 1: Total number of primary school students in BiH



Source: Agency for Statistics of BiH

Graph 2: Student teacher numbers ratio in primary schools



Source: Agency for Statistics of BiH

are not enrolled in primary schools at all, Roma children as especially vulnerable category, students who attend school irregularly, and students who drop out of primary school before graduating. Another interesting information from this analysis

<sup>7</sup> Analysis of absence from school, dropout rate and decline in number of students in the FBiH in 2013, available at:[http://fmon.gov.ba/Upload/Dokumenti/071c06d8-2181-41c5-ba9a-97374cf73bf0\\_ANALIZAuzroka nepohađanja, napuštanja i smanjenja broja učenika u osnovnim školama u FBiH.pdf](http://fmon.gov.ba/Upload/Dokumenti/071c06d8-2181-41c5-ba9a-97374cf73bf0_ANALIZAuzroka nepohađanja, napuštanja i smanjenja broja učenika u osnovnim školama u FBiH.pdf)

2002, the number of primary schools was not significantly reduced, and yet, there was a significant increase in the number of teachers by 3.000 new employees.

The growth in the number of employees was especially visible in the time period 2002 - 2012, partially due to the primary education reform and intro-

duction of the nine-year system, but also due to the general trend of employment growth in public administration, especially after the introduction of VAT and sharp rise in public revenues.

When it comes to secondary schools, the same source reveals the following situation:

Table 2: Number of students in secondary schools in academic years since 2012.<sup>8</sup>

<b>Year</b>	<b>Total number of students in secondary schools</b>
2012/2013	166.662
2013/2014	156.350
2014/2015	143.881
2015/2016	133.228
2016/2017	126.824

Table 3: Total numbers of students enrolled in first grade and students who graduated in 2016 – 2017 academic year, per type of secondary school

<b>Type of school</b>	<b>Total number of students</b>	<b>Students enrolled in first grade</b>	<b>Students who graduated in 2015/2016 academic year</b>
Grammar school	30.615	7.241	9.210
Technical schools	69.017	17.426	18.467
Art schools	1.203	318	288
Vocational schools	23.509	8.198	7.109
Religious schools	2.227	624	503
Secondary schools for children with special needs	394	124	118

<sup>8</sup> Agency for Statistics of BiH, Communication no. 1 dated 30 May 2017, Communication no. 2, dated 9 June 2017, Communication no. 2 dated 12 December 2014, Communication no. 2 dated 6 December 2013

The analysis of the longer time period, since 2002, indicates that the number of students enrolled in secondary schools is in continued decline, as in the case of primary schools.

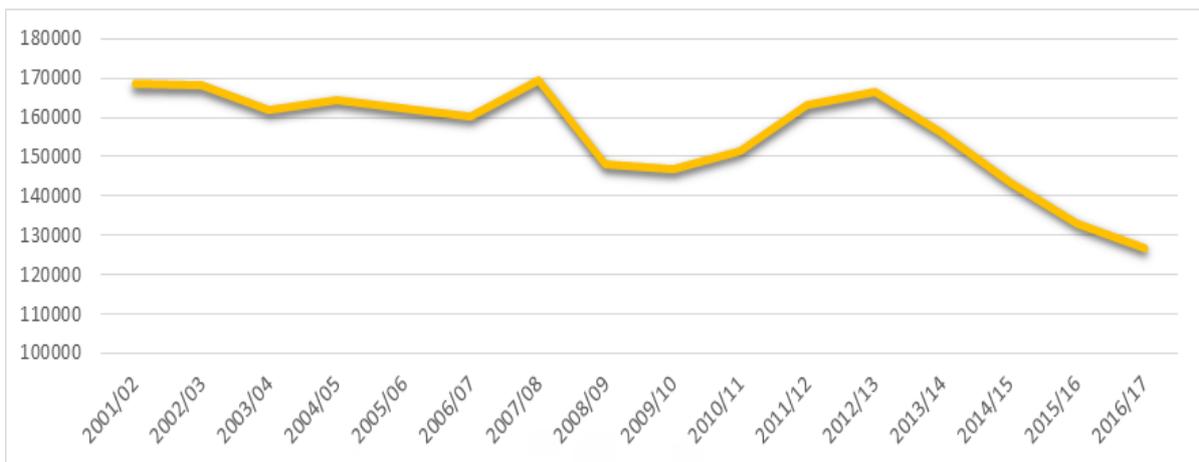
However, when it comes to secondary schools, certain fluctuations in total number of students were observed, as indicated in the Graph 3.

Today, 40.000 fewer students are enrolled in secondary schools in Bosnia and Herzegovina than in the academic year 2001 - 2002. It is interesting to note that the similar thing happened here as with primary schools.

There is a slight increase in number of secondary schools, by 2.5% compared to 2002, whereas the number of teachers was increased by almost 20%. If we look at the trend of decline in the number of students per types of secondary schools (general vs. vocational), no significant difference may be observed in the previous three-year period.

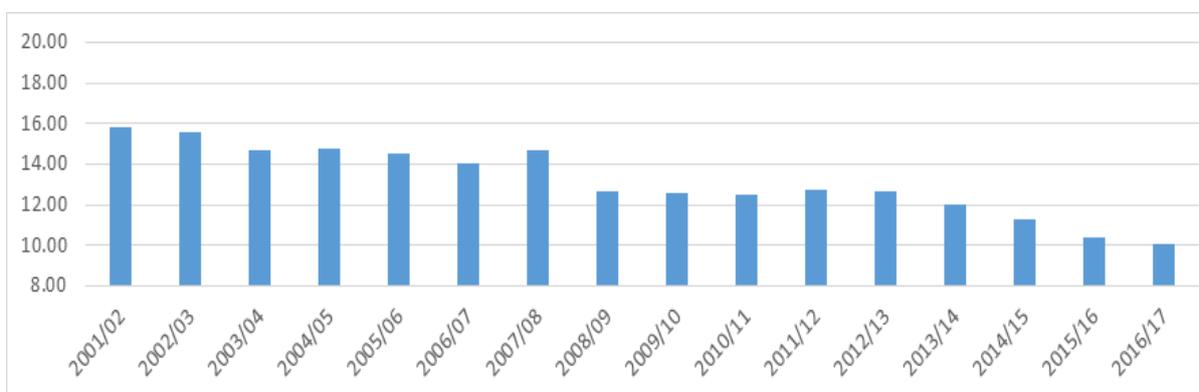
Table 4 indicates very similar trend of decline in the number of students in schools that enrol most of the children: technical, grammar, vocational and art schools.

Graph 3: Total numbers of students in secondary schools in BiH



Source: Agency for Statistics of BiH

Graph 4: Student teacher numbers ratio in secondary schools



Source: Agency for Statistics of BiH

Table 4: Number of students per type of secondary school in the last three academic years

Type of school	2014/2015	2015/2016	2016/2017
Grammar school	41.930	37.132	30.615
Technical schools	85.896	77.388	68.743
Art schools	1.482	1.291	1.203
Religious schools	2.237	2.222	2.227
Vocational schools	32.633	25.463	23.642
Secondary schools for children with special needs	431	385	394
<b>Total</b>	<b>164.609</b>	<b>143.881</b>	<b>126.824</b>

Only religious schools and schools for children with special needs saw no significant decline in the number of enrolled students in the last two years.

As noted by various authors (i.e. Dušanić, 2007. ; Hacic-Vlahović ), this can be explained with a specific status religion has in the BiH post-conflict society. In this context, religion is the basic indicator of ethnicity and as such, it represents an important factor of social status.

Pertaining to the schools for children with development disabilities, it needs to be said that the education of such children has only recently been recognized as an important part of education systems, and efforts are being made in the territory of the entire BiH to implement early detection and intervention systems.<sup>11/12</sup>

9 Dušanić, S., (2007). Prediktori religioznosti mladih (Predictors of Youth Religiosity) ; S. Dušanić, Psihološka istraživanja religioznosti, (Psychological research of religiosity) 15-33.

10 Hacic-Vlahovic, A. (2008), An Examination of Religiosity Trends in a Multi-Ethnic Society. Amsterdam social science, 72.

11 Strategic plan for improving early childhood development in the FBiH 2013-2017, available at [https://www.unicef.org/bih/early\\_childhood\\_development\\_eng.pdf](https://www.unicef.org/bih/early_childhood_development_eng.pdf).

12 A successful example of such efforts is the work done by EDUS NGO, more information available at [www.edusbih.org](http://www.edusbih.org)

### 2.3. Allocation of funds in primary and secondary education

Financing of primary and secondary education in Bosnia and Herzegovina is defined by the current institutional and normative framework, which includes centralised financing at the level of the Republika Srpska and decentralised financing at the level of cantons in the Federation of BiH. The Law on Primary Education and Upbringing of the Republika Srpska stipulates that the activities of primary schools founded by the Republika Srpska (public primary schools) are financed from:

- the budget of the Republika Srpska,
- budget of local self-government units where the schools are located and
- other sources.

The Government uses the RS Budget to ensure funds for salaries and remunerations for school employees, construction, furnishing and maintenance of schools, costs of material transactions, professional development of primary school employees, transportation compensations for employees, financing student transportation, entity competition and competition of high-ranking students,

in line with approval issued by the Ministry.

The local self-government units in of the Republika Srpska participate in financing of primary schools located in their respective areas only to a limited extent. Specifically, the local self-government units participate in costs of construction, equipping and maintenance of primary schools, costs of material transactions, and costs of student competitions at municipal and regional level.

The last Consolidated Report on Budget Execution of the Republika Srpska for 2015 indicates that total budget allocations for primary schools amounted to BAM 205.572.864; gross salary and the employment benefit allocations for employees in primary schools accounted for over 90% of the total amount. if one is to observe only the allocations made for the purpose of modernising the teaching process (e.g. procurement of teaching equipment, including new teaching aids) it can be noticed that, in 2015, BAM 458.000 in total was allocated for this purpose and it accounted for 0.22% of the total budget funds for primary schools.

In the Federation of BiH, public schools, as public institutions, are financed from cantonal budgets.

This includes financing salaries and employment benefits for teachers, associates and other employees, their professional development and training, education of children with special needs, student competitions, school maintenance, procurement of school equipment and teaching aids and other.

Observed collectively at the level of all ten cantons in the Federation of BiH, total allocations for primary schools in 2015 amounted to BAM 426.445.895. The gross salaries, employment benefits, compensations and bonuses for employees accounted to 90% of total budget, as in the case of of the Republika Srpska. The allocations for school equipment in 2015 (including the teaching aids) were relatively low in the Federation of BiH as well and amounted to BAM 1.723.177 or 0.40% of the total budget for primary schools in all cantons.

However, these allocations vary from canton to canton. It is interesting to note that Sarajevo Canton allocated BAM 1.255.326 in 2015, which is twice the amount than all other cantons combined. The overview of allocations for primary schools in all ten cantons in the Federation of BiH is provided in the Table 5.

Table 5: Allocations for primary schools from FBiH cantonal budgets in 2015

<b>Canton</b>	<b>Total allocations for primary schools</b>	<b>Gross salary expenditures (as a percentage of total expenditure)</b>	<b>Employment benefits and other remunerations (%)</b>	<b>Other expenditures (%)</b>	<b>Allocation for procurement of equipment (%)</b>
Una-Sana Canton	53.574.702	71%	14%	15%	0.07%
Posavina Canton	7.513.439	67%	14%	18%	0.58%
Zenica-Doboj Canton	69.786.625	65%	14%	21%	0.25%
Tuzla Canton	75.963.917	73%	12%	15%	0.04%
Bosna-Podrinje Canton	5.648.364	72%	8%	20%	0.09%

Table 5: Allocations for primary schools from FBiH cantonal budgets in 2015

Central Bosnia Canton	44.644.043	69%	11%	20%	0.37%
Herzegovina-Neretva Canton	39.485.174	76%	13%	11%	0.00%
West Herzegovina Canton	20.888.208	75%	15%	10%	0.05%
Sarajevo Canton	94.457.771	68%	11%	19%	1.33%
Canton 10	14.483.652	77%	14%	9%	0.00%
<b>TOTAL IN FBiH</b>	<b>426.445.895</b>	<b>70.48%</b>	<b>12.46%</b>	<b>16.66%</b>	<b>0.40%</b>

Source: Public finance database of the Centre for Public Interest Advocacy (CPI) - <http://javnefinansije.cpi.ba/budzetski-korisnici/>

The situation is similar with regard to secondary schools financing; however, under the Law on Secondary Education and Upbringing, the schools in of the Republika Srpska are financed from the entity budget, budget of local self-government units and other sources.

The RS budget covers the costs of salaries and employment benefits, and only a portion of costs for construction, reconstruction, building extension, equipping, maintenance, equipment and consumables, and tools for practical and theoretical classes. The local self-government units cover the material costs, costs of professional development and training of employees, and a portion of costs of maintenance and procurement of equipment pertaining to secondary schools.

In 2015, BAM 79.156.517 were allocated from the RS Budget for secondary schools, where gross salaries and other employment benefits accounted for over 98% of that amount.

In the Federation of BiH, operating of secondary schools as public institutions, is financed from the cantonal budgets, based on the financing criteria adopted by cantonal governments, upon the proposal of relevant ministries.

In line with this, the founder of secondary schools will secure the funds required for establishment and operation of schools, and, in particular, the financing of the following:

- salaries, remunerations and benefits for teachers, technical staff and other employees, their professional development and training,
- education of children with special needs,
- student competitions,
- experimental secondary schools,
- activities of associations, institutions and organisations of interest for secondary education,
- maintenance of school premises, procurement of school equipment and teaching aids.

The summary data for 2015 indicates that secondary schools in all ten cantons in the Federation of BiH received in total BAM 233.757.817 from the budget, out of which BAM 200.000.000 was absorbed by salaries and employment benefits. For the sake of comparison, procurement of

equipment in secondary schools absorbed BAM 1.076.753 in total, or 0.47% of the total budget for secondary schools.

The Table 6 presents an overview of allocations for secondary schools in FBiH per each canton.

If the total allocations for education were to be placed in the international context and compared to allocations in other countries, then allocations in education as a ratio to gross domestic product (GDP) is commonly used as an indicator.

Table 6: Allocations for secondary schools from FBiH cantonal budgets in 2015 .

<b>Canton</b>	<b>Total allocations for secondary schools</b>	<b>Gross salary expenditures (as a percentage of total expenditure)</b>	<b>Employment benefits and other remunerations (%)</b>	<b>Other expenditure (%)</b>	<b>Allocation for procurement of equipment (%)</b>
Una-Sana Canton	26 468 809	73,78%	12,64%	13,25%	0,33%
Posavina Canton	3 668 470	65,52%	14,41%	19,61%	0,45%
Zenica-Doboj Canton	37 661 801	68,76%	12,21%	18,71%	0,32%
Tuzla Canton	40 201 144	71,36%	11,09%	17,00%	0,55%
Bosna-Podrinje Canton	2 878 234	73,00%	9,99%	16,56%	0,45%
Central Bosnia Canton	24 324 874	68,93%	8,96%	22,11%	0,00%
Herzegovina-Neretva Canton	27 343 544	66,92%	9,77%	23,30%	0,00%
West Herzegovina Canton	9 658 518	73,50%	13,34%	13,12%	0,04%
Sarajevo Canton	54 304 566	71,51%	12,01%	15,39%	1,08%
Canton 10	7 247 857	72,12%	11,36%	16,13%	0,39%
<b>TOTAL IN FBiH</b>	<b>233 757 817</b>	<b>70,52%</b>	<b>11,43%</b>	<b>17,59%</b>	<b>0,46%</b>

Source: Public finance database of the Centre for Public Interest Advocacy (CPI)- <http://javnefinansije.cpi.ba/budzetski-korisnici/>

When viewed in this way, BiH has spent between 4 and 5 percent of its GDP on education (including higher education) in the past period, which is on par with the expenditure in the EU countries (according to Eurostat data, the average for the EU at the end of 2014 was 5.1%).

The percentage of allocations for education with regard to overall budget allocations in BiH is also somewhat higher when compared to the OECD countries (in the Republika Srpska it is 15% while the OECD countries average is 12.3%)<sup>13</sup>. However, we should take into account that the absolute GDP of Bosnia and Herzegovina is considerably lower than the GDP of the majority of other observed countries.

Therefore, the absolute amount of expenditure on education is lower (e.g. total expenditure on education in Slovenia, in 2014, was three times the amount in BiH); secondly, in BiH, percentage of salary costs in total expenditure in education is considerably higher than in other countries. In BiH, salaries and employment benefits account for 90% of total expenditures. For the sake of comparison, ratio of salaries to other education expenditures in Slovenia differs significantly: salaries account for approx. 70%, and other expenditures account for 30% of total expenditures<sup>14</sup>.

On the other hand, although the percentage of costs of salaries and employment benefits in total education spending in BiH is high, the average salaries of teachers in primary and secondary schools are considerably lower than the salaries of public administration employees. This, to certain extent, may be explained by previously mentioned increase in the number of teachers in the past period, accompanied by drastic decline in the number of students, which certainly raises an issue of structure of costs, motivation of teaching staff and efficiency of education management system in BiH.

13 According to the Consolidated Report on the Budget Expenditure of the Republika Srpska, the allocations for education amounted to 15% of the overall budget allocations; OECD average for 2014—Source: <https://data.worldbank.org/indicator/SE.XPD.TOTL.GB.ZS?locations=OE&view=chart>

14 The Quality and Costs of Education in BiH\* - Lejla Dragnić, Education Support Program, Open Society Fund in BiH

#### 2.4. Learning outcomes in primary education – results of participation of BiH in international education quality assessments

Another indicator of the state of play in primary and secondary education in Bosnia and Herzegovina are student achievements results. Striving to achieve the best possible education system management, decision-makers tend to periodically test the knowledge and skills acquired in education system by students of specific age and in specific areas. The following competitions are used to this end: PIRLS (Progress in International Reading Literacy Study), TIMSS<sup>15</sup> (Trends in International Mathematics and Science Study) and PISA<sup>16</sup> (Programme for International Student Assessment).

PIRLS and TIMSS are international and standardised tests used to assess the achievements of students of fourth and eighth grades to understand and apply the knowledge they have adopted from various subject areas. PIRLS assesses reading skills, while TIMSS assesses mathematics and science achievements.

Indirectly, TIMSS monitors teaching methods, its quality, the quality of textbook content, as well as results of additional teachers' vocational training. Analysis of data acquired through this testing enables participating countries to identify relevant weaknesses within the areas tested by TIMSS and, based on test results, make appropriate decisions on necessary changes in the education system.

PISA tests knowledge and skills of 15-year-olds required for continuation of their education, professional development and responsible civic engagement. PISA assesses the level of knowledge and skills in reading, mathematical and scientific literacy. The purpose of the testing is not to assess the quantity of information absorbed by the students

15 'The Advantages of TIMSS Introduction into BiH Educational System' (TIMSS), Centre for Policy and Governance (CPU), available at: <http://www.cpu.org.ba/media/7811/Prednosti-uvo%C4%91enja-redovnog-Me%C4%91unarodnog-testiranja-trendova-u-matematici-i-prirodnim-naukama-TIMSS-u-bosanskohercegova%C4%8Dki-obrazovni-sistem.pdf>

16 Baucal, A., Pavlović Babić, D. (2010) Teach me to think, teach me to learn, Institute of Psychology, Centre for Applied Psychology, Belgrade

[http://www.pefja.kg.ac.rs/preuzimanje/Materijali\\_za\\_nastavu/Pedagoska%20psihologija/PISA2009\\_u\\_Srbiji.pdf](http://www.pefja.kg.ac.rs/preuzimanje/Materijali_za_nastavu/Pedagoska%20psihologija/PISA2009_u_Srbiji.pdf)

who are graduating from primary schools, but rather to examine whether they have developed efficient learning strategies, whether they apply their knowledge in various life situations, and whether they reflect on these contents critically. In addition, PISA, similarly to previously mentioned tests, examines the quality, fairness and efficiency of education system.

In 2007, Bosnia and Herzegovina had participated in TIMSS testing, with 4.300 students from 150 schools which, according to the data of the Agency for Statistics of BiH accounted for approximately 10 percent of total number of primary schools across the country. Furthermore, 150 school headmasters as well as 724 teachers were indirectly assessed through this testing. Knowledge in mathematics and natural sciences was tested.

Back then, BiH was ranked 27th among 50 countries in total, which indicates that it is among the countries of lower and middle international quality. BiH scored 465.5 points in total, which is less than international average of 500 points. The results indicate that only 10% of students who underwent testing are able to apply knowledge and skills acquired in mathematics to specific problem solving, whereas that percentage is somewhat higher with regard to natural sciences (14%); 32% of students is sufficiently knowledgeable about mathematics and 46% of students about science, to be able to handle the basic situations in these areas, which is not enough.

After the results had been published, Agency for Preschool, Primary and Secondary Education (APOSO) conducted the Secondary Analysis of TIMSS 2007 in Bosnia and Herzegovina which was supposed to be used by the ministries to review the curricula, introduce systemic changes, implement reforms and other.

However, a question is raised of whether any of that was done. In review of 2011 and 2012 curricula, it appears it was not.

The Agency had intended to repeat the testing and had made all arrangements to prepare for a new testing. It had defined translations and samples of

texts, but testing was not conducted in 2011 due to the lack of financial resources. In that year, donors were unable to provide full financial support for testing implementation, but they had offered to provide 80% of funds. However, local decision-makers were unwilling to cover the remaining 20% of total costs. What are the costs of TIMSS testing? They are divided into the membership fee cost which is 52.000 USD, and local costs that include costs of distribution, packaging, payments for testers, evaluators, additional trainings and other. The Agency had projected that costs for 2011 would have amounted to 60.000 USD.

However, what is more important is that regular conducting of this test is not a cost but an investment that will contribute to better prosperity, development and growth of the country. Global TIMSS results indicate that countries, whose students achieve top results in the test, are precisely the countries with highest economic growth and development. Therefore, it is more than absurd to suggest that participation in such testing is a cost.

When it comes to PISA 2018 testing, it is encouraging to know that the Presidency of BiH has approved the participation of our country, on 3 November 2016. PISA is expected to reveal the real state of play in BiH education and to indicate the areas that require additional efforts, in order to improve the education system.

### 3. Education of the teaching staff and curricula as quality factors in primary and secondary education

#### 3.1. Teacher education

Human education is intensive and continued activity, heavily dependent on the quality of initial education of educators. In modern education systems, many authors have explored how different factors impact the quality of education of children and youth in general. The results they obtained (Glasser, 1999) indicate that the quality of

teaching process depends on the quality of the one who implements it i.e. a teacher. This is why (Delors et al., 1996) it is essential to invest in initial education of teachers in order to achieve the overall better quality in education. It is important to abandon traditional approach in education where teachers represent those who provide knowledge. In today's age of information and communication technologies, it is much more important that teachers are trained to teach students how to learn, seek and use information, and to enable them to self-educate and to raise their awareness on the importance of continuous development.

The UNESCO report 'Towards Knowledge Societies' from 2007 speaks not just about the importance of initial education of future educators, but also about the competencies they need to develop within it, such as the following: to master general knowledge (to learn to know), to undergo professional trainings and develop competencies to deal with life situations (to learn to do), to undergo character development in the education process (to learn to be), to strengthen the character to understand and respect diversity, and to build the need for mutual interconnectedness (to learn to live together). A teacher should possess both general and specific knowledge, a wide spectrum of skills, and a wide range of human qualities. Therefore, teachers should earn their authority not only through their expertise, but through human qualities as well (attitude towards students, empathy, patience and other).

In line with the aforementioned, and in accordance with the UNESCO International Standard Classification of Education (ISCED, 1997), modern faculties for teacher education should offer interdisciplinary teacher education. Teacher education should also include subjects and courses enabling them for scientific research in the area of education science.

In order to implement the reform of teacher education studies in Bosnia and Herzegovina, it would be necessary to adopt the standards of profession at the state or entity level and define adequate competencies accordingly. In this way, both the initial teacher education and additional training and requalification system that

are in place when it comes to vocational subject teachers in secondary schools are regulated.

Occupational standards for early childhood educators (pre-school educators) were developed within the Project Development of Qualifications Framework for General Education, as a document which defines the occupational standards for early childhood educators and teachers<sup>17</sup>. The standards also define key tasks and activities to be performed by teachers/educators, and the list of generic competencies required for efficient completion thereof. There is a direct connection between this document and qualifications standard defining the content and structure of specific qualification, i.e. competencies acquired at the end of specific education cycle. In this regard, occupational standard represents a connection between the initial teacher education and work in educational institutions, and the framework for development of teacher profession<sup>18</sup>.

Author Ivana Zečević used these standards to explore the evaluation of curricula of eight public universities in Bosnia and Herzegovina in the study titled 'Inclusive and Non-discriminatory Education in the Curricula of Teacher Education Faculties in Bosnia and Herzegovina'. This research showed that initial education of teachers in BiH continues to be content-oriented and is not based on learning outcomes and competencies.

This means that when planning the subjects and courses in curricula, creators are focused on what the students, future teachers, should learn, and not what they should be competent for. Analysis of subject syllabi reveals that course objectives dominating the syllabi and those focused on acquiring the knowledge, definitions of concepts, and their characteristics; however, these syllabi mostly do not contain learning outcomes that should indicate the competencies developed in students throughout those courses.

17 Project 'Development of Qualifications Framework for General Education', Occupational Standards for Early childhood Educators, European Union and British Council

18 Draft Report on Initial Education and Professional Development of Teachers with Recommendations, 'Development of Qualifications Framework for General Education' project, European Union and British Council

Even if the syllabi contain learning outcomes, they are not well formulated because their formulation leans towards the formulation of objectives. In terms of the competencies of future teachers, analysis of teacher education curricula established that they differ considerably. The curricula of teacher education that produces early childhood educators and teachers are not solely formally oriented to acquiring knowledge in academic areas of study, but are focused on development of their teaching competencies through subject areas in pedagogy, psychology, didactics and teaching methodology (PPDTM).

As opposed to this, in teacher education that produces future subject teachers, teaching is predominantly focused on acquiring academic knowledge in subject areas, and is generally very little oriented towards developing teacher competencies. In majority of cases, these undergraduate departments provide only one semester of general psychology and pedagogy and one or two teaching methodology subjects.

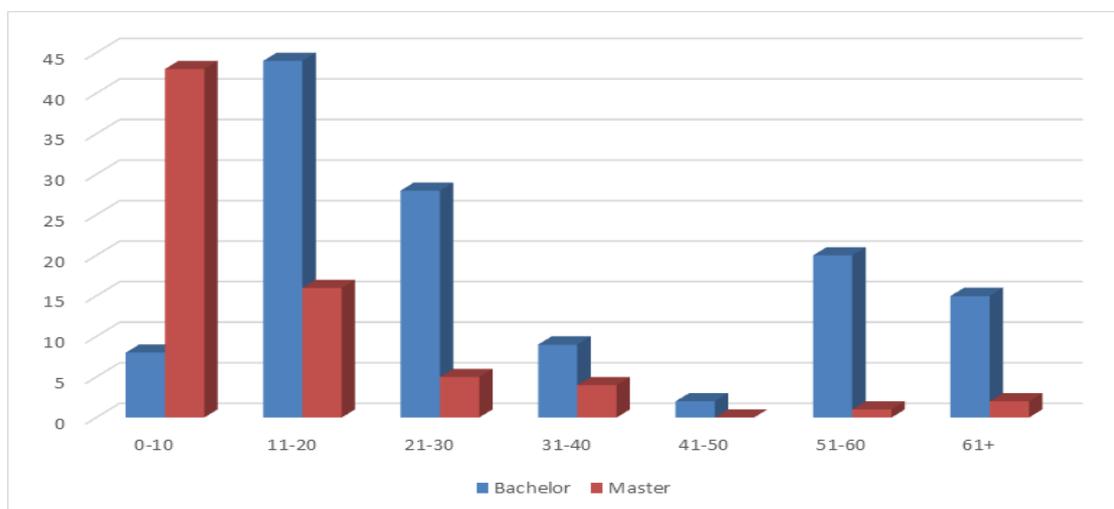
The research analysed 207 departments that provide education for future early childhood educators and teachers. The graphs 5 and 6 present the ECTS (European Credit Transfer and Accumulation System) credits regarding the subjects within PPDTM group. Graph 5 provides an illustration of departments divided into groups, with regard to

the number of ECTS credits. The groups are as follows: 0-10, 11-20, 21-30, 31-40, 41-50, 51-60 and 61+ (see Graph 5). It is indicative that majority of departments falls under the 11-20 ECTS group. These departments usually offer one course in pedagogy and psychology and two courses in teaching methodology. It means that their students, during the studies where they have to earn a minimum of 240 ECTS credits, are given an opportunity to take courses where course credits account for 5 – 10%, and these courses teach them how to work with children, i.e. how to rear and teach children, how to understand their development, how to identify problems children deal with and how to timely intervene, and all that is entailed by occupation as an educator.

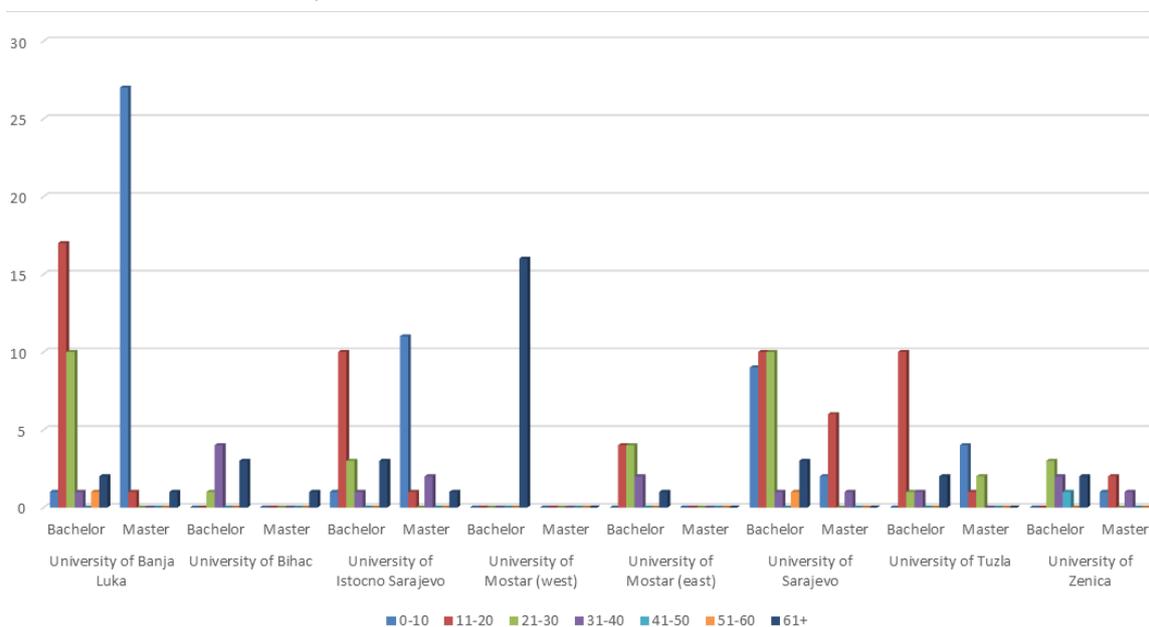
This analysis showed that, out of seven assumed groups of tasks and activities that educators should perform, and that include: planning and programming, teaching and tuition, monitoring and evaluation, creating the learning environment, cooperation with family and community, professional development and participation in activities and development of school and education system, and entail adequate competencies; our students do not receive education for any of this.

Each individual university is represented in Graph 6; so the difference between some universities when it comes to curricula can be observed.

Graph 5 Number of ECTS credits for subjects in PPDTM group of undergraduate and postgraduate studies at universities in BiH



Graph 6: Number of ECTS credits for subjects in PPDTM group of undergraduate and postgraduate studies, assorted per universities in BiH



According to data in Graph 6, it may be concluded that the University of Mostar stands out distinctly because it embraced all of the European standards pertaining to development of teacher education curriculum and complied with requirements, both in terms of number of ECTS credits, which is 60, and in terms of subjects encouraging development of the competencies of future teachers. Analysis reveals that, in addition to Mostar University, there are faculties/schools and undergraduate departments with curricula that differ from others. Those are:

1. Department of English Language and Literature, Faculty of Philosophy, University of Sarajevo
2. Department of Islamic Theology, Islamic Teacher Education School in Bihać,
3. Department of Islamic Theology and Religious Pedagogy, School for Islamic Studies, University of Sarajevo,
4. Departments of Chemistry, Physics and Mathematics, Faculty of Natural Sciences and Mathematics, University of Sarajevo,
5. Department for Engineering and Computer Science, Faculty of Electrical Engineering, University of Tuzla,

6. Department of Islamic Theology, Islamic Teacher Education School, University of Zenica,
7. Teacher Education School, University of Bihać.

University of Mostar is an example of good practices. This institution follows European trends and requires that subjects in PPDTM group, within teacher education studies, carry a minimum of 60 ECTS credits. The so-called Teacher Education Module is developed and it represents a group of subject areas which are common to all teacher education courses. This module is comprised of compulsory and elective subjects related to teacher competencies. The Module is divided into three smaller modules i.e. sections: General Education Subjects Module, Vocational Education Subjects Module and Teaching Methodology and Applied Professional Teaching Practice Module. General Education Subjects Module includes compulsory subjects that develop basic teacher competencies and it carries 36 ECTS credits.

Vocational Education Subjects Module includes subjects that develop specific teacher competencies; compulsory subjects in this module carry 8 ECTS credits, and elective subjects carry 6 ECTS.

Teaching Method and Applied Professional Teaching Practice Module is comprised of subjects that develop professional skills through practical experience and this module carries 10 ECTS credits. Teaching Methodology practice includes 30 hours.

It is important to note that students, who pursue teacher education studies, may develop their competencies in integrated manner, through specific teacher education courses or through the Programme for Acquiring Teacher Competencies i.e. Teacher Education Module. Student who has completed teacher education studies must have 60 ECTS credits, earned in subjects that develop teacher competencies. Whether the student takes these courses and corresponding exams in integrated manner or within an additional module, is irrelevant.

In addition to insufficient number of subjects under PPDTM group, another problem in initial teacher education is a lack of opportunities to study and explore other, specific areas and fields related to modern trends and reforms in education systems in BiH and abroad. This, in particular, refers to work with students with special education needs, development of key competencies and monitoring and evaluation of student achievements, work with families and communities, education policies, etc.

In addition to the quality of curriculum, teacher education enrolment policy is another essential component in building the quality education system in any country. Enrolment policy in our country is rather similar in all universities and it refers to enrolment with or without the entrance exam.

However, essential problem of teacher education enrolment policy is its inability to attract students from better quality secondary schools.

Tendency to degrade the profession of an educator has led to a situation where teacher education schools are perceived as unattractive by students with high academic achievements in pre-university education in better quality secondary schools.

### 3.2. Curricula

Although Bosnia and Herzegovina has three curricula, what they share in common is that each sets out the content which teachers should pass to children, and children should passively receive it. Neither of curricula includes the concept where teachers lead the students to specific achievements at the end of primary or secondary school. When viewed in this way, it can be said that Bosnia and Herzegovina has only one education system.

However, if we look at the content of „national“ group of subjects, it is obvious we must refer to three different curricula. In the Republika Srpska, education is governed by entity level legislation and regulated by the Ministry of Education and Culture, through Pedagogical Institute of the Republika Srpska. In the Federation of BiH, education falls under the competence of the cantons, whereas Education Institute in Mostar oversees the schools that follow curriculum in Croatian language. The cantons with a majority Bosniak population follow the Framework Curriculum of the Federation of BiH, which is adapted, modified and supplemented as needed. In the past few years, two in-depth analysis of curricula were conducted. The one used in the Republika Srpska was performed by the group of experts from the Faculty of Philosophy, University of Banja Luka<sup>19</sup>, hired by the Ministry of Education and Culture in the Government of the Republika Srpska. The other was the Framework Curriculum, used in Sarajevo Canton analyzed by the committee appointed by the Ministry of Education, Science and Youth of Sarajevo Canton<sup>20</sup>.

The most important conclusions resulting from both analyses are as follows:

- curriculum has retained all the characteristics of traditional eight-year primary education programme to which first grade was added, and as such it stands out from the remaining curriculum;

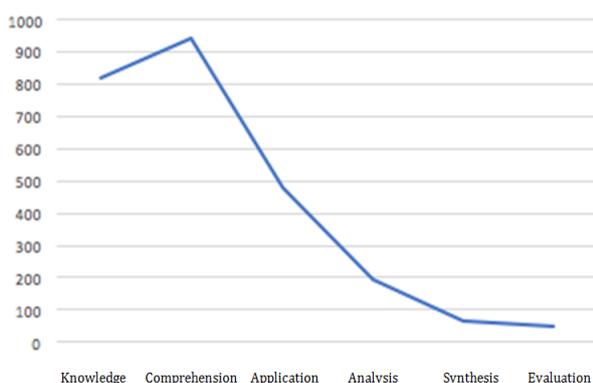
<sup>19</sup> Prof. dr Ivana Zečević, prof. dr Aleksandra Hadžić, doc. dr Milica Drobac and prof. dr Brane Mikanović

<sup>20</sup> Document on: [www.skolegijum.ba/static/biblioteka/5460fcc35ceb502AnalizaNPPzadevetogodisnjeobrazovanjeuKantonuSarajevo.pdf](http://www.skolegijum.ba/static/biblioteka/5460fcc35ceb502AnalizaNPPzadevetogodisnjeobrazovanjeuKantonuSarajevo.pdf)

- structure of teaching content within a subject is more or less clear, but connection between cognate subjects is missing; therefore, the curriculum appears to be more a group of subject programmes, because the contents are similar and overlapping, sometimes within the same and sometimes between different subjects, across several grades or throughout an entire education cycle;

- it appears, upon review of learning outcomes and teaching concepts, that curriculum is not designed to encourage development of critical thinking in children or deeper analysis of content, because, as is evident from learning outcomes where predominantly lowest levels of knowledge are expected such as memorising of facts and demonstrating simple understanding at the level where they are expected to re-tell in their own words; while the abilities of apply knowledge, compare and draw conclusions are not widely expected, and therefore, their development is not encouraged in a learning process (Graph 7);

Graph 7: Levels of knowledge in learning outcomes in primary education curriculum in the Republika Srpska



- curriculum is also characterised by extensiveness and superficial approach to study subjects, where children are required to memorise a huge volume of information (certain information changes from one day to the next), and they jump from one content to another, without engaging in deeper analysis.

After reviewing primary education curricula in Bosnia and Herzegovina, it should be noted that the situation is not that grim, because teachers can compensate a lot during the classes. However, it is important to bear in mind that curricula set out the limit for knowledge in each subject area and teachers are expected to comply with these limits when it comes to knowledge testing. In this case it may be difficult, especially in senior grades, to organise interactive classes where children would be encouraged to develop critical thinking and creativity. The expectations set before students at oral and written exams are also the limits of their knowledge.

Based on the results of the conducted analyses and the aforementioned facts, it may be concluded that education in Bosnia and Herzegovina has not essentially changed in twenty years, since the end of war, neither in primary or secondary schools, pertaining to the fundamental document referred to as curriculum. In addition, classrooms saw very few changes. Teaching methods continue to be the same, because traditional approach i.e. teacher-centred lecturing (frontal lecturing) remains a prevalent form of teaching, where the teacher lectures in front of the classroom, and students sit passively and take notes. After some time, students are expected to demonstrate what they have learned from their notes and teachers refer to this as knowledge. The only indicator of child's performance in school are his/her grades (marks) which are highly valued, and given solely based on subjective appraisal of teachers who, at the majority of universities, are not even trained to give grades (marks) (conclusion which results from the previously mentioned analysis of initial teacher education). Introduction of external final exam intends to objectivise the performance of children in primary schools.

However, academic achievement remains predominant factor when it comes to enrolment to secondary schools. Then, the academic achievement in secondary school becomes a dominant factor with regard to enrolment to universities with no entrance exams. In cases where entrance exam is required, academic performance accounts for 50% of entrance exam score, which is still a lot.

#### 4. Responses of primary and secondary education to dynamic environment changes in the past 20 years

##### 4.1. Previous attempts of education reforms in BiH

Although in the past 20 years, media have repeatedly said that education system reform in BiH is underway, the only essential reform had been made in 2004 in the Republika Srpska and the Federation of BiH (but not in all the cantons) when nine-year primary education system was introduced.

However, this reform failed to result in considerable improvements of primary education. What it actually resulted in was a simple reorganisation of number of years a child will spend in primary school, while the curriculum was added another grade. The schools were unprepared to welcome little six-year-olds, teachers were not trained to work with this age group, and curriculum resembled a document which merely included additional new educational level, first grade, which differed completely in its structure and work methodology from other primary school grades. Introduction of six year olds into schools, leaving them to teachers who were not trained to work with this age group, demanding from teachers to play with them even though said teachers' methods and work techniques didn't include play, meant that, in 2004, these professionals had to promptly re-think and change the concept of education and upbringing in their minds. When it comes to changes in secondary education system, it is important to note that 2001 saw the launch of vocational education reform following the principles of modular education, through introduction of EU VET<sup>21</sup> programme. The module includes complete set of teaching units within one subject area. Each module has clearly defined learning outcomes and evaluation techniques, and duration is 34 hours.

The reasons for the introduction of modular education system, among others, are: introduction of new technologies, intensive changes in social and economic system, approximation to EU, adoption

of global standards in the education system, wider occupation base, intensive changes in labour market, lifelong learning and other.

The objectives of new vocational education curricula include: education and training that results in responsible, independent and creative students, encouraging to partake in team work and decision-making, increasing theoretical and practical knowledge, encouraging development of positive work ethics, development of capacities for more efficient use of foreign languages and communication technologies, and development of basic communication skills and democratic values<sup>22</sup>.

##### 4.2. Harmonization of education with labor market, with regards to dual education

A myriad of documents, studies and analyses have been produced regarding the issue of harmonization between education and labor market in Bosnia and Herzegovina. One such rather exhaustive analysis was issued by the Labor and Employment Agency of Bosnia and Herzegovina in 2012<sup>23</sup>.

According to the study made, around 30% of employees have asserted they have difficulties finding adequate employees, with majority of them being from the private sector. Most demanded workers are those with university education, while most demanded jobs are those for secondary education manufacturing occupations in building, metal and textile vocations. On top of the aforementioned, there is a particular demand for people with managerial skills in business administration. In 2013, the Federation Ministry of Education and Science published a document titled Analysis of the Enrolment Policy in Secondary Education in the Federation of Bosnia and Herzegovina in Terms of Labor Market Needs<sup>24</sup>, aimed at harmonizing the enrolment policy with the needs of the labor market.

<sup>22</sup> Strategy for Development of Secondary Vocational Education and Training in BiH for the period 2007-2013

<sup>23</sup> Research of the labor market in BiH, available at: <http://www.arz.gov.ba/Dokumenti/Fajlovi/ANKETA%202012.pdf>

<sup>24</sup> Analysis of the enrolment policy in secondary education in the FBiH, available at: [http://fmon.gov.ba/Upload/Dokumenti/7fce8fb-6633-4e95-bb7b-232198c37cd3\\_INFORMACIJA\\_Analiza\\_upisne\\_politike\\_u\\_srednjoškolskom\\_obrazovanju\\_u\\_FBiH\\_s\\_aspekta\\_potreba\\_tržišta.pdf](http://fmon.gov.ba/Upload/Dokumenti/7fce8fb-6633-4e95-bb7b-232198c37cd3_INFORMACIJA_Analiza_upisne_politike_u_srednjoškolskom_obrazovanju_u_FBiH_s_aspekta_potreba_tržišta.pdf)

<sup>21</sup> EU VET – European Union Vocational Education and Training

According to the results of this analysis, secondary education curricula in the Federation of BiH do not sufficiently reflect the needs of the labor market, in terms of acquiring competencies that are in demand, while most occupations students are being educated and trained for in schools are not adjusted to the requirements of the labor market. The following are the recommendations produced by the above analysis:

- Harmonization of the curricula with the needs of the labor market, a process that has been carried out in continuity since 1998, through EU VET projects for reforming vocational secondary education<sup>25</sup>. However, an issue that remains open is to which extent VET projects were able to take into account all dynamic changes in the labor market, in particular when it comes to never-ending creation of new occupations.
- Creation of enrolment policy for secondary schools that would match the needs relative to economic development of the environment in which the school operates and the needs of the labor market, while being mindful of the interests and abilities of students, as well as material and personnel capacities of the school. When adding to the picture the enrolment policies of other cantons, it is clear that the enrolment policy for secondary schools is among the most complex problems in this field.
- Development of a standardized program for professional orientation in primary and secondary schools, which would serve to counsel, guide and help students to choose a career with the biggest chance of success and best employment prospects. This recommendation seems rather doable and leaves space for advancement, because, despite sporadic projects of professional orientation, most primary and secondary schools in BiH have very limited offers relative to professional orientation for students. Pedagogic/psychological services have discretion in determining whether and how

they will provide this type of counselling. They have various handbooks and recommendations for this work available online<sup>26/27</sup>, but not systematic support in form of a standardized procedure as proposed by the said recommendations.

- Coordination among cantonal ministries at the level of the Federation of BiH, in order to harmonize the enrolment policy in each canton relative to labor market needs.
- Continuous improvement of the conditions for implementing traineeship in schools and encouraging employers to take student trainees, as well as continuous vocational training of educators that teach vocational courses, is the last recommendation of this analysis. Even though all vocational schools have some traineeship system in place, these options can be further improved or, in some cases, steered towards the system of dual or double education, which will be discussed further in text.

As for the Sarajevo Canton, the Ministry of Labor, Social Policy, Displaced Persons and Refugees has published some more recent data from 2016<sup>28</sup>, indicating that there is a series of shortage occupations acquired upon attending vocational secondary schools, but despite that, the majority of elementary school graduates enroll in a grammar school or secondary school of economics. Even when it comes to university education, there is a series of shortage and surplus occupations alike. Hence, for the academic year 2016/2017, the Ministry had proposed and the Government had adopted the adjusted enrolment quotas for social and humanitarian sciences, which prevalently produce surplus occupations. Given that the most demanded occupations with university education in this canton are bachelor of computer science, bachelor of ecology, medical doctor/specialist, ba-

<sup>26</sup> See, for instance, Handbook for trainers at <http://www.fzzz.ba/publikacije1/Prirucnik%20za%20trenereweb.pdf>

<sup>27</sup> Or at [http://profesionalnaorijentacija.org/wp-content/uploads/2011/12/profesionalna-orijentacija\\_FINAL-2013.pdf](http://profesionalnaorijentacija.org/wp-content/uploads/2011/12/profesionalna-orijentacija_FINAL-2013.pdf)

<sup>28</sup> Reply of the Sarajevo Canton Assembly to the question on employment of youth in the Sarajevo Canton, available at: [https://skupstina.ks.gov.ba/sites/skupstina.ks.gov.ba/files/mario\\_vukasovic\\_4.pdf](https://skupstina.ks.gov.ba/sites/skupstina.ks.gov.ba/files/mario_vukasovic_4.pdf)

<sup>25</sup> [http://www.vetbih.org/portal/index.php?option=com\\_content&view=article&id=114&Itemid=69&lang=sr](http://www.vetbih.org/portal/index.php?option=com_content&view=article&id=114&Itemid=69&lang=sr)

chelor of defectology, bachelor of environmental science, teacher of computer science and teacher of mathematics, while most unemployed in the unemployment bureau records come from the faculty of economy and the faculty of law, one can see what the enrolment quotas at the University of Sarajevo were for the academic year in question<sup>29</sup>.

One of the attempts to harmonize the labor market with the education system is the so-called dual or double education. This system has long been specific to Germany, Austria and Switzerland, but it has gradually expanded to other countries, such as France or South Korea. As for the countries in the region, this education system is being quickly introduced in Serbia, where the Law on Dual Education was adopted in late 2017 and the implementation of the system should officially commence as of the academic year 2019/2020<sup>30</sup>.

What is actually dual education? It is a schooling system for vocational occupations, where part of schooling is done at school and the other part in a company, enterprise or a production plant. The extent of learning through work in dual education is at least 20%, but no more than 80% of school hours of the total number of hours for vocational courses. The learning takes place under adequate curriculum and learning program, in accordance with predefined competencies for such occupation. The school and the employer have a partnership relation, with the school being responsible for the accomplishment for its part of the curriculum and learning program, and the employer being responsible for systematic and proper learning through work in his/her company. A thing that is significantly different in this system, compared to an apprenticeship in a company as a form of learning through work that has been present for decades, is the fact that the relations between the school, the employer and the students, i.e. their parents or another legal representative of students, in dual education is stipulated by an agreement. Furthermore, the labor market and student schooling may

be more closely linked in this way. For instance, the Law on Dual Education in Serbia stipulates that the structure of student enrolment in secondary vocational schools for occupations covered by this system are to be determined in accordance with the needs of the economy and possibilities for further education of future students.

In Bosnia and Herzegovina, the possibility of introduction this learning system is under consideration<sup>31</sup>, but the idea is still in the conception stage. Direct employability of the trained staff is the fundamental advantage of this system, working in favor of both students and employers, with the following being some of the problems relative to dual education: companies that are engaged in the implementation of learning through work must abide by numerous regulations defined by law and agreements; systematic approach to instruction in accordance with formulated curriculum, with assigned instructor or mentor, it is often expensive for the company; many companies are too narrowly specialized in a particular activity to be in the position to provide learning as defined under the curriculum and competencies determined for a given education profile, and other.

#### 4.3. Review of regional/European experiences with reforms and innovation in education

Even in the most developed countries, reforms and innovation in the education sector struggle to catch up with all the changes brought about by the information revolution, while European schools continuously face challenges posed by the omnipresent use of new technologies<sup>32</sup>.

They have significantly changed and continue to change not only the way we communicate and learn, but how we think as well. These changes are certainly most pronounced in children who have grown up and do grow up in full swing of the digitalization. Clearly, there is a huge gap between informal forms of learning through information

29 Call for student enrolment for 2016/2017: <http://old.unsa.ba/s/images/stories/novosti1516/konkurs%20i%20plan%20upisa%201617.pdf>

30 Law on Dual Education of the Republic of Serbia: <http://www.mpn.gov.rs/wp-content/uploads/2017/12/dualno-zakon.pdf>

31 <http://vlada.ks.gov.ba/aktuelnosti/novosti/dualno-obrazovanje-bi-omogucilo-ucinkovitiju>

32 The NMC Horizon Report Europe 2014: Schools Edition, available at: [http://publications.jrc.ec.europa.eu/repository/bitstream/JRC90385/2014-nmc-horizon-report-eu-en\\_online.pdf](http://publications.jrc.ec.europa.eu/repository/bitstream/JRC90385/2014-nmc-horizon-report-eu-en_online.pdf)

technologies and formal school education across Europe. Instead of prohibiting the use of mobile phones, tablets and similar gadgets that students reluctantly part with, there is an ever increasing trend of integrating their use into the education system in a meaningful and purposeful manner, in order to advance the learning process. Merging of mobile, digital, virtual, social and physical learning modalities seems to be inevitable in order for the learning process to be relevant and meaningful and intrinsically motivating for children. Nonetheless, even in the most developed education systems, effective methods of resolving this challenge are yet to be found.

For the past few decades, another important challenge of the developed European countries' school systems is a great diversity of children in schools. Inclusion and integration of ever growing number of migrant children, as well as of children who have grown up in European countries but in a completely different cultural context during their everyday family life call for new and creative solutions.

This chapter aims to present some of the most interesting reforms and innovations in the field of education in European countries, but in our regions as well. However, there are huge differences among European countries when it comes to their education systems, not only when comparing countries with different economic standards, such as, for example, Bosnia and Herzegovina and Germany, but also when comparing more developed countries that have different cultural and educational heritage, such as, for instance, Finland and France.

The scope of this paper does not allow a detailed overview of education systems of individual countries. It is limited to reviewing only those innovative practices relevant for education systems in BiH, with special accent placed on reforms of curricula, teacher education and connecting education with the real life. This chapter will first offer a short review of reforms and innovations in a country traditionally known to have a quality education system (Finland), and in a country that has achieved significant progress and reforms in teacher education (Estonia), followed by a number of examples of in-

novations that some European countries have in common. The final part of this chapter will provide bright examples of innovations in school systems in Bosnia and Herzegovina.

Finland is commonly known as a country with a highly flexible education system that keeps changing and adapting itself to the needs of the changing society. Still, despite frequent and comprehensive changes in education, its status as a country with relatively high results in the international PISA testing remains unchanged<sup>33</sup>.

Teaching profession is a highly paid and desired occupation, while education of teachers and educators requires mandatory desired occupation, while education of teachers and educators requires mandatory first and second (master) study cycles, as well as continued annual vocational training, financed by the state. Learning outcomes are defined state wide, but the teachers have great autonomy, and can devise the methods and materials to use in order to achieve the set outcomes independently. The latest educational program adopted in this country covers the following seven areas: 1) thinking skills and learning how to learn; 2) cultural competencies, communication and self-expression skills; 3) self-care and daily living skills; 4) multiple literacy; 5) competencies in the field of information and communication technology; 6) skills required for work and entrepreneurship, and 7) participation, action and personal readiness for building sustainable future.<sup>34</sup>

An example of an innovative approach that aims at achieving some of the above objectives is integrating different course subjects. This actually means that school courses are not taught in isolation and separately from one another, as is the case in most education systems. Rather, learning is based on processing particular topics, problems or projects, that build knowledge in various areas. Multiple teachers may become involved in one project or problem, each contributing to the learning process in their own way.

33 <https://www.oecd.org/pisa/pisa-2015-results-in-focus.pdf>

34 The NMC Horizon Report Europe 2014: Schools Edition, available at: [http://publications.jrc.ec.europa.eu/repository/bitstream/JRC90385/2014-nmc-horizon-report-eu-en\\_online.pdf](http://publications.jrc.ec.europa.eu/repository/bitstream/JRC90385/2014-nmc-horizon-report-eu-en_online.pdf)

Students, on the other hand, may use all information sources they can access independently, with teachers merely giving them pointers in the process. A concrete example of this type of learning might be a secondary school environment where, for example, students are asked to offer multiple solutions to a broadly defined problem of integrating refugees in the school system. A solution to such problem requires knowledge of history, geography, geopolitics, mathematics, economics, psychology and other fields, while at the same time it is relevant and meaningful, being a current social problem that involves the students. Another example of good quality European education, at least according to PISA testing results, is the Estonian education system. According to analyses, the reasons for the high ranking of this relatively small country are the tradition of placing high value on the schooling in this culture, highly and well educated teaching staff enjoying major autonomy in the teaching process, as well as systematic approach to education for all children, regardless of their status, origin or individual abilities.

Reforms in the Estonian education system since 2007 to date are not as dedicated to technological development of schools as they are focused on the development of a support system for all students, starting from free meals to textbooks and school materials. This support system also includes individualized annual monitoring of each student, with continuous application of measures to prevent failure and provision of support from special educators, speech therapists, psychologists and pedagogues in each school. It is exactly this segment of education that is deemed as crucial for the overall success of the Estonian education in PISA testing<sup>35</sup>.

Here are some other examples of innovation and changes in the field of education in European countries that are not limited to one country:

- Assignments of making/constructing/cultivating specific products as part of the curriculum. Instead of learning from textbooks and verbally reproducing the coursework, students

are asked to partake in making purposeful and useable products. Whether making seasonal decorations, gift boxes, agricultural products or mobile applications, such approach requires using the already existing and acquiring new knowledge from several different areas, searching independently for sources of information and utilizing new technologies, such as “do it yourself” tutorials, forums and advice from passionate creators from around the globe.

- Closely linked to the first item is project based learning, which does not necessarily include making a concrete product. A project, whether group or individual, implies a complex process of searching for various sources of information in order to understand and present a phenomenon, problem or assignment. Once again, working on any project exceeds the use of textbooks as a teaching tool and implies creative use of various sources of information and methods for their presentation. A typical example of a project is presenting a particular country or culture to the class, where a student should gather a myriad of interesting information on all sorts of fields and through them, present the country or culture to the class in a creative way.

- Discovery learning is not a novelty in education, but it is still insufficiently represented in the education systems across Europe, hence its further promotion is warranted. In a nutshell, instead of having lectures on the coursework, students are posed questions and required to look for answers themselves, once again, using all possible sources of information they can acquire on their own.

- Participation of practicing professionals in the teaching process is one of the methods that ties the learning process to actual life problems. For example, studying chemistry or biology will get a new dimension if presented to students by a doctor or a lab technician doing tests on tumour tissue, or studying physics if presented by an engineer making sports cars.

35 <https://www.oecd.org/pisa/PISA-2015-estonia.pdf>

- Dual education, i.e. integrating the learning process with the working process, is yet another innovative practice where learning is meaningful and students are motivated by the very process and their work results. This type of learning is more suitable for vocational schools, such as technical or agricultural schools. It is now present even in regional systems, which will be discussed further in text.

This is not a comprehensive or exhaustive list, but merely an overview of the most frequently mentioned innovative ideas and practices in education process in various reviews available online. In theory, there may be as many new ideas and practices as there are teachers, but what they all have in common is ever greater distancing from the learning by "sitting still and listening", and moving towards active learning through exploring, inquiring and using various information sources for solving specific problems and assignments. Another thing that they have in common is that the textbook has been surpassed as the exclusive learning tool, while using knowledge available on the internet, various learning applications and social support systems, such as forums and specialized websites, is not prohibited but rather it is largely used in the learning process, not only by students, but also by the teaching staff. For a more detailed overview of many more innovative practices in European education, you may see a compilation document available on the "*OpenEducationEuropa*" website<sup>36</sup>.

There are some innovative ideas and practices already applied by teachers and educators in Bosnia and Herzegovina. Although the majority of teachers and educators feel obligated to strictly follow the curriculum and textbooks therein prescribed and to stick to the timetable for lectures on the coursework prescribed, some of them seem to understand the advantages of using innovative practices in their teaching and, even without the support of the system, they use new technologies and creative methods to stimulate their students. Hence, in the prize campaign for innovative

practices in education by the Centre for Education Initiatives Step by Step, awards have been given to 50 innovative educators in 2017<sup>37</sup>.

The awarded examples are a good fit for the aforementioned most frequent innovative practices in Europe. For instance, one teacher gave an assignment to children to make a news broadcasting TV show, being free to use any and all ment to children to make a news broadcasting TV show, being free to use any and all technologies available to them and being fully responsible for the concept of the show, topics, interviews, filming, editing and airing it in the school. Another teacher in an elementary school taught history to children through project activities, by exploring folk's customs in their region, entertaining their grandparents to talk about life in the past and making a time capsule from their own time. Therefore, one does not have to dispose with major resources or enjoy systemic support in order to implement simple innovative practices that raise students' level of independence, intrinsic motivation, satisfaction with discovery learning and linking school knowledge to real life. Moreover, there are also examples that go beyond the enthusiasm of individual educators, in particular when it comes to secondary school education.

For instance, the Agricultural School in Banja Luka has a system in place where students learn and make produce in their school garden, orchard, bee garden or bakery. In Prijedor, students have extracurricular veterinary practice and confectionery practice in a biscuit factory, as well as farming, greenery and gardening practices in a greenhouse and an orchard. Students leave these schools with very specific knowledge in such fields, ready to enter the labor market or to start their own business.

4.4. Case studies (Banja Luka Grammar School – same educators but different curricula; University of Mostar – training of educators in accordance with European trends)

In Sarajevo, Mostar and Banja Luka, the so-called International Baccalaureate (IB) program has been

36 Innovative practices of learning and teaching, document available at: [https://www.openeducationeuropa.eu/sites/default/files/legacy\\_files/asset/In-depth\\_30\\_1.pdf](https://www.openeducationeuropa.eu/sites/default/files/legacy_files/asset/In-depth_30_1.pdf)

37 <http://inskola.com/odabrano-50-inovativnih-praksi-u-2017-godini/>

in place for years, run under the international program of the IB Organization<sup>38</sup>. This program is implemented under the same roof with the so-called national grammar school programs. For the most part, it is also implemented by the same educators that teach in the national program; however, in the IB program, they are obliged to work in a completely different manner, for which they are additionally trained. The IB program is based on the multidisciplinary and multicultural approach, developing critical thinking, stimulating social values of volunteering and socially-beneficial work, as well as constant linking of the school knowledge with real life problems.

A longitudinal study carried out by the Faculty of Philosophy and the Republika Srpska Society of Psychologists, under the sponsorship of the Republika Srpska Ministry of Science and Technology and the Open Society Fund in BiH, was implemented in the period from 2015 to 2017 in the Banja Luka Grammar School, with the goal to present differences in student competencies that can be produced by radically different curricula and programs carried out by the same educators. Even though a detailed analysis of this study's results is still underway, preliminary results can provide us with some interesting insight. Having analyzed the learning objectives and outcomes for the courses that are common to the curricula of the national and the international grammar school in Banja Luka, the authors<sup>39</sup> have inferred that the curriculum of the national grammar school has abundance of educational contents that students need to learn through a myriad of courses in natural, social, humanist and technical sciences, with learning outcomes that focus on mere understanding of such notions.

The analysis has depicted the picture that the basic objective of such program is to make the students into obedient citizens, who will memorize the data without questioning them, where the tendency is for them to only get the basic understanding, and inspire no desire, ability or knowledge to ever use

38 <http://www.ibo.org/>

39 The authors of this study are Tutnjević, S., Lakić, S., and Zečević, I. Two of them are also the authors of this analysis, while the third gave his permission to disclose part of the preliminary results. The final results will be presented to the public in 2018.

them. Hence, the objective might be to turn people into databases in the 21st century. This result, of course, is not in accordance with the objectives of the secondary education and upbringing in the Republika Srpska.

When it comes to the analysis of curriculum of the international grammar school, an entirely different picture is portrayed. Programs for each course are devised in much more detail, with harmonized learning outcomes and objectives, not only for individual courses but for groups of courses as well. Students have practically half as many courses as students in the national program, but heavier burden to bear, in terms of requirements placed on them, measured by the knowledge and skills they acquire rather than the number of information (some courses from the national program exist as such in the IB program as well, while other IB courses combine several different courses from the national program). The learning process is active and students acquire not only theoretical but also practical knowledge. Every science becomes meaningful in this way. Students are not only expected but they are required to use the latest technologies for the purpose of gathering information they use in schoolwork. Although books can be a good starting point for learning, a computer is the fundamental working tool for knowledge acquisition in the IB program. Students are not passively limited to one book per course (referring primarily to textbooks), but they learn that information today is gathered in various ways and that not all information is useful. Nowadays, it is very important to teach students how to select from a myriad of different information that which is accurate and useful.

Even though data analysis is still under way, which means that this information must be taken with reservations, preliminary results of the student testing indicate that after two years of attending the IB program, students, on average, have better developed skills of critical thinking than their peers who have attended regular program during that time. Furthermore, certain more recent studies<sup>40</sup> suggest that critical thinking constitutes

40 <https://digest.bps.org.uk/2017/07/21/why-some-smart-people-make-foolish-decisions/>

the key ability for making good decisions in life, being even more important than intelligence. Even though these results are incomplete, which is why they should be taken with reservations, when it comes to curriculum, it is likely that the students who complete these two programs will be substantially different in terms of competencies acquired at school.

The authors have concluded that the program of the international grammar school is the program that stimulates development of a healthy persona that is capable of critical thinking, making logical connections and inferences, being creative in the domains of their interest, making choices and taking responsibility for consequences thereof. The national grammar school program constitutes slippery ground, which only in the hands of a skilful educator can break away from the outdated principles that were in place in the early days of education. However, in this struggle to conceive adequate working techniques aimed at achieving the set objectives, educators in the national grammar school have one very important enemy - time, i.e. the number of course hours, which certainly does not work in their favour. Perhaps "less is more" should be the new motto for the creators of educational policy here.

## 5. Research main findings and recommendations

Without any desire for this analysis to go into political issues or BiH administrative structure, even at first glance it is clear that the institutional framework for the development of education system in BiH is extremely complicated and economically irrational. Abundance of ministries, various agencies, institutes, commissions and conferences are intertwined and overlapping in terms of their competences, making any attempt of systematic approach to educational reform exceptionally complex, sometimes even impracticable. On the other hand, curricular reform and reform relative to training of teachers and educators are urgently needed in all parts of the state. This recommendation primarily refers to all competent ministries of education and pedagogical

institutes. Total spending on elementary and secondary education in BiH, viewed as percentage of GDP, is in line with the EU average. However, the absolute amount of the spending is substantially smaller than in most European countries.

Furthermore, in BiH, unlike other European countries, there is a particularly high percentage of salary expenses in the total spending on education, limiting the potential for urgently required investment into modernization of the teaching process, procurement of new equipment and tools, as well as life-long training and vocational training for teachers and educators. In this regard, the financial framework for elementary and secondary education in BiH (at entity and cantonal levels) should be formulated so as to uphold the principle of efficiency and to reflect adequate structure in terms of the spending on employee salaries and investment into the needed modernization of schools and the teaching process. It is of particular importance for the upcoming period to, in a timely manner, secure the funds needed for regular participation of BiH in international assessments/researches that compare the outcomes of student education post elementary education (TIMSS and PISA), which, unfortunately, has not been the case to this date. Redefining the financial framework implies a new salary policy in the education sector, where the number of educators should be set based on the needs of the teaching process and the students, and to constitute a sufficient motivating factor when it comes to engaging the existing educators and influencing the structure of future students at the faculties of teacher education in BiH.

As for elementary education, when it comes to learning outcomes and teaching notions in the curricula, one has the impression that it is not formulated to stimulate development of logical, scientific, abstract and critical thinking in children, as learning outcomes predominantly anticipate the lowest level of knowledge, such as memorizing facts and their mere understanding, in terms of being capable of retelling them in their own words. The focus of the creators of the curricula on the contents learned rather than on student competencies has led to students being pressured into absorbing large quantities of scientific data, without understanding

their essence or application in everyday life. Therefore, it is important for education authorities to focus on making new curricula and to be guided in this process by the present time; the time that school children are growing up in, as well as by the competencies they should have when leaving elementary education.

Despite numerous attempts to harmonize educational objectives with the needs of the labor market, students with completed secondary education still lack all required skills and knowledge that they need to find a job in their profession. It is necessary to continuously link the learning process with the market needs. For vocational schools, the key is to have ongoing partnership between a school and a potential workplace, while the option of introducing dual education is one of possible ways for improvement. Schools that offer general education, need to have more flexibility in their curricula, less requirements in terms of memorizing and reproducing, and more application and linking the coursework with actual life problems. Even though this recommendation can and should be implemented even by the lowest instances of power (such as directors of specific vocational schools in terms of securing practical education for their students and acquiring knowledge they can use in real life), it primarily refers to competent ministries of education which are the primary authors of education policies.

At the time when information are available to students at least as much as they are to educators, often even more, textbooks are insufficient as teaching tools, with other forms of learning becoming a necessity. European countries, as well as creative individuals in our country, have already understood this, so they use all available information sources in innovative ways, in order to improve the teaching process. It is necessary to teach children how to gain new knowledge and skills on their own, through their own discovery, how to critically examine and select from among myriad of information available to them, and how to use their knowledge in the context of actual problems. On top of textbooks, for both students and educators, the learning tools must include information available on the internet, various forums and "clouds"

on which knowledge, working methods, ideas and innovations are constantly created, shared and multiplied. Social networks, tablets and phones must be treated as learning tools rather than as prohibited or bad things per se. This recommendation is probably the most usable, because the experiences show that every teacher, ready to seriously and creatively devote himself/herself to the profession, and step out of the traditional framework of teaching process, can adopt this without needing additional financial resources to do it.

Still, in order for changes to be done systematically, the recommendation primarily refers to the teaching staff in universities, and primarily on the staff teaching psychological, pedagogical, didactics and methodology group of courses, and in pedagogical institutes organizing continuous teacher education.

The initial education of educators in BiH is still focused on the contents and not based on learning outcomes and competencies, which means that when planning courses in curricula, outcomes and competencies, which means that when planning courses in curricula, the creators are focused on what students, future educators, should learn rather than what they should be competent for. In this way, we educate staff that is not capable of adapting to student needs and the differences among them.

The initial education of educators in BiH must be transformed, in terms of change in the approach to education of future educators, and curricula should move away from the contents learned and be formed in relation to competencies that an educator should have. This means that university education of teachers should include a multitude of courses in the field of pedagogy, psychology, didactics and methodology. Nowadays, at the time of information and communication technology, it is much more important for educators to be able to teach students how to learn and seek out information, how to use the information, as well as how to train them for self-education and raise their awareness of the importance of continuous development.

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