Funded by the European Union

WORLD BANK GROUP

Bosnia and Herzegovina

Functional Review of Education Service Delivery

Phase II: Strengthening Institutions to Create a More Effective Education Workforce

March 2021

Abbreviations

APOSO	Agency for Preschool, Primary, and Secondary
BAM	Bosnia and Herzegovina convertible mark
BHAS	Bosnia and Herzegovina Agency for Statistics
BiH	Bosnia and Herzegovina
CCC	Common Core Curriculum
DepEd	Department of Education
EC	European Commission
ECA	Europe and Central Asia
ECE	Early childhood education
EU	European Union
FBiH	Federation of Bosnia and Herzegovina
FTE	Full-time equivalent
GDP	Gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HCI	Human Capital Index
HDI	Human Development Index
HLO	Harmonized Learning Outcomes
ILOSTAT	International Labour Organization Statistics
LSG	Local self-government
MEC	Ministry of Education and Culture
MES	Ministry of Education and Science
MoE	Ministry of Education
NEET	Not in education, employment or training
OECD	Organization for Economic Cooperation and Development
PISA	Programme for International Student Assessment
PS	Primary School
Q2	Second quarter
RS	Republika Srpska
STEM	Science, technology, engineering and mathematics
STEP	Skills towards Employment and Productivity
STR	Student-teacher ratio
TIMSS	Trends in International Mathematics and Science Study
TVET	Technical and vocational education and training
UMICs	Upper-middle income countries
UN	United Nations
UNDP	United Nations Development Programme
USAID	United States Agency for International Development

Acknowledgements

Table of Contents

Executive Summary

Strengthening the quality of education is an imperative for social and economic development in Bosnia and Herzegovina (BiH). In support of this objective, the World Bank has concluded a two-stage functional review of the pre-university education sector. Phase 1 focused on financial resources and efficiency of service delivery, and this report presents results of Phase 2 which focuses on the quality and effectiveness of the education workforce.

Preschool enrollment in BiH is especially low at a mere 15 percent; also, the distribution of education spending is inefficient and inequitable, disproportionately skewed towards personnel leaving little room for school improvement. Still, teachers, the main resource that education systems deploy to support and enhance student learning, lack the necessary support structures to improve performance. Furthermore, the impacts of COVID-19 on the education system exacerbate preexisting challenges and inequities, requiring special attention to restore services and recover learning losses. In line with the issues, this functional review has considered four key school-level elements critical for learning: prepared learners, learning-focused inputs, effective teaching, and skilled management and governance that pulls them all together.

Regarding *prepared learners*, there is a clear need to address learning recovery efforts in response to COVID-19 and its impacts on quality of learning. This could involve learning recovery programs like accelerated learning or tutoring, support for learning at home through greater access to learning materials, and systems for monitoring and tracking reintegration, learning and health of all students. Expanding access to pre-primary education and early learning opportunities and increasing the amount of instructional time in basic education will also be important to guarantee students in BiH the maximum opportunity to learn.

Regarding *school inputs,* this review recommends steps to reform the school funding framework through per capita financing of schools to improve efficient use of resources and move away from the current input-based funding model, while also giving schools opportunity to manage a portion of funds in support of their school development plans. Additionally, further investments in digital technologies and digital skills to enhance the ability of schools and teachers to reach all students—particularly in the aftermath of COVID-19—are warranted.

Regarding *teachers' careers*, this report recommends aligning teacher careers with effective personnel management, including the implementation of a competency-based professional standards for teachers. Starting by adopting the standards that have been already developed is the natural first step. Equally, it advises to use these standards as the basis for decisions regarding teachers' careers. It also recommends improving guidance, support and resources for mentor teachers, which are currently limited. Further training for teacher mentors should also be a key component of further initiatives in this area.

Recommendations to enhance *teachers' skills and practices* include the introduction of new forms of classroom observations to improve effective monitoring of teacher performance. The review found that classroom observation is today hindered by the implementation capacity of Pedagogical Institutes and schools. A greater focus on practical tools to support classroom observation could be adopted widely across jurisdictions and would strengthen capacity to monitor teacher

performance while serving a formative purpose. Equally, an expanded use of external student assessments is recommended as these are generally not available with the exception of international assessments. BiH needs to invest in well-designed external student assessments as without such standardized information policymakers are operating in the dark. Existing institutions could lead this effort, building on previous similar initiatives. The report also recommends expanding opportunities for continuous in-service training for teachers, including by enhancing capacities of Pedagogical Institutes and through school-based CPD; and to rely on technology wisely to enhance the ability of teachers to reach every student, particularly in context of COVID-19 and its impacts on teaching and learning in BiH.

Finally, the review considered *management at the school and system levels.* At the school level, school leadership functions need to be strengthened and professionalized. The role of school principals is limited to administrative functions, despite the great potential for improving student learning outcomes as result of stronger instructional leadership in schools. Defining a framework of leadership competencies would be a first step, as is linking principal appraisal criteria to school leaders' professional competencies and school performance. The development and use of report cards and other information tools would also strengthen the foundations for data-driven decision making at the school and system levels.

Quality and capacity of management practices at the education system level are also critical drivers of workforce effectiveness and ultimately learning outcomes. In BiH, the decentralized nature of education service delivery means in practice that many professional functions are duplicated across different jurisdictions (see Annex 4). While this cannot be resolved easily, the report provides recommendations for further development to improve capacity and alignment within the education bureaucracy. First, the rationalization of currently conflicting functions in Pedagogical Institutes, as well as an increase to their independence and collaborative resources; then further investments in harmonized information systems and an improved use of technology for data collection and processing, including as an early warning system to prevent student dropout and support further learning; third, to strengthen the capacity and motivation among staff of Ministries and Pedagogical Institutes through interventions that enhance supportive management practices and empower the bureaucratic level of staff with improved trust and working conditions.

I.   Introduction and Background

1. **The World Bank has been supporting the Governments of Bosnia and Herzegovina's (BiH) priority to strengthen public performance and enhance quality in the provision of education and other social services.** In December 2017, the World Bank and the European Commission signed an Administration Agreement to support the Governments of BiH with public sector management reform. The objective of the trust fund (TF072973, P161587) that accompanies the agreement is to strengthen public employment controls in BiH in line with obligations outlined in the Reform Agenda (the Action), where the Action is focused on the implementation of the Reform Agenda (2015-2018) of BiH and the subsequent Reform Agenda 2019-2022 and support efforts of the BiH Council of Ministers, Government of the Federation of Bosnia and Herzegovina (FBiH), and Government of Republika Srpska (RS) to strengthen public performance and enhance quality in the provision of services delivered to its citizens.

2. **Within this context and the existing strategic and legislative framework for education in the jurisdictions of BiH, the World Bank has concluded a two-stage functional review analysis of the pre-university education sector.** The functional review analysis focused on pre-university education given that this sub-sector accounts for the vast majority of students and teachers in the education systems of BiH, as well as about 75 percent of the fiscal resources dedicated to education, and that data on the quality of learning outcomes from basic education in BiH underscores an urgent need to strengthen service delivery in pre-university education. As such, the two-stage functional review was designed to provide policymakers in BiH with a comprehensive analysis and recommendations for both the governments in FBiH and RS to improve delivery of pre-university education focusing on efficiency, access, and quality.

3. **The framework for the BiH education functional review is based on a simplified model of key school-level ingredients for learning: prepared learners, learning-focused inputs, effective teaching, and skilled management and governance that pulls them all together.** This framework for the functional review is adapted from the World Bank's 2018 World Development Report (WDR) *Learning to Realize Education's Promise*. As noted in the WDR's extensive analysis of education systems across the world, struggling education systems lack one or more of the four key school-level factors that directly impact learning (see Figure 1). Using this framework, Phase 1 of the functional review (Report No. 142644) looked in detail at issues of resource efficiency and coverage, while Phase 2 (presented in this report) looked in detail at effectiveness of the education workforce.

Figure 1: Framework for the BiH Education Functional Review
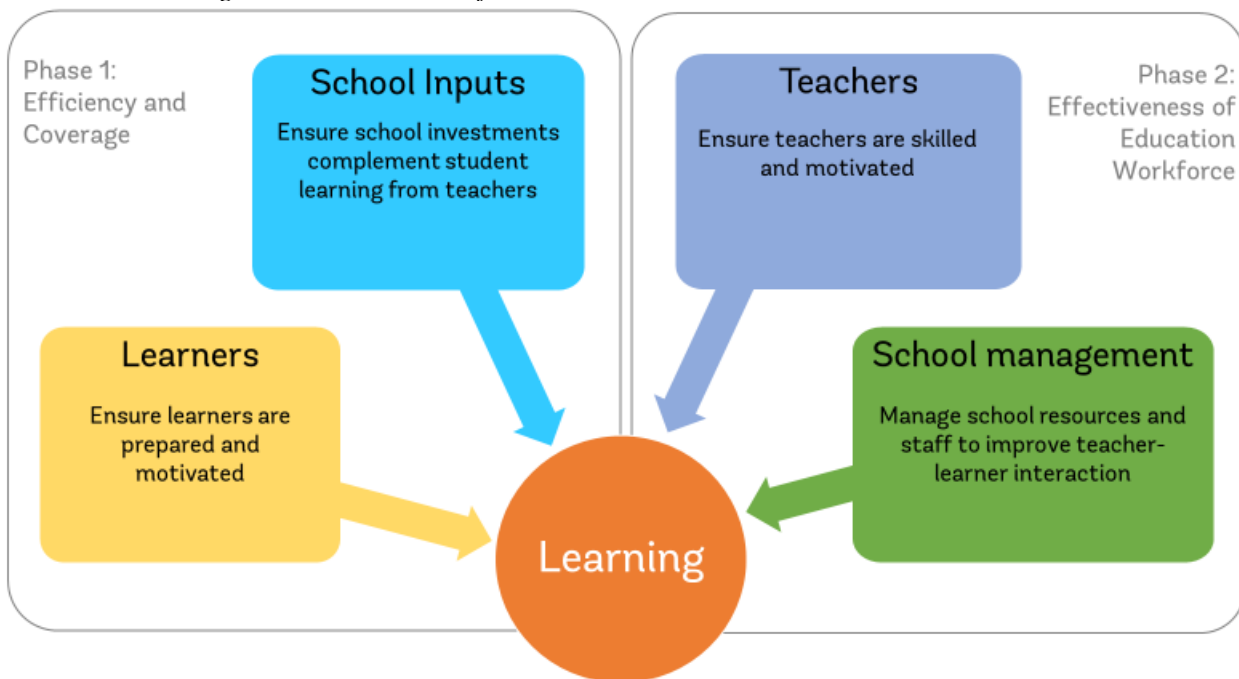
Source: Authors' elaboration, adapted from World Development Report 2018

4. **In particular, Phase 1 focused on financial resources and the efficiency of service delivery in pre-university education.** The Phase 1 report provided updated analysis on sector priorities, demographic trends, coverage, system performance and education outcomes, with a focus on the current distribution of resources in pre-university education in selected entities and cantons. The analysis was presented to stakeholders in October 2019 and disseminated publicly and online.[1] Highlights are summarized in the section below.

5. **Phase 2 of the analysis, presented in detail in this report, focused on the quality and effectiveness of the education workforce.** Informed by results obtained in Phase 1, this analysis presents an in-depth analysis of quality of service delivery of the education workforce in various selected jurisdictions within the country: RS, as well as four cantons of FBiH (Sarajevo, Tuzla, West Herzegovina and Herzegovina Neretva) which were identified based on their potential for efficiency improvements, authorities' commitment and preparedness, feasibility of design and implementation, and representative coverage of the country's three major ethnic groups ("constituent peoples" as defined in the Constitution of Bosnia and Herzegovina).

6. **This report is structured as follows:** the remainder of this section summarizes the Phase 1 results and further details on the methodology and objectives for Phase 2. Section 2 frames the focus on the education workforce within the larger context of learning outcomes in BiH, particularly within the context of the impacts of COVID-19 on education systems and student learning. Section 3 articulates the enabling policies for workforce effectiveness and quality in detail and summarizes findings from the in-depth policy mapping conducted in selected jurisdictions of BiH; and finally, Section 4 provides recommendations.

---

[1] www.worldbank.org/bihedu

Key findings and conclusions on education spending and resource efficiency

7. **The findings from the research done during Phase 1 showed that low and declining levels of efficiency in the education systems of BiH represent a major barrier to any effort to improve the quality of learning outcomes.** In recent years, despite decreasing enrollment and some efforts to reduce the number of schools in primary and secondary education, the number of teachers has increased in both RS and FBiH. Consequently, current student-teacher ratios and average class sizes are below international benchmarks for all levels of pre-university education, especially in primary education. There are also notable variations across cantons and municipalities indicating inefficiencies.

8. **Declining student-teacher ratios and class sizes have not translated into an expansion of preschool education coverage, and the enrollment rate is especially low at a mere 15 percent.** This is far below the preschool enrollment rate in neighboring countries in the region (e.g. over 60 percent in Croatia and Serbia) and well below the European Union (EU) goal of 95 percent of children between the ages of 4 and 6 participating in preschool education, according to the Europe 2020 Strategy. There is a state-wide strategy for preschool education, and preschool education in the year prior to starting primary education is compulsory according to the 2003 Framework Law on Preschool Education in Bosnia & Herzegovina. However, compliance varies across education authorities. One year of preparatory preschool education for children aged 5 to 6 is compulsory in 7 of 10 cantons in FBiH, but it is only recommended as optional in RS, Brčko District, and the remaining 3 cantons.[2]

9. **Additionally, the distribution of education spending is inefficient and inequitable, being disproportionately skewed towards personnel which leaves little room for needed investments to improve quality of service delivery.** At 4.6 percent of gross domestic product (GDP), BiH spends more than some peers in the region, but less than the EU and Organization for Economic Cooperation and Development (OECD) averages of 5.1 and 5.2 percent, respectively. Per student spending relative to GDP per capita is also relatively high in BiH, compared to other countries. Nevertheless, there are notable variations in per student expenditure across entities and cantons. At 91 percent in FBiH and 87 percent in RS, personnel spending represents a large share of total spending, higher than the average in EU and OECD countries. This leaves little room for capital investments and other inputs that could improve learning, including preschool education for which there is high demand in BiH. The percentage of non-teaching staff is also nearly one-third of personnel costs, indicating that a large share of spending funds auxiliary work in schools that does not directly contribute to teaching and learning.

10. **Teachers and other education sector staff are the main resource that education systems deploy to support and enhance student learning, and salaries represent the vast majority of spending in the sector, yet structures in place are not well-designed to support or improve teacher performance.** Teachers are paid higher than the average private sector salaries and on par with the public sector in BiH, which contributes to the attractiveness of the profession, but wages are not tied to performance, which itself is not measured systematically. This points to the need to investigate the structural incentives and functional setup of the

---

[2] Popić & Džumhur (2019); USAID (2016); MoCA (2018).

education system that determines quality and effectiveness of the education workforce. Such issues are discussed in detail in Section 3.

11. **Fragmentation and the nature of decentralization in the system perpetuate inefficiencies and inequities across levels of education.** BiH has fourteen government bodies responsible for education in a country of just 3.3 million people and 422,645 students. The administrative costs of such a system are prohibitive and help to explain the fact that a high percentage of education funding is allocated to salaries. Furthermore, the decentralization of education in BiH has resulted in a highly inefficient allocation of school resources, with significant disparities in per pupil funding between entities and cantons and by level of education. The lack of a central authority to legislate or impel lower bodies to act has created a fractured, uncoordinated system, and the state-wide level of government has limited authority to address issues of efficiency, quality, and equity in the system. Annex 4 contains a diagram of the governance structure of the education systems in BiH.

Phase 2 Objectives and Methodology

12. **The Phase 1 functional review findings suggest that the level and distribution of education inputs are inefficient and inadequately focused on raising learning levels.** Resources are predominately deployed in the form of a disproportionately high share of spending on staff salaries and a high share of non-teaching staff working in schools. Analysis also indicates that other key inputs which are important for learning and student engagement may be insufficient. These include: (i) a relatively modest amount of compulsory instructional hours in basic education, (ii) limited teacher support structures, with few opportunities for professional development and limited teacher collaboration, and (iii) limited academic and career guidance counseling in schools.[3]

13. **Given these findings, Phase 2 focused on institutional conditions at the system and school level that affect the efficiency and effectiveness of *human resources* in the education workforce.** In particular, Phase 2 focused on assessing several key institutional characteristics that affect the management and effectiveness of the education workforce, particularly teachers and school directors, and benchmarking those against comparators. Such institutional characteristics fall into four categories:

    a. *System-level teacher policies* governing teacher careers and management, which have direct impacts on teacher skills and practices in the classroom
    b. *System-level policies related to school leadership, autonomy and accountability* governing the allocation of functions at the system and school levels, and of oversight responsibilities
    c. *Managerial practices at the system level* driving the allocation and organization of work within the education bureaucracy, namely Education Ministries and Pedagogical Institutes in BiH; and
    d. *Managerial practices at the school level* driving the allocation and organization of work within schools.

---

[3] PISA 2018 results indicate that BiH is an outlier in terms of having a very low share of students – less than 10 percent – in schools that provide career guidance (compared to the OECD average of 60-65 percent).

Note on defining the "education system": Given the governance setup within the education systems of BiH, the term "system" in this report refers primarily to the level of government that is responsible for education policymaking and implementation: the entity-level government in RS, the cantonal governments for the 10 cantons that comprise the Federation of BiH (FBiH), and the district government for Brčko District.

14. **Phase 2 has focused on a subset of education systems within BiH to allow for in-depth policy analysis**. The jurisdictions of RS, as well as Sarajevo Canton, Herzegovina-Neretva Canton, West Herzegovina Canton and Tuzla Canton were selected in order to allow for a deeper and more focused analysis of institutional characteristics while recognizing the significant limitations of administrative data in BiH. These five jurisdictions were specifically selected based on four criteria:

    a. *Population*: These jurisdictions together comprise two-thirds of all primary school students and teachers in BiH, thereby representing a large sample of the country's education systems and of the education workforce.
    b. *Variation in Spending*: These jurisdictions represent a range of government expenditure in terms of (i) total per student spending in both primary and secondary education, (ii) personnel spending as a share of total spending, (iii) non-teaching staff salaries as a share of total spending in primary schools, and (iv) teachers' monthly salaries.
    c. *Ethnic Composition*: This selection of jurisdictions ensures representation of all constituent peoples of BiH.
    d. *Engagement with the Bank:* The Bank team has had direct engagement and received data from the majority of these jurisdictions. The Bank team also received letters of support from the Ministry of Civil Affairs, FBiH Ministry of Education and Science (MoES), and the cantonal Ministries of Education in the four above-mentioned cantons.

II.   The Context for Learning Outcomes

Learning outcomes

15. **Through the state-level Agency for Pre-Primary, Primary and Secondary Education (APOSO), BiH has participated in two recent large-scale international education surveys: Trends in International Mathematics and Science Study (TIMSS) 2019 and Program for International Student Assessment (PISA) 2018.** Both of these recent student assessments are particularly valuable for evidence-based policymaking given that there are no other state-wide assessments of student learning in the country. Furthermore, they provide information at two points in the system: TIMSS 2019 measured mathematics and science achievement of Grade 4 students (age 9 on average) according to the prevailing curricula, while PISA 2018 measured mathematics, science, and reading achievement for 15-year-old students, primarily enrolled in Grade 10, which is the first grade of secondary education.

16. **Results of the latest round of TIMSS 2019 for mathematics and science achievement show that 60 percent of Grade 4 students in BiH are failing to meet or exceed the low benchmark for achievement.** This is substantially higher than many other comparator countries in the Europe and Central Asia (ECA) region, as well as the international median of 29 percent of students at or below the low benchmark (see Figure 2 below). For science achievement, the situation is similar: 22 percent of students fail to reach even the low benchmark for science, and another 34 percent reach the low benchmark as their highest level of achievement, for a total of 56 percent of students in the country. This is in stark contrast to Bulgaria and Serbia (29 percent) and Croatia (20 percent), where relatively fewer students do not surpass the low achievement benchmarks.

Note on TIMSS 2019 International Benchmarks: The *Low* benchmark for mathematics means that students have some basic mathematical knowledge and the ability to add, subtract, multiply, and divide one- and two-digit whole numbers. They can solve simple word problems. They have some knowledge of simple fractions and common geometric shapes. Students can read and complete simple bar graphs and tables. At the *Intermediate* benchmark, students can apply basic mathematical knowledge in simple situations. At the *High* benchmark, students can apply conceptual understanding to solve problems. At the *Advanced* benchmark, students can apply their understanding and knowledge in a variety of relatively complex situations and explain their reasoning.

Source: International Association for the Evaluation of Educational Achievement (IEA) (2019).

Figure 2: Percent of Grade 4 students reaching international benchmarks for mathematics achievement in selected ECA countries (TIMSS 2019)
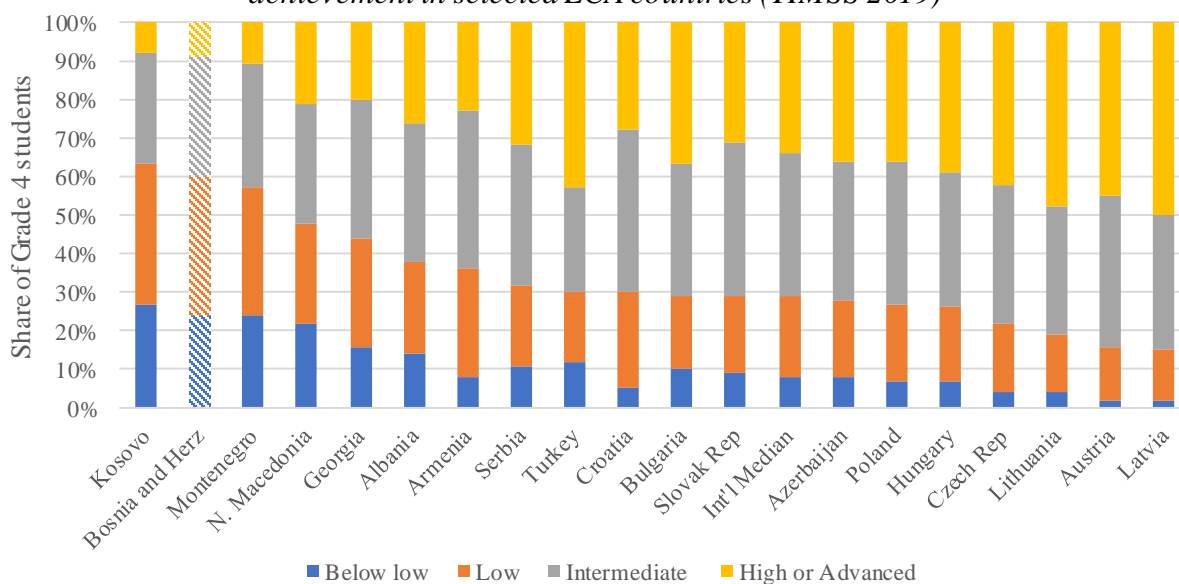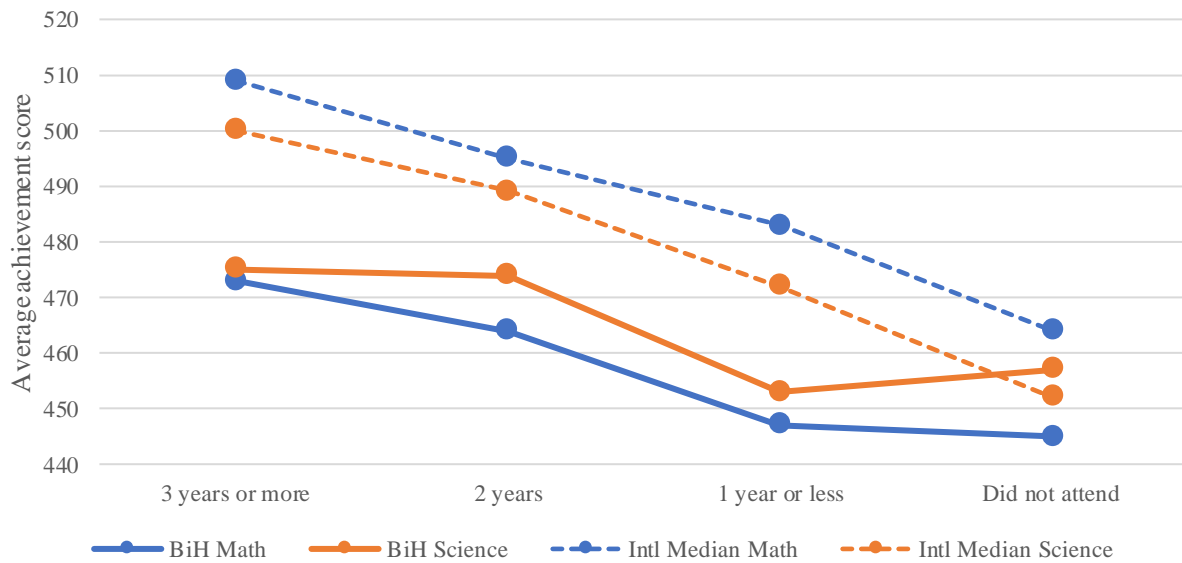

Source: Authors' analysis using TIMSS 2019 data.

17. **TIMSS 2019 results also show the clear positive relationship between pre-primary education and learning achievement for students in BiH.** Internationally, the results show

a strong positive relationship between years of pre-primary education and achievement in Grade 4 for both mathematics and science. This is consistent with literature on the impacts of pre-primary education.[4] The relationship between pre-primary education and Grade 4 achievement is not as strong for BiH (see Figure 3 below), which likely reflects both lower coverage (only about 30 percent of Grade 4 students in BiH had more than 1 year of pre-primary education) and differential levels of quality in pre-primary service delivery. Even so, the relationship is clear and further underscores the need to expand enrollment in high-quality pre-primary education in BiH.

Figure 3: Relationship between Pre-Primary Education and Grade 4 Achievement (TIMSS 2019)

Source: Authors' analysis using TIMSS 2019 data.

18. **PISA results from BiH's participation in 2018[5] highlight similar achievement gaps, with over half of 15-year-old students below basic proficiency, suggesting that learning deficiencies which begin early are likely to persist over time.** Over half of the 15-year-old students in BiH failed to achieve the basic competencies required for reading, mathematics, and science, compared to the average of 31 percent for ECA and 24 percent for EU countries. Students in BiH performed slightly below the average of countries in its income group. There are significant achievement gaps between students from the top and bottom income groups with the latter lagging by 65 PISA points (almost equivalent to one and a half years of schooling). Additionally, students from urban locations outperform their rural peers with 47 percent of students in urban areas achieving basic proficiency in reading as compared to 33 percent in rural areas.

---

[4] For example, see Naudeau, et al. (2011); Berlinski & Schady (2015); Britto et al. (2016).
[5] The country participated in PISA for the first time in 2018, covering about 82 percent of 15-year-olds in the country.

Figure 4: PISA performance and GDP per capita (PPP constant USD)

GDP per Capita 2018 (or latest), PPP (constant 2011 International $), World Bank ICP
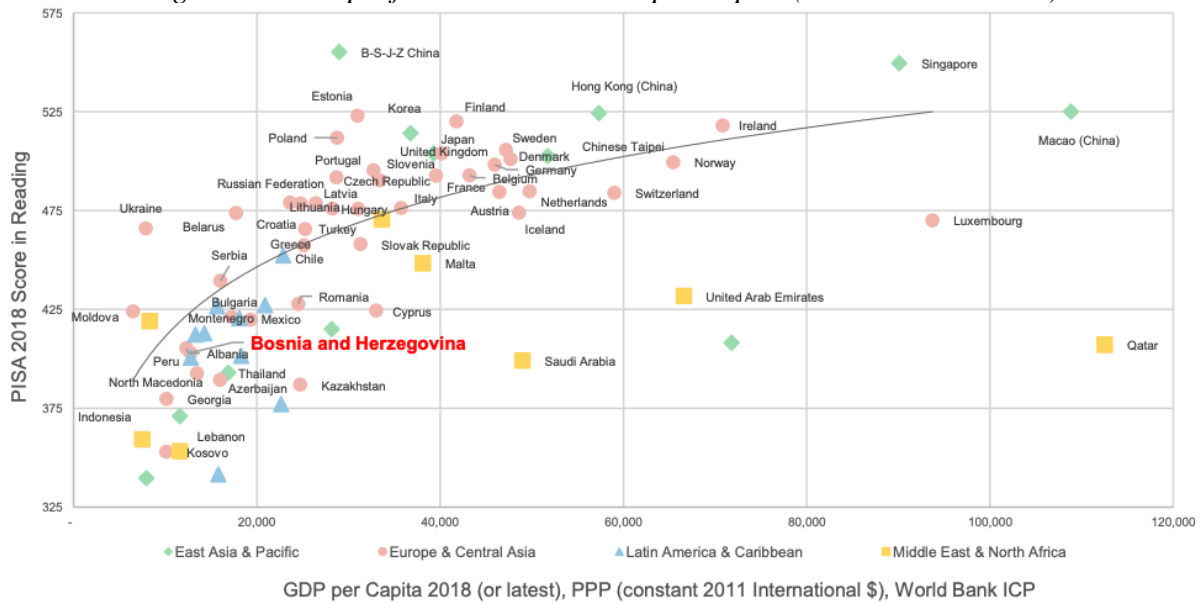
Source: Authors' analysis using PISA 2018 data.

19. **BiH's performance was also slightly below expected results based on the country's level of development.** As shown in Figure 4 above, the average reading achievement performance in BiH was lower than what would be predicted based on the country's level of economic development, measured by GDP per capita (PPP constant 2011 international $). Overall results of BiH were of 403, 406 and 398 points respectively in reading, mathematics, and science. BiH scored better than Albania and Kosovo, similar to North Macedonia, and below Montenegro and Serbia. Additional analysis showed some key achievement gaps (in reading), notably socioeconomic gaps (students from the top socioeconomic status (SES) groups outperformed bottom SES groups by 65 PISA points) and gender gaps (girls outperformed boys by 29 points).

20. **Above other structural factors, school socioeconomic status (SES) in particular is strongly associated with differences in student learning outcomes.** PISA 2018 results are presented below for reading, math and science, broken down by urban and rural settings, school size, students' grade level, and average school SES (see Figure). The analysis shows that urban schools tend to outperform rural schools (although the urban-rural gap is smaller than in other countries in the region). Students in smaller schools tend to modestly outperform students in larger schools, which is consistent with international literature on school size effects.[6] Looking instead by students' grade level - given that the PISA 2018 cohort of students in BiH is split between grade 9 (16.2% of 15-year-olds, where such students are still in basic education in primary schools) and grade 10 (83.4% of 15-year-olds, which are attending upper secondary schools) as a result of the entrance age policy – students in grade 10 tend to outperform their younger peers. Even so, the differences in scores across grade levels is much smaller than the gap by school average SES. Students in high SES schools outperform students in bottom SES schools by approximately 75 PISA points, which represents approximately two years of schooling (see Figure 6). This gap is significant, given that comparator countries with higher

---

[6] Luyten, Hendriks, and Scheerens (2014).

levels of socioeconomic inequity in performance also have higher average scores in general (e.g. Bulgaria, Serbia, Croatia, Slovenia). In other words, BiH has relatively high levels of inequity given its average level of overall performance. However, even among students in high SES schools, the average scale score performance is around 440 points, compared to the OECD average of 488 points—a difference equivalent to over a year of schooling.

Figure 5: PISA 2018 results by key school characteristics in BiH
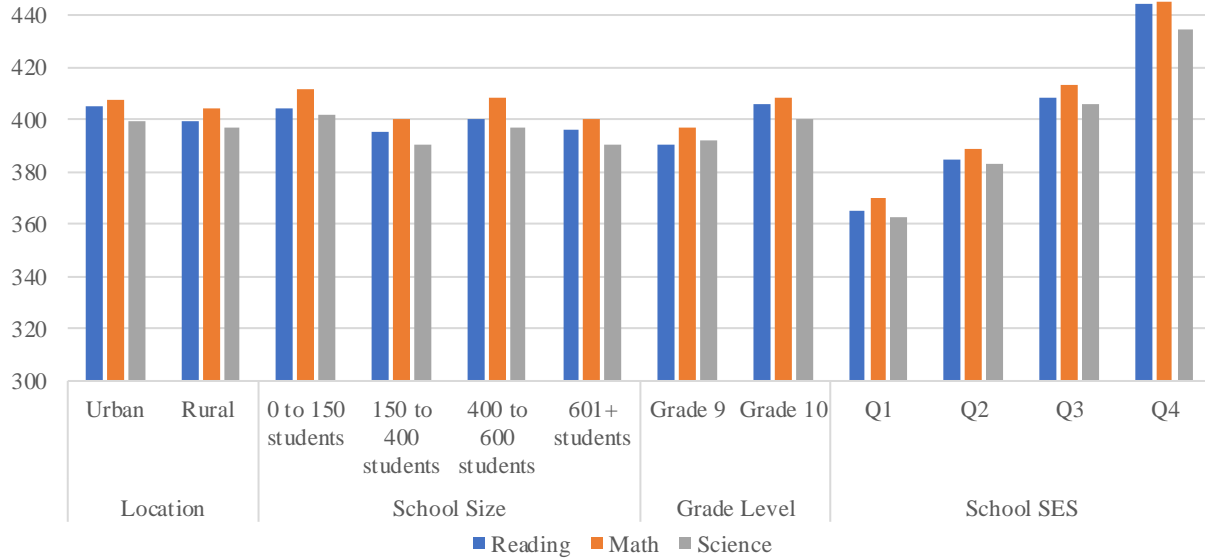
Source: Authors' analysis using PISA 2018 data; data are weighted by student weight at schools.

Figure 6: Equity Gaps in Student Performance Between Top and Bottom Quartiles of School Socioeconomic Status
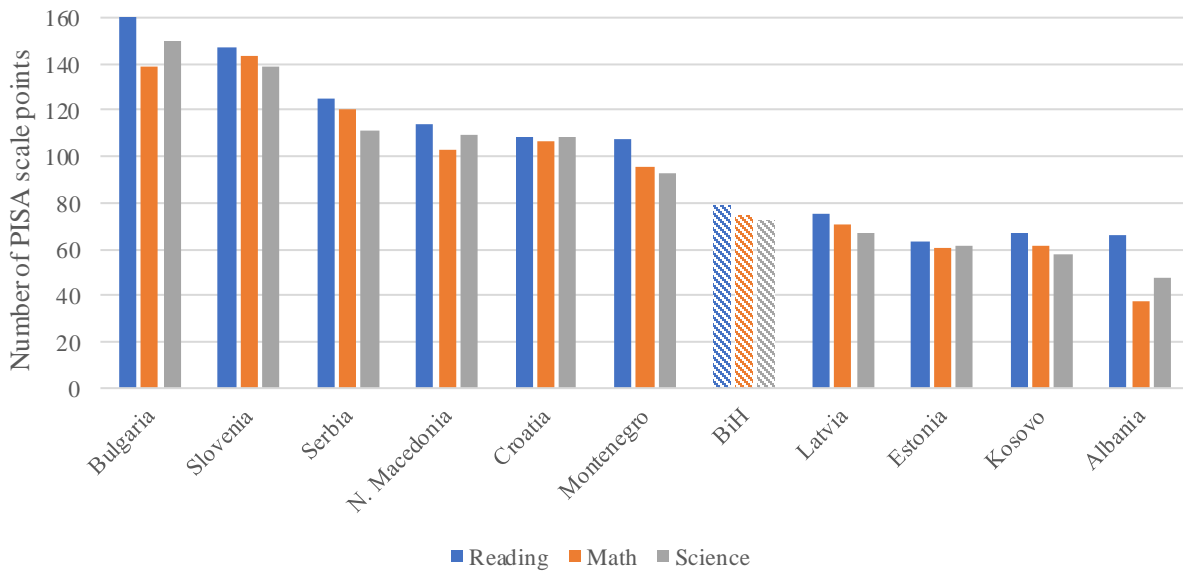
Source: Authors' analysis using PISA 2018 data; data are weighted by student weights at schools. 30-40 points in PISA scale ≈ 1 year of schooling.

Learning losses resulting from COVID-19

21. **Globally, COVID-19 and the associated school closures are expected to result in considerable loss of learning and human capital.** Not attending school has two impacts: students do not learn anything new, and they forget what they had already learned. Experience from previous crises shows that school closures depress learning and disproportionally affect students from disadvantaged backgrounds.[7] The erosion in learning during a long gap in the school year, for example, a typical summer break, has been documented and quantified. On average, during a typical three-month summer break student achievement scores declined by one month's worth of school-year learning, and historically disadvantaged students lose more learning than the rest. Ongoing school closures and resulting learning losses will take months or years to recover from, which will necessitate immediate policy responses to mitigate the impact, especially for those who suffered the most during school closures. Failure to do so will undermine human capital in the medium term and diminish economic opportunities in the long term.

22. **In Bosnia and Herzegovina, the COVID-19 pandemic is expected to result in substantial learning losses and greater potential for school disengagement and dropout.** Before the outbreak of COVID-19, the education system in Bosnia and Herzegovina was struggling to provide high quality education to all students. The closure of schools in March 2020 lasted through the beginning of the 2020/21 school year, when schools in some jurisdictions reopened with changes to schedules, group size, or introduction of blended approaches. Other schools continued with remote teaching, particularly for students in grades 5 and above. Due to the emergency nature of remote teaching initiatives, effectiveness is lower than traditional instruction for various reasons, described in more detail below. Lower-bound estimates[8] suggest that learning in the country will have declined by *at least* the equivalent of 6 PISA points (see Figure 7). Additionally, as most students in the country currently perform around the threshold for functional literacy, and assuming some lose more than others, the estimates suggest that the percentage of students performing below functional literacy may increase by up to 7 percentage points (from 54 to 61 percent).[9] Furthermore, protracted closures and remote teaching may lead to disengagement, with students' ties to their school weakening over time, potentially increasing the risk for school dropout.

---

[7] In the U.S., the impact of the 2007–09 recession on disadvantaged subgroups suggests a long-term small but significant negative impact on test scores attributable to the recession. In 2014 severe flooding in 2014 closed schools in Thailand for up to a month and reduced student achievement, depending on the subject and level, by 7 to 25 percent

[8] Assumptions are based on World Bank estimates of the effects of COVID-19 related school closures on learning outcomes for 157 countries. Simulations use data on learning outcomes, years of schooling, and monthly wages to estimate the effects of school closures in general and across socioeconomic groups. For global and regional estimates, see World Bank (2020 b).

[9] For more detail see http://documents1.worldbank.org/curated/en/590751590682058272/pdf/The-Economic-and-Social-Impact-of-COVID-19-Education.pdf.

Figure 7: Lower-Bound Estimates of COVID-19 Impact on PISA Scores
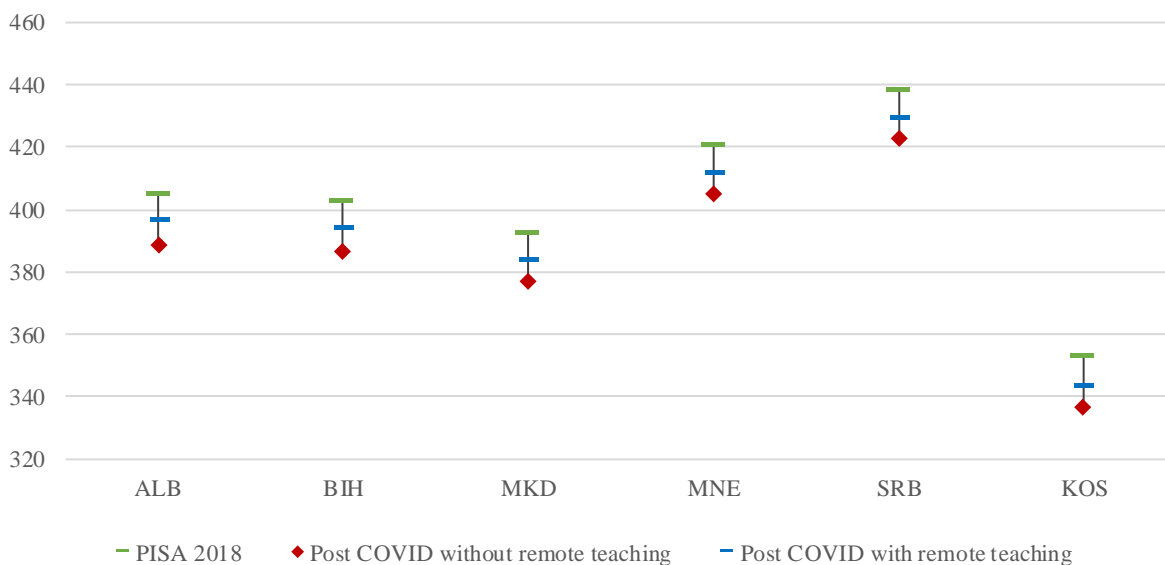
Source: PISA 2018 data and World Bank staff calculations.

23. **This impact is having a marked socioeconomic dimension, with larger losses for disadvantaged students.** In line with the global response to COVID-19, containment and mitigation measures led to widespread closures of education institutions, resulting in a serious impact on children and youth as well as their parents. Mitigation measures included the transition to distance learning, primarily through a combination of online platforms and smart phone applications and e-mail for communication with teachers through digital services. Schools transferred to improvised online teaching methods with varying degrees of success. The hardest hit have been poor children without technological devices or an internet connection and children that live with neglect or in violent homes for whom the likelihood of dropout increased. As mentioned earlier, school socioeconomic status was already a strong predictor of learning outcomes prior to COVID-19, and there was already a significant learning achievement gap between the richest and poorest quartiles of students, equivalent to approximately 75 PISA points. Using PISA 2018 data for access to learning modalities and assumptions on differentiated learning effectiveness[10], the reading achievement gap between the richest and poorest students is expected to increase by 12 percent (from 66 to 74 PISA points) as a result of school closures and less effective remote teaching modalities.

24. **In line with the above estimates, a third of BiH households (33 percent) with children and youth of school age had not attended or received online education during the months of school closures[11].** Of course, access to high speed internet at home and digital devices is a key determinant of households' ability to make use of remote learning modalities: about 73 percent of households in BiH have access to high-speed internet, while about 93 percent of households

---

[10] Estimates assume that remote teaching modalities are 25% effective for the poorest students (compared to traditional face-to-face instruction), 50% effective for the average student, and 75% as effective for the richest students.

[11] UNICEF (2020).

have access to a mobile phone.[12] During the COVID-19 crisis, 67 percent of households with minors had a member who attended school or education in this way. Yet, a significantly smaller percentage of households with members belonging to vulnerable groups (just 32 percent) had a member who attended school or education online. Only 31 percent of the relatively poor households and 30 percent of single parent households had a household member who attended online school or education. On the other hand, 44 percent of respondent households who did not belong to a vulnerable group had a household member who had attended online education since the outset of the pandemic. This further highlights the disproportionate effects of the crisis on disadvantaged households.

25. **Maintaining continuity of education through remote modalities has presented numerous challenges to student engagement, quality of instruction, and access to learning resources.** Online education was mostly perceived as a necessity to respond to the situation and not as a permanent solution. Lower quality of interaction with teachers in the course of online education was cited most frequently by 31 percent of survey respondents, along with poorer organization of learning (24 percent), or general technical problems with online learning (23 percent).[13] The greatest problems faced by younger children and their caregivers when it came to online classes were accessing online platforms and daily supervision. Younger children are not able to access online platforms on their own and find it much more difficult to cope with online lectures. They also tend to benefit more from direct interaction with teachers. The inability to use online platforms on their own implies that caregivers must constantly assist the child with navigating through the online platforms during classes. An online modality of education for young children requires the active participation of a caregiver, many of whom are themselves pressured to work from home in parallel, creating tremendous pressure particularly for women and single parents. The absence of or sharing of technological devices by multiple household members for teleworking, school and homework also has proved particularly stressful.

---

[12] BiH Agency for Statistics
[13] UNICEF and UNDP (2020).

Figure 8: Problems faced during transition to online classes

Problem	Percentage
Lower quality of interaction with teacher in the course of online education	31%
Poorer organization compared to classroom learning	24%
Technical problems related to the use of online platform	23%
Lower quality of online learning materials	19%
Parents do not have the time and/or skills to help children learn	17%
It is difficult to organize additional supervision in learning	16%
Lower quality of interaction with fellow students online	12%
Difficulties in sharing the device with other members of the 8% household	8%
Difficulty accessing assignment materials 5%	5%
Inadequacy of this type of teaching for children with disabilities	2%

Source: UNICEF and UNDP (2020).

III. Enabling Policies for Workforce Effectiveness and Quality

Conceptual Framework

26. **Institutions moderate the relationship between inputs and learning outcomes, particularly those institutional characteristics pertaining to staffing, workloads, and human resource management practices in the education sector.** Evidence shows that institutional characteristics within education systems matter for learning outcomes.[14] Furthermore, there are numerous studies investigating the impact of varying specific inputs in education which show substantial heterogeneity across contexts in what works, what does not work, and why, further suggesting that the institutional environment is critical in moderating this relationship.[15] The 2018 World Development Report also showcases the importance of alignment amongst these institutional characteristics in order to ensure that all elements of the education system are working together to prioritize learning.

---

[14] Hanushek and Woessmann 2011; Woessmann 2016.
[15] Glewwe and Muralidharan 2015

27. **At the same time, research from around the world shows that teachers are the most important school-level factor driving student learning.** Given that salaries for teachers and other staff in schools represent over 90 percent of financial resources in education in BiH, it is important to better understand how teacher policies and practices influence resource use and service delivery. Phase 2 of the functional review of education service delivery used a conceptual framework (see ***Error! Reference source not found.***) that situates student learning at the center. With teachers as the most important resource, teacher policies and practices were analyzed across two domains: (i) teacher careers and management, and (ii) teacher skills and practices. However, recognizing the importance of management at the school and system levels, the conceptual framework also incorporates these two additional domains: (iii) school leadership, autonomy and accountability; and (iv) system management and alignment. These domains are described below.

Figure 9: Conceptual Framework for Workforce Effectiveness in Education
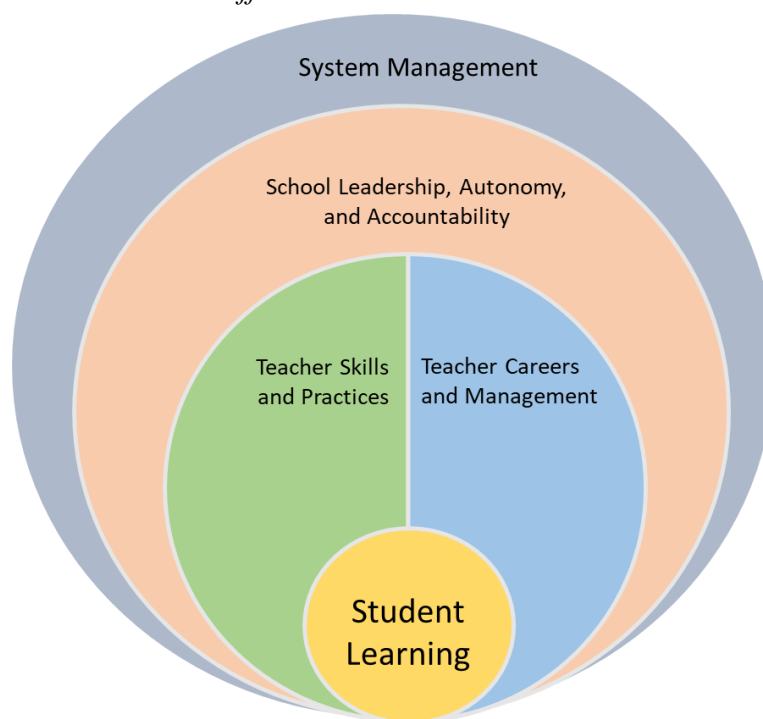
Source: Authors' elaboration.

- **Teacher Careers and Management:** This domain covers policy goals related to teacher professional standards, personnel management, including recruitment, employment, compensation, retirement rules as well as teacher representation and voice.

- **Teacher Skills and Practices:** This domain covers policy goals related to teacher skills and practices, including monitoring and evaluation of teacher quality, professional development, and teachers' workload and autonomy.

- **School Leadership, Autonomy and Accountability:** This domain covers policy goals related to school leadership, autonomy over pedagogical and budgetary aspects of school management, role of the school council, and school and student assessment.

- **System Management:** Finally, this domain covers policy goals related to the education bureaucracy and policy-making environment for the education sector, including learning goals, accountability and mandates, quality of bureaucracy, and impartial decision-making.

Data Sources

28. **The research and analysis for Phase 2 of the BiH Education Functional Review is based on a comprehensive methodological approach and data triangulation and validation, starting with policy mapping.** The conceptual framework considers the prevailing policy framework in the selected jurisdictions, the bureaucratic practices and norms of public education officials, as well as the school-level practices and learning conditions. The analysis of the policy framework (presented below) is adapted from the World Bank's *Systems Approach for Better Education Results* (SABER), which is an initiative to produce comparative data and knowledge on education policies and institutions, with the aim of helping countries systematically strengthen their education systems and the ultimate goal of promoting learning for all.[16] This analysis uses the SABER frameworks for two key domains, namely School Autonomy and Accountability (SAA) as well as Teachers. SABER SAA measures the degree of autonomy and accountability in education system institutions, providing the stage for improving policy dialogue, planning, and implementation. SABER Teachers helps to analyze and identify gaps in teacher policies with the ultimate aim of promoting greater teacher effectiveness and learning for all. **Annex 1: Conceptual Framework: Alignment of Functional Review Domains for Workforce Effectiveness and Education Policy Goals** outlines the mapping of policy goals with the functional review domains for workforce effectiveness, as described above.

29. **In addition to the policy mapping analysis, key findings from PISA 2018 related to school conditions and practices are included throughout the report to ground the policy mapping in evidence regarding Bosnian schools' working conditions and outcomes.** BiH participated for the first time in the PISA in its 2018 edition. A total of 6,480 15-year old students (born in 2002) out of 213 (lower and upper) secondary schools participated. PISA includes two additional questionnaires, one capturing the student background in which students provided information about themselves, their attitudes, dispositions and beliefs, their homes and their school and learning experiences, and a second in which school principals provided information on school management and organization, and the learning environment. For the purpose of this analysis, and to link the policy mapping to "on-the-ground" conditions in schools, the PISA student and principal data are considered for BiH.

30. **Finally, to address the domain on system management and alignment, the Phase 2 analysis involved extensive interviews of education policymakers and staff of Education Ministries and Pedagogical Institutes in four cantons in FBiH.** This survey, which was conducted between September and November 2020, was administered to 49 public education officials in Sarajevo, Tuzla, Herzegovina-Neretva, and West Herzegovina cantons, together comprising about 66 percent of the target audience for the survey (see Annex 2). The Survey of Public Officials is a joint product of the World Bank's Global Education Policy Dashboard and the Bureaucracy Lab. It covers topics related to learning goals in the organization, including aspects of targeting, monitoring, incentives and community engagement; coherence, transparency and accountability of public officials; aspects indicative of the quality of the bureaucracy; and those related to impartial decision making.

---

[16] For more information, see https://saber.worldbank.org/index.cfm.

31. **Today, requirements for entering the teaching profession are high and generally aligned with other European countries, but this has not always been the case, thus shaping the current workforce**. Preschool, primary, and secondary education teachers are required to complete the first cycle of higher education, 180 or 240 credits according to the European Credit Transfer and Accumulation System (ECTS), to gain access to the teaching profession. However, initial teacher education is under the jurisdiction of entities and cantons, and there are no uniform minimal teacher educational requirements between jurisdictions, and requirements for the same teaching position might vary widely among jurisdictions. For example, in some cantons it is obligatory for teachers to have 180 ECTS credits for one teaching position, while in another canton it is necessary to have 240 or 320 ECTS credits for the same position. There is also no uniform system of quality control for teacher training programs. Moreover, historically, there were different entrance requirements to enter the teacher workforce, so the profession contains many teachers with lower levels of training. For example, according to TIMSS 2019, 29 percent of Grade 4 students in BiH are taught by teachers with a post-secondary education, but who have not completed a bachelor's degree. [17]

Figure 10: Students taught by full-time teachers in BiH and comparator countries (PISA 2018)
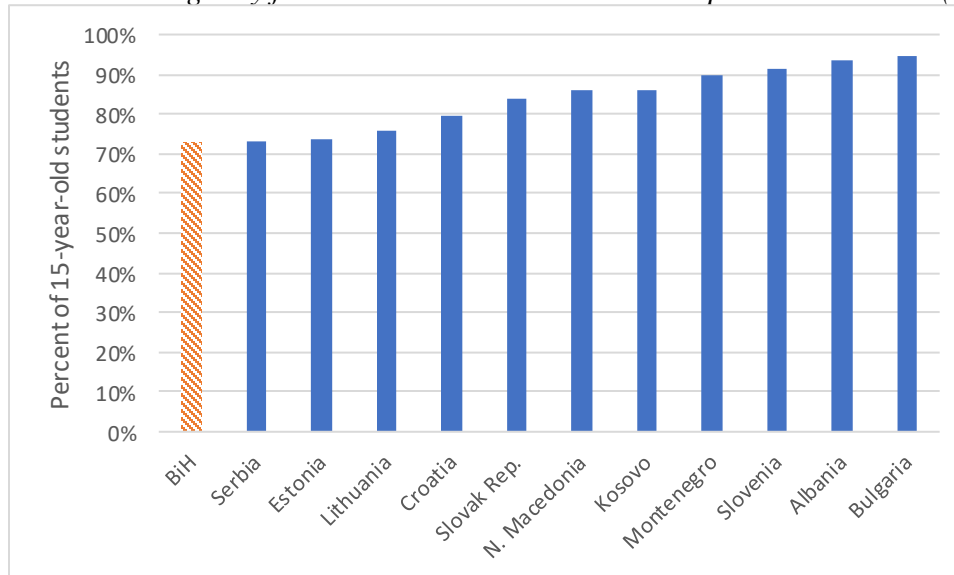
Note: Authors' analysis using PISA 2018 data; data are weighted by student weight at schools.

32. **BiH has a high share of teachers working on a part-time basis.** In FBiH, about 28 percent of primary school teachers are part-time, compared to 21 percent in 2009. RS has a higher share of part-time teachers in primary schools, at 32 percent, but this figure has declined from 40 percent in 2009. In secondary schools, the figures have remained relatively constant over time: about 32 percent of secondary school teachers are part-time in FBiH, compared to 36 percent in RS. This is also consistent with the PISA 2018 results, indicating that about 73 percent of students age 15 years old are taught by full-time teachers, while another 27 percent

---

[17] IEA (2019), Exhibit 9.1.

are taught by part-time teachers (see Figure 10). The share of part-time teachers across cantons is also high except for Canton 10. Such concentrations of part-time teachers and the variations across the country raise questions about the efficiency of teachers' workloads, the ease of hiring part-time versus full-time staff, and the ultimate effect on student learning.

33. **Most teachers in BiH have been in the education workforce for many years, reflecting a high degree of teaching experience as well as an aging teacher workforce.** According to TIMSS 2019, 84 percent of Grade 4 students are taught by teachers with at least 10 years or more of teaching experience, and 50 percent are taught by teachers with 20 years or more of teaching experience. Only 7 percent of students are taught by "new" teachers with less than 5 years of teaching experience. With an average of 18 years of teaching experience within the teaching workforce, BiH is on par with other countries in the Western Balkans and the ECA region. However, achievement among students who have less experienced teachers is noticeably lower in BiH compared to neighboring Croatia, for example, where the average age of teachers is even higher than in BiH (see Figure 11). This suggests qualitative differences across teacher cohorts, with less experienced teachers new to the workforce having potentially received a lower quality of initial teacher education than older cohorts of teachers. It could also indicate an inequitable form of teacher sorting, whereby inexperienced teachers end up working in low-performing schools.

Figure 11: Relationship between Grade 4 student achievement and teacher experience in BiH and Croatia (TIMSS 2019)
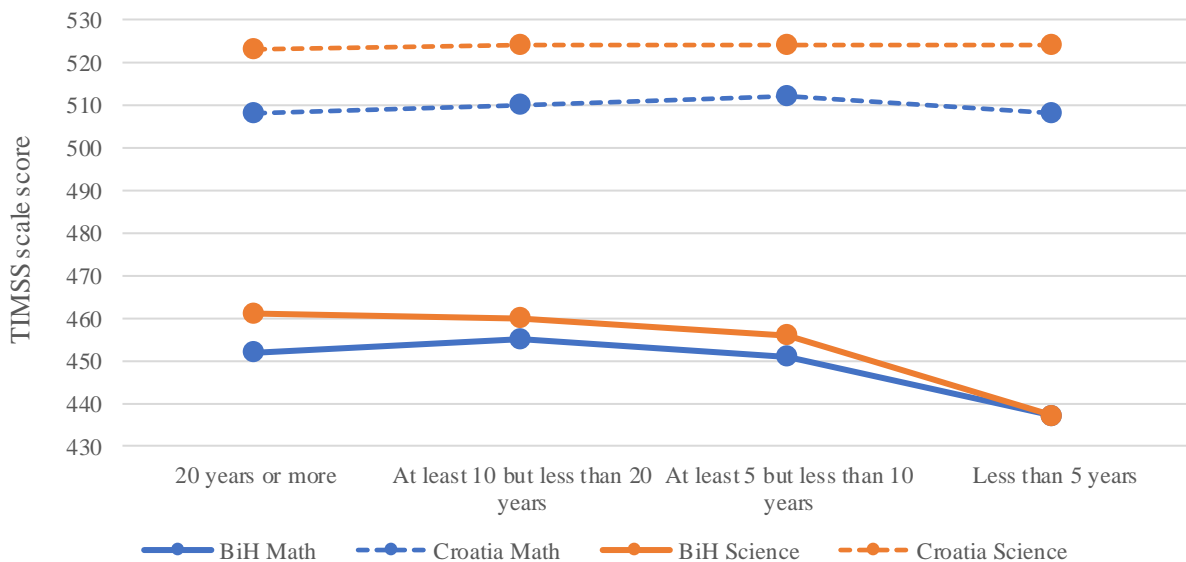
Source: Authors' analysis using TIMSS 2019 data.

34. **Also, most experienced senior teachers are concentrated in a few larger cantons**. In recent years, the percentage of teachers under the age of 25 increased by 34 percent, while the percentage of teachers over retirement age (65+) has decreased by 37 percent. This is a natural trend reflecting inflows and outflows from the teaching profession, but it also reflects an evolution in the appeal of the teaching profession as an option for young secondary school graduates. Even so, a closer look at the distribution of cohorts by canton indicates that 60

percent of teachers who are at or nearing retirement age (55+) are concentrated in just three cantons—Tuzla, Sarajevo, and Zenica-Doboj. Although these are more populous cantons, it also means that future transitions in the teacher workforce in BiH will affect these cantons disproportionately, potentially requiring more robust efforts at workforce management and planning going forward.

35. **Non-teaching staff make up a significant share of school staff, especially in primary schools and in RS.** Non-teaching staff include auxiliary workers such as secretaries as well as manual workers such as security guards, cooks, and cleaners. In RS, non-teaching staff comprise 33 percent of all school staff in primary schools and 26 percent of all school staff in secondary schools. In five cantons[18] for which data are available, non-teaching staff make up on average 21 percent of school staff in primary schools and 16 percent in secondary schools. These figures are roughly equivalent to the share of personnel spending for teaching vs. non-teaching staff. Although international benchmarks are difficult to establish here, since different categories of staff are included as "non-teaching staff," data from the OECD suggest that the share of spending on non-teaching staff represents more like 14-15 percent in the EU and the OECD.[19] Although non-teaching staff are often critical to fulfilling school functions and keeping the school operational, a high share of non-teaching staff relative to teaching staff indicates that a large share of resources is not being used towards a school's core purpose: teaching and learning.

Aligning Teacher Careers with Effective Personnel Management

Setting clear expectations for teachers

36. **Professional competence frameworks for teachers are a key transversal policy tool for strengthening effectiveness of the education workforce.** Professional competence frameworks define key elements that comprise good teaching: the knowledge, skills, attitudes, and values that teachers need to support student learning in schools. Such frameworks help to align entrance requirements for initial teacher education, certification examinations, teacher evaluation, continuing professional development, and career progression.[20] As such, they are a core policy tool for enhancing teacher quality and workforce effectiveness.

37. **Teacher professional competence standards have been defined in BiH, but not officially adopted, meaning that the benefit of this tool is not being captured.** The 2003 Framework Law for Primary and Secondary Education defines many aspects of teachers' work, as well as initial education level, in-service training requirements, and other elements regarding teachers' employment. However, there is no qualifications framework or defined professional standards for teachers in place in the jurisdictions included in this analysis. That said, there was a recent and extensive process, financed by the EU, to develop a qualifications framework for teachers in preschool and general education, including with extensive involvement of practitioners. This process developed occupational standards in seven areas: planning, teaching and learning, monitoring and evaluation, creating a learning environment, partnership with the family and

---

[18] Sarajevo, Tuzla, Zenica-Doboj, Tuzla, and Posavina Cantons.
[19] OECD (2018).
[20] European Commission (2018).

community, professional development, and participation in the work and development of the school and education system.[21] These standards included key tasks and defined competences, which represents a positive development and beneficial resource for the education systems in BiH. Although they have been adopted by the BiH Ministry of Civil Affairs, relevant authorities at entity and cantonal levels have not yet formally adopted these standards, so their potential for enhancing quality of initial teacher education and aligning competences with professional entrance exams is not being captured. As the standards are still relatively recent, potential opposition from teachers' unions may require further outreach, collaboration, and consultation to build ownership and understanding of the value of these standards.

Recruitment and employment

38. **The current policies shaping the teaching workforce differ across jurisdictions, partly in response to teacher selection criteria and non-meritocratic processes.** Some cantons, like Tuzla, have centralized processes, while others have school-based selection processes. There is also some evidence that selection processes involve non-meritocratic criteria, such as years of unemployment registered with the Unemployment Service, which is a criterion used in Sarajevo Canton. For example, a candidate earns 0.25 points if they have experience directly relevant to the job for which they are applying. However, the candidate would early 0.20 points for other types of experience in education, and s/he would also earn 0.20 points for each month s/he was registered with the Unemployment Service. This approach signifies that experience and time spent registered for unemployment are equally valued. This stands in opposition to good international practice, which indicates that meritocratic selection yields better learning outcomes even when teacher assessment systems are imperfect.[22] There is also not a uniform consideration of careers among cantons. For instance, time registered on the unemployment register is only considered if it is in the register of the canton where the job selection is taking place. Likewise, promotions or titles obtained in different cantons are not recognized towards selection processes in other cantons.

39. **The regulatory framework most often stipulates that hiring of teachers is the responsibility of school principals, either directly or by setting up recruitment committees or dedicated boards.** The most frequent process involves a public competition for announced teachers' vacant positions, but there are differences in the degree of intervention of other authorities in this process. In West Herzegovina Canton, the school board is required to obtain prior consent from the Ministry for the announcement of such competition; in Tuzla Canton, it is the Ministry directly that proposes the hiring competition. However, in Sarajevo Canton, the school principal can directly propose to announce such vacancies, following consent of the Ministry of Education and the decision of the School council. There is wide variation too in the assignment of teachers, meaning that this can be the decision of the principal (RS), the school (Herzegovina-Neretva Canton) or the cantonal level Ministry (Sarajevo Canton). In general, legal provisions do not stipulate whether teachers must work in

---

[21] Rangelov-Jusović. Development of a Qualifications Framework for General Education: Occupational Standards.

[22] For example, in Mexico, the introduction of a standardized test to select teachers resulted in substantial improvements in student learning, largely because it resulted in a much wider sample of candidates. Many countries across the world have moved towards such a system of incorporating a test into their teacher hiring practices.

difficult-to-staff schools. There have been no policy reforms related to entering and remaining in the teaching profession. More detail is presented in Table below

Table 1 Overview of teaching selection and employment policies

	RS	**FBiH**			
		Herzegovina-Neretva	*West Herzegovina*	*Tuzla*	*Sarajevo*
Competitive	Yes	Yes	Yes	Yes	Yes
Announcement	Principal	Principal	School board	Ministry	Principal
Published	Daily newspaper	NA	NA	The candidates' ranking should be prominently displayed in the school	Announcement must be published on a daily newspaper and the website of the Ministry of Education
Decision maker	School Principal	School board	School Principal (proposal from School Board)	School principal - should sign an employment contract with the selected candidate within two days	School Principal can decide amongst two top-ranked candidates following selection procedure
Selection procedure	Recruitment committee appointed by the principal – proposes candidates – School Principal has to choose the best ranked candidate	School board stipulates procedures	Principal is obliged to check with the Ministry whether there are unassigned workers in the Canton. Ministry submits data on the selected employee, and the school is obliged to hire that worker by the end of the school year at the latest	Unclear, but contract must be offered/signed within two days	If unassigned workers exist, they must be given first priority. If no such persons exist, then announcement is published and selection proceeds according to established criteria.

Source: Authors' analysis of legislative framework; see Annex 2.

40. **Required qualifications for appointment to the teaching profession include successful completion of a professional entrance exam after an internship, along with other requirements which vary across jurisdictions.** Required qualifications for hiring include passing the professional exam as well as accruing professional work experience, typically in the form of an internship. Additional requirements for hiring apply in some jurisdictions[23], where a pedagogical-psychological and didactic-methodological certificate is required for certain group of subjects and a Medical certificate of psychophysical ability to work with students is required[24]. Hiring processes can sometimes specify that candidates are only eligible

---

[23] RS and West Herzegovina Canton

[24] This medical certificate is mandatory in most jurisdictions. The candidate must provide this certificate after being selected for the position in the school.

to take part after at least eight months of work with a mentor[25]. Some of these requirements are foregone if the recruitment occurs for teacher intern positions. Upon appointment, teaching employment contracts often stipulate probationary periods varying in length from three weeks in RS up to six months in some cantons; however, the probationary period is not mandatory, and evidence suggests they are rarely used. Upon employment, teachers in BiH are not considered civil servants.

41. **Induction activities in the form of internships and on-the-job mentoring is a good practice for building an effective workforce; however, expectations for mentors in BiH are not clear, which diminishes their potential.** Evidence from high-performing education systems about the need for early-career support is abundant. There is clear evidence that strong and effective mentoring helps to prevent attrition, since teachers who leave the profession do so early in the careers.[26] While the policy framework in BiH does support such induction activities in line with good practice, there are no clear requirements for mentors or procedures for mentoring in the jurisdictions included the analysis, meaning in practice that the quality of induction training varies from school to school. There are also no clear procedures defined in the policy framework for mentoring or mentor training programs. This represents a missed opportunity in the education systems of BiH.

42. **Professional entrance exams also help to support merit-based recruitment, but without clear teacher professional standards, the entrance exams may not be measuring the right things.** Many countries around the world have introduced tests for teacher candidates to improve transparency and merit-based recruitment processes that prioritize the knowledge and skill sets that are most important for entering the teaching profession. There is strong evidence that test-based teacher recruitment does have a positive effect on student achievement by deterring low-skilled candidates and bringing more transparency to the selection process.[27] Again, professional entrance exams for teachers entering the profession represents a good practice, but without a clear linkage to transversal teaching competences defined as part of a teacher professional competences framework, it is unclear whether the exams provide an added value in terms of enhancing quality of the workforce.

43. **Conditions to remain in the teaching profession are not uniform or standardized.** For instance, there are wide discrepancies in the implications of non-compliance with mandatory professional development, where in some cases it does not entail the loss of teaching status while in others it may result in a teacher facing disciplinary action. Additionally, in some jurisdictions the failing of (at least two) performance assessments leads to a termination of employment, this is not generalized across regions. The termination of employment also remains with the school principal, and in Herzegovina-Neretva and West Herzegovina Cantons, dismissals often do not require that a notice period is respected.

44. **There are some incentives in place for teachers to work in hard-to-staff schools and to pursue promotions, but the incentives vary considerably by jurisdiction.** Incentives to teach in hard-to-staff schools are in place in several jurisdictions in the form of salary increases

---

[25] Tuzla Canton
[26] OECD (2005).
[27] Estrada (2019); Araujo, Heineck, and Cruz-Aguayo (2020)

in RS and Sarajevo Canton.[28] Housing assistance is also granted in Herzegovina-Neretva Canton for hard-to-reach schools and areas where there has been a long-term teacher shortage. Teachers can also receive monetary bonuses for teaching multi-grade classes, in recognition of the more challenging working conditions.[29] Jurisdictions also have salary incentives for teachers working in schools for students with disabilities. In RS and Herzegovina-Neretva Canton, teachers with five years of work experience can opt for internal positions including heads of department, academic lead teachers, or master teachers. These promotions come with higher responsibilities for management and leadership at the school level, as well as increased salary coefficients.

45. **Teachers are permitted to work in multiple schools simultaneously (a practice that is increasingly common), though the policy framework for private tutoring is less clear.** Limitations can vary for part-time teachers, who can engage in multiple jobs to reach a full-time equivalent workload. However, teachers are generally not permitted to conduct private tutoring of their own students, though in some jurisdictions (e.g. Sarajevo, Tuzla, and West Herzegovina Cantons) the policy framework does not specify whether teachers are permitted to provide private tutoring to their own students or to students from their own school. It is not clear how common these practices are, but such a scenario may endanger the integrity of teachers by putting them in a situation of conflict of interest, affecting their impartiality and professionalism.[30]

Level of autonomy in personnel management

46. **School principals have considerable autonomy in terms of personnel management, employment, and deployment of teachers.** The principal (themself or through an employment recruitment committee of their choosing) has the final authority for teachers' employment, and variance exists on whether the respective trade union must be involved in the appointment process.[31] As per teacher deployment, principals have decision making power for within school deployments, and often also for deployments to other schools. These processes are similar for teaching and non-teaching staff.

47. **However, in terms of personnel management of school principals themselves, the process to employ and deploy school principals is diverse and inconsistent**. The school council decides the employment and dismissal of primary school principals, but there is significant variance in the composition of participants in this process across jurisdictions. In some cases, the Ministry is consulted, and their agreement is required ahead of selection and appointment (Herzegovina-Neretva Canton). In other instances, advice is required from the Pedagogical Institute (Tuzla Canton), whereas in other cases, the Ministry has equal voice and agency to the parent council and the trade union (RS).

---

[28] In RS, school employees working in schools that are 15 km away from the municipal center is increased by 2%, with an additional 0.1% added for each 1 km up to a maximum of 3%. In Sarajevo Canton, employees are also entitled to a salary supplement of 10% for schools located between 10-20 km from the urban center, and 20% for schools beyond 20km.

[29] Basic salaries in Herzegovina-Neretva Canton can be increased by 8% for teaching a class with two grades combined, and 13% for teaching a class with three grades combined.

[30] OECD (2017).

[31] In Sarajevo and Tuzla the respective Trade Unions are consulted regarding recruitment procedures

48. **Salaries for teachers, school principals, and non-teaching staff are stipulated in collective agreements and are defined in consultation with trade unions.** Entity (in the case of RS) or cantonal budgets fund salaries and compensations of the required number of teachers, professional associates, and other employees. They consist of a basic salary as well as additional compensation and/or salary increases, typically the jurisdiction's labor law specifies the rules determining salary amounts.[32] In addition to the basic salary, employees are also entitled to salary supplements such as a travel allowance or paid leave for attending professional development courses, overtime payment, and food and beverage benefits (as in RS, Sarajevo Canton, and Herzegovina-Neretva Canton). Also, the basic salary can be accompanied by a multiplying coefficient accounting for the teacher's job complexity in Tuzla Canton.

49. **Although the policy framework contains a relatively well-defined system of compensation, teachers' compensation in reality involves a series of top-ups and bonuses which are not well-aligned or focused on enhancing performance.** For example, in RS, the Special Collective Agreement allows for one-time financial rewards for good performance of up to 50 percent, 70 percent, or 100 percent of the employee's salary earned in the previous month, but it is not clear how good performance is defined or whether it is linked to teaching practices or school performance. Additionally, in RS and Tuzla Canton, teachers' basic salaries can be supplemented by 30 percent for work on weekly rest days by order of the manager; by 35 percent for work at night; and by 50 percent for work on public holidays or other non-working days by law. Variation in basic salary and salary supplements across jurisdictions means that in practice, teachers' total compensation can vary significantly between entities and cantons.

50. **There are no special provisions for retirement specific to the teaching profession.** In general, the legal framework[33] for teachers' employment conditions stipulates that an insured person is entitled to an old-age pension when he/she reaches the age of 65 and has at least 20 years of pensionable service or when he/she reaches 40 years of pensionable service regardless of age. However, in all jurisdictions, there is no defined mandatory retirement age for public school teachers.

51. **Teaching staff are entitled to a pension when they retire from the teaching profession.** It is the employer's responsibility to register the employee for pension insurance upon concluding an employment contract. A comparison of fiscal provisions between the RS and the FBiH identified certain differences. For example, the length of pensionable service in the FBiH can exceed 40 years, while the length of pensionable service in the RS can be a maximum of 40 years. Differences in the details of the annual personal coefficients also occur. Most often[34], it is the specific insurance carrier[35], decides on pension and disability insurance, as

---

[32] West Herzegovina Canton is an exception.
[33] According to Article 40 of the Law on Pension and Disability Insurance of the FBiH, No. 13/2018 and 93/2019.
[34] West Herzegovina, Herzegovina-Neretva Tuzla, and Sarajevo Cantons
[35] Federal Institute for Pension and Disability Insurance and Pension and Disability Insurance of Republika Srpska

well as the length of pensionable service, and follows the general provisions that apply to all employees in FBiH.

Teacher representation and voice

52. **The legal framework for labor rights and collective bargaining is not uniform, though in most cases teachers are represented by unions through collective agreements with the entity or cantonal government.** Generally, all employees have the right to organize in a union. Legal provisions do not define the obligation to join a teachers' union (nor one in the field of education and culture) and the employer may not restrict or prevent trade union work, or employees' membership. Striking rights are recognized; research did not identify any cases where teacher went on strike alone outside of the trade union organization. Similarly, no information on penalties for protesting or striking was found.

53. **The unions do collectively negotiate and sign collective agreements with the school and the employer on behalf of the employees.** They do so to protect and pursue economic and social interests that can otherwise not be resolved through negotiations with employers or through other measures and sign collective agreements with the school and the employer on behalf of the employees. Pension rights are regulated in collective agreements, and results of collective bargaining applies to all employees in the field of education and culture in RS and Herzegovina-Neretva Canton. In Sarajevo Canton, different trade unions are in place for the different levels of education.

Enhancing Teacher Skills and Practices

54. **Teaching practices in Bosnia and Herzegovina still rely heavily on traditional pedagogical approaches and teacher-directed instruction, particularly in disadvantaged schools.** For example, evidence from BiH's participation in PISA 2018 shows that teacher-directed practices are much more common in BiH compared to other OECD countries, while teachers are less likely to give constructive feedback to students.[36] At the same time, teachers in advantaged schools with higher shares of high-SES students are more likely to employ adaptive instructional techniques, whereas in disadvantaged schools, teachers are more likely to employ teacher-directed instructional practices, according to the PISA results. Research suggests that a broader set of pedagogical methods are needed to develop so-called 21st century competences like creative thinking, critical analysis, collaborative problem solving, and communication skills. Traditional approaches can also pose greater challenges for students that need to learn at their own pace, either faster or slower than other students in the class.

55. **Strengthening teaching practices requires a coordinated focus on several elements of teachers' careers.** In particular, this requires well-designed professional development programs that afford teachers the opportunity to practice modern approaches in their classrooms, including with support from mentors or coaches. It requires tools for effective monitoring and evaluation of teacher quality, including mechanisms for teacher appraisal.

---

[36] OECD (2020).

Finally, it requires sufficient time in teachers' workloads to integrate formative activities with their normal teaching activities. These areas are discussed in more detail below.

Professional Development

56. **Access to and participation in professional development for teachers is quite limited in Bosnia and Herzegovina compared to other countries.** Data from PISA 2018 show that only about 30 percent of students in BiH attend schools in which teaching staff have participated in professional development programmes within the last three months (see Figure 12). At the same time, there are clear differences across schools, particularly based on SES: nearly half of students in high-SES schools have teachers who are regularly participating in professional development activities, compared to only about 25 percent in low-SES schools. The relationship between SES and participation in teacher professional development is even stronger than between location and participation, indicating that disadvantaged schools in either urban or rural locations lack sufficient resources to ensure that their teachers can participate regularly in teacher professional development. Although available data do not fully explain the reason for this, it may be explained by the fact that high-SES schools attract donations or more local funding from their respective municipalities, or that teachers themselves in high-SES schools are more able to self-finance professional development activities. In any case, this is a significant challenge, given that students in low-SES schools perform significantly behind those in high-SES schools and would benefit even more from the impacts of teachers' professional development.

Figure 12: Participation in Teacher Professional Development
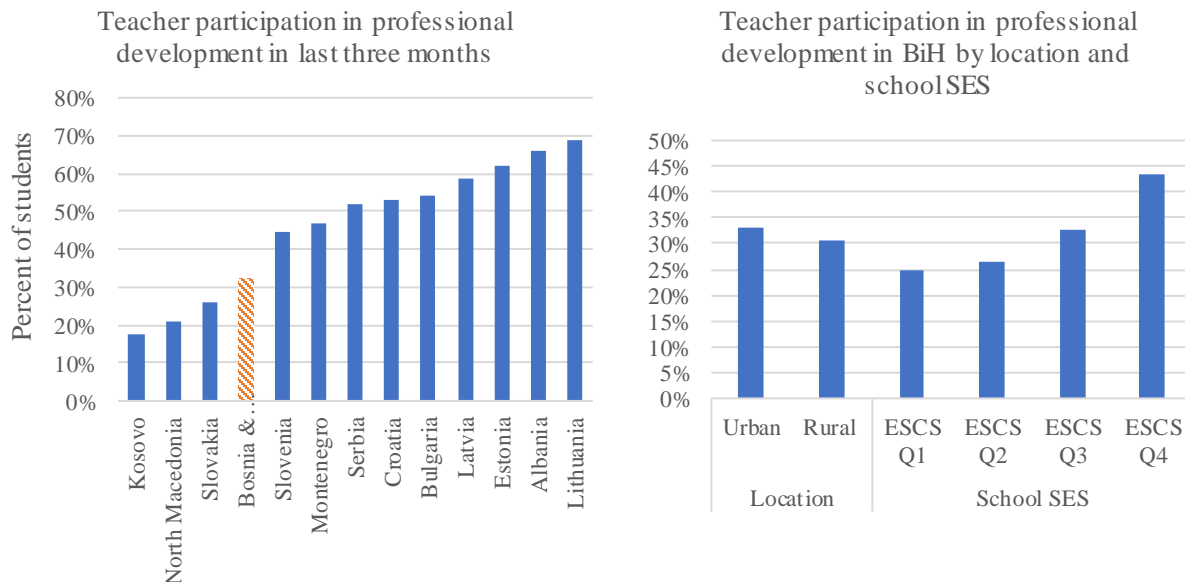
Note: Authors' analysis using PISA 2018 data; data are weighted by student weight at schools.

57. **At the same time, links between professional development and desired teaching practices are weak.** Across the OECD, and especially in Central and Eastern Europe, data from PISA indicate a statistically significant and positive association between the amount of professional development received by teachers, and how frequently they use adaptive instructional

techniques in their classroom practice. However, there is no such relationship in the data from BiH, suggesting that professional development effectiveness is weak. This is further underscored by the above finding on the relatively low share of participation.[37]

58. **An institutional framework detailing continuous professional development (CPD) in the selected jurisdictions of BiH is in place.** The pursuit of professional development includes mandatory training for teachers. Some of the legislation refers to CPD as an obligation which teachers are required to undergo (RS), whereas in others it is articulated as both a right and an obligation (Sarajevo Canton). The institutional framework also varies in its specificity regarding CPD for teachers or for school employees more generally, also including non-teaching school staff. Rights and responsibilities related to CPD are defined in the jurisdictions' laws on primary and secondary education, as well as associated rulebooks on professional development which differ substantively across jurisdictions.

59. **Although participation in professional training is mandatory, there is no systematic assessment of teachers' needs to inform professional training, and its definition and content are specified by diverse educational authorities.** In absence of a needs-based approach to teachers' professional development, a systematic approach for professional training is lacking. CPD can be proposed by the respective Pedagogical Institutes and formally adopted by the Ministry. It can also remain the direct prerogative of the Cantonal Government[38], where professional development of school teaching and non-teaching staff is articulated in their issued regulations and rulebooks. Educational institutions or schools may, on the basis of identified training needs of its educational staff, as well as at the proposal of teachers' council, educators council and teaching staff, propose professional development programs to the Pedagogical Institute, ultimately also to be validated and adopted by the Ministry. Schools themselves, led by the principal, are responsible for planning professional development in their annual work plans, but schools would benefit from more guidance and support on how to assess teachers' CPD needs and build those into the annual work plans.

60. **Implementation of professional development plans and programs relies more consistently on the capacity of Pedagogical Institutes, though other providers also exist.** They organize and implement the professional development of teachers, including with responsibilities for planning, implementation, development, professional supervision, and evaluation of approved professional development programs. These Pedagogical Institutes can work independently or in cooperation with higher education institutions, and in some cases, professional training can be also carried out by other organizations, such as private organizations, non-governmental organizations, etc. Lastly, the Ministries or entity/cantonal governments can be the provider of professional development, where teachers may associate in professional councils and associations for the purpose of receiving this education. Where professional training is to be carried out by other organizations the consent of the Pedagogical Institute and the Ministry is required.

61. **Sources of financing for professional development include entity or cantonal governments, local self-governments, and schools depending on the jurisdiction and level**

---

[37] OECD (2020).
[38] Tuzla Canton

of education. For example, in RS, mandatory professional development of primary school teachers is financed by the entity-level budget and implemented by the Pedagogical Institute, whereas secondary school teachers' CPD is financed by the local self-government. For other cantons in FBiH, the entire funding responsibility resides in the cantonal budget, yet in practice, a significant number of professional development programs are funded by non-governmental organizations (NGOs) or donations. In any case, jurisdictions do not expect teachers themselves to finance any part of their own mandatory CPD activities, though they do occasionally finance elective training for their individual CPD.

62. **The support for teachers' professional development in the *beginning* of their career is structured via internships and the use of mentors, but is not as consistent *throughout* their professional career.** With internships, new teachers are paired with independent mentors and develop practical skills while preparing to take the professional exam. Obligations of mentors and advisors are explicitly defined in rulebooks on professional development, though in different levels of detail. However, throughout teachers' careers, rules and policies on professional development obligations and expectations for teachers vary widely. Furthermore, the use of mentoring and peer observation/coaching as an explicit form of CPD for teachers along the career path is less common and the policy framework does not explicitly encourage this.

Table 2 Overview of teacher professional development policies

	RS	**FBiH**			
		Herzegovina-Neretva	*West Herzegovina*	*Tuzla*	*Sarajevo*
Time	Not specified	Not specified at primary education level; 1h a week recommended for secondary	Not specified	1h a week recommended	0.5h per week in primary education, and 1h per week in secondary education
Dedication	Part of teachers' 40-hour norm	Part of 40-hour norm for primary education; part of 31.5 standard hours for secondary education	Part of teachers' 40-hour norm	Part of teachers' 40-hour norm	Not specified
Obligation	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
Consequences of non-fulfilment	Possible disciplinary action	Not specified	Not specified	Not specified	Not specified
Legal requirements on content	No legal provisions are defined	No legal provisions are defined	No legal provisions are defined	No official regulations or recommendations are defined	Yes, requirements defined in Laws on Primary and Secondary Education
Provision	• Ministry • Pedagogical Institute	• Ministry • Pedagogical Institutes	• Ministry • Pedagogical Institute • Schools	• Pedagogical Institute • NGOs/donors • APOSO	• Ministry • Pedagogical Institute

	RS	**FBiH**			
		Herzegovina-Neretva	*West Herzegovina*	*Tuzla*	*Sarajevo*
	• Council for Development of Preschool, Primary and Secondary Education • Schools	• Higher education institutions (HEIs) • Schools • NGOs/donors • APOSO	• NGOs/donors • APOSO		• Higher Education Institutions (HEIs) • Schools • Professional councils (secondary ed) • NGOs/donors • APOSO

Source: Authors' analysis of legislative framework; see Annex 2.

63. **Continuing professional development encompasses both mandatory and elective programs, and penalties can exist for non-compliance**. Mandatory professional development programs are those that follow the identified needs for the improvement of quality and achieved results or changes which are sought to be introduced in practice. Typically, these are under the direct control of the Minister of the respective jurisdiction. Some jurisdictions also have elective programs that enable an educational employee or educational institution to monitor individual needs and interests. However, the consequences if teachers do not participate in professional development activities are not clearly specified. In general, *non-fulfilment* of CPD obligations (when specified) may result in teachers falling below full-time status, which could lead to disciplinary actions, though in practice this is rare. However, except in this case, there are no defined consequences for non-fulfilment of CPD obligations.

64. **Regulatory requirements for the implementation and content for CPD vary, but in general are not defined in the policy framework.** CPD offerings are implemented through a diverse array of training tools and programs, summer, and winter schools and through international and regional conferences, and professional symposiums, attending seminars, etc. These modalities are explicitly referenced in the policy frameworks of the respective laws on primary and secondary education. The content of professional development, however, is rarely defined as legal provisions do not specify recommendations about the content of professional development for primary and secondary education public school teachers. Sarajevo Canton is an exception, with its legal framework defining CPD content to cover individual and organized training in a series of general fields including pedagogy, didactics, educational psychology, methodology, information and communication technologies, counseling, management, educational policies, and other areas relevant to the effective implementation of educational activities.[39]

65. **The most notable discrepancies are found in terms of expectations for time dedicated for CPD activities.** Some jurisdictions, such as RS as well as West Herzegovina Canton, specify that CPD is an integral part of the mandatory work of teachers within their 40-hour norm, but the framework does not contain legal requirements or official recommendations regarding the amount of time teachers should dedicate to CPD activities. In other jurisdictions, time

---

[39] Defined in the Sarajevo Canton Law on Primary Education, Article 91.

dedicated to CPD is detailed in the policy framework yet is also grouped together with all other non-teaching activities. For instance, Pedagogical Standards and Norms for Secondary Education in Herzegovina-Neretva Canton state that teachers can dedicate 31.5 hours to standard teaching hours, along with preparation for teaching, correction of written, school and art works, laboratory exercises, testing according to the curriculum, and professional development. The remaining 8.5 hours per week can be dedicated to other tasks. In other cases, like Sarajevo and Tuzla Cantons, time for professional development is clearly stipulated in rules and regulations.

Monitoring and Evaluation of Teacher Quality

66. **External and internal evaluations of teacher quality are a required element of the teacher policy framework in the selected jurisdictions of BiH.** The methodology and quality standards for external evaluations can be defined by the Pedagogical Institute (RS and Tuzla Canton), the Ministry (West Herzegovina Canton), or a combination of the two in consultation with the Trade Union (Sarajevo Canton). Teacher performance is reported to the school principal, and legal provisions do not require reporting to the general public on the performance of public-school teachers. More detail is specified in Table .

Table 3 Monitoring and evaluation of teacher quality

	RS	FBiH			
		Herzegovina-Neretva	*West Herzegovina*	*Tuzla*	*Sarajevo*
Internal Evaluation	Principals conduct internal evaluation of teachers' and professional associates work at least 1x per year. Principal appoints team of 5-15 members for school self-evaluation, which is conducted according to the methodology prescribed by the Pedagogical Institute. Teachers' work can also be monitored by school council(s), pedagogues, or assistant principals.	The school principal provides an assessment of the work of the teaching staff once every 2 years; participation is mandatory.	Participation in internal evaluations is mandatory for all teachers every 2 years. Self-evaluation process is carried out by a team of teachers appointed by principal. Evaluation criteria are not defined	Assessments by the principal, school council and colleagues are considered. It is mandatory for teachers who have completed the tasks and duties set in the school's annual work program.	Participation in internal evaluation is mandatory and conducted at least once every 2 years for primary and secondary education. Principal leads internal evaluations and monitoring of teachers' work.
External Evaluation	Conducted by the Pedagogical Institute of Republika Srpska according to its annual program through educational advisors. Information sources for external evaluations are not specified.	External evaluation is mandatory, led by the expert advisor from the Pedagogical Institute based on direct insights into and continuous monitoring of the work of educational staff. Criteria and	Professional-pedagogical supervision over the work of schools is conducted by the Pedagogical Institute, and participation in these	Professional supervision is conducted by the Pedagogical Institute, and teachers are evaluated every 6 months.	External evaluation is mandatory and involves professional-pedagogical supervision through classroom observations.

		information sources are not explicitly defined.	evaluations is mandatory.		School principals' assessment is used instead when there is no external assessment.

Source: Authors' analysis of legislative framework; see Annex 2.

67. **Internal evaluations often rely on the school principal and a dedicated team of teachers appointed by the principal**. Participation in these internal evaluations can be mandatory, but professionals who have worked in educational institutions for less than six months during the school year can be excluded. If defined, the methodology and criteria used for evaluation is also prescribed by the Pedagogical Institute (for example, in RS) and officially includes, among other things, teaching methods, teacher-student interactions, and monitoring the application and implementation of the curriculum. These elements are explained in the professional instructions for evaluating the quality of work in primary and secondary schools. Internal evaluations occur regularly, either once a year or once every two years in the selected cantons analyzed for this report.[40] The results of these evaluations are used for employment procedures, promotion decisions, salary decisions, decisions to dismiss a teacher, or to inform additional professional development.

68. **External evaluations are mandatory but the guidelines that determine these are inconsistent.** Quality standards are defined in some cases by the corresponding Pedagogical Institute (RS) but are absent in other jurisdictions. Although professional and pedagogical supervision can be a continuous process and is often described as such in the policy framework, it is expected to be conducted at least once within a two year period. The results of these are used similarly to those of the internal evaluation, to determine the type of professional development that a teacher must attend, or to inform promotion and salary decisions in the case of teachers applying for higher professional titles.

69. **Criteria for internal and external evaluations of teacher quality are based on performance standards, when defined, but even in these cases, criteria are vaguely defined, without clear links to assessment tools.** In several jurisdictions, such as RS, authorities have articulated professional standards and indicators for measuring the quality of school work according to broad categories such as teaching and learning, management and administration, student support, cooperation with family and local communities, and human and material resources. However, given that such standards are intended for school evaluations, rather than teacher evaluations per se, the criteria are not sufficiently well-defined for use in evaluation of teacher quality. Furthermore, in Tuzla Canton, rulebooks exist for both teacher performance appraisal and professional supervision, but they indicate different evaluation criteria for teacher quality. In other cantons, no such rulebooks exist. In general, school visits are the primary source of information for external evaluations, including inspections of school records and documentation, educational programs, and working conditions. External evaluations also rely to some extent on schools' own self-evaluations, led by the school principals.

---

[40] This period is longer (e.g. every four years) in other cantons in FBiH.

70. **Pedagogical Institutes play a critical role in inspecting and evaluating the quality of teaching, but they have a series of other conflicting roles which limit their capacity to support quality improvements.** Pedagogical Institutes act as developers of curriculum, monitors and evaluators of school and teacher quality, and organizers and providers of professional development for teachers and school personnel. This combination of functions mixes policy development and service delivery, which creates a conflict of interest. This further contributes to fragmentation of the education system in BiH and it stresses the already low capacity of Pedagogical Institutes. Supporting the Pedagogical Institutes to become more independent from the Ministries and to professionalize them as expert bodies providing specialized inspection and quality assurance functions would be important to strengthen their role in the system. Greater collaboration between Pedagogical Institutes on criteria for teacher and school evaluation and other functions would also facilitate this.

Teachers' workload and pedagogical autonomy

71. **The institutional framework that legislates teachers' workloads and working hours is the prerogative of the respective Ministry, as defined in the entity and cantonal laws on primary and secondary education.** This includes most commonly the considerations of the length of working hours (40-hour week) as well as the academic calendar of the school year, including the beginning and end of classes. More specific teachers' tasks are specified in Pedagogical Standards and Norms, and include for example, the daily and weekly workload for students and teachers in Herzegovina-Neretva Canton, the number of classes and other teachers' tasks in Sarajevo Canton, or the prescribed standard of weekly hours for different tasks (educational work, preparation for work with students, work on documentation, cooperation with parents and individual work with students). The policy frameworks often define a maximum number of working hours by level of education, considering teaching hours as well as lesson preparation, assessment of students' work, class meetings, supplementary and optional classes, and organization of extracurricular activities.

72. **Considerations of workload, daily and weekly tasks, as well as the employees' working time schedule are occasionally determined at the school level** by general acts of the school, which are adopted in accordance with curriculum and pedagogical standards and the collective agreement.[41] Some level of school autonomy is also registered for specific levels of education, and the structure and schedule of duties of teachers and professional associates for secondary education in RS is are adopted by the school board.

73. **Consistency exists around statutory worktime and duties for full time employment, but this is not the case for part-time or over-time.** When specified, the statutory working time[42] of teachers is uniform across jurisdictions, at 40 hours per week. Sometimes, the specific instruction time is defined as well, at 24 hours within a 40-hour workweek[43], or a maximum

---

[41] Tuzla Canton

[42] Defined as the total number of working hours in in which the employee is obliged to perform work for the employer according to the employment contract

[43] RS and Sarajevo Canton

of 35 within the 40-hour week[44], though not all jurisdictions provide this breakdown.[45] Part-time employment, as well as over-time[46], are inconsistently reflected in the regulations. Changes in statutory worktime and duties are reflected by level of education in each jurisdiction.[47] Work time is stipulated and regulated at the entity or cantonal level by the respective Ministry and regulated by Pedagogical Standards and Norms.

74. **In total, the legal framework along with the collective agreements rigidly define teacher workloads and working hours.** Teaching and non-teaching hours are defined by level of education according to Pedagogical Standards, and the non-teaching hours are in some cases rigidly defined as well. For example, in Tuzla, out of a 40-hour workweek, four working hours are allocated to critical duties including professional development, administration, participation in professional bodies, and other duties. In other cases, like RS, legal provisions do not define the time teachers are to spend planning or preparing lessons or supporting other school administrative tasks.

75. **In terms of pedagogical autonomy, the entity or cantonal Ministries in collaboration with Pedagogical Institutes play the central role in preapproval of curricula and associated learning resources, including textbooks, teaching, and learning materials.** The Framework Law on Primary and Secondary Education stipulates that all primary and secondary schools should apply the common core curricula, which should be as harmonized as possible for all subjects, aiming to unify primary and secondary education in BiH as much as possible.[48] In line with this, textbooks and teaching resources, as well as the regular compulsory school curriculum, are selected by the relevant Ministry at the proposal of the Pedagogical Institute. This can also involve special additional programs for talented students, adapted programs for children with special educational needs, some extracurricular activities, adult curriculum, programs for elective and optional, supplemental, additional classes and extracurricular activities and programs for various types of courses. Some jurisdictions (e.g. Sarajevo, Herzegovina-Neretva cantons) specify that subjects allow up to 20 percent for non-core curricula, in which teachers have more autonomy to design supplemental curricula; in Tuzla Canton, this share is 30 percent of the curricula.[49] For secondary education, a portion of curricula for the vocational education (up to 30 percent) may be defined by the teacher council on a proposal of the vocational subject teachers, where the local authority's labor market demands shall be taken into account.

76. **Teachers do have autonomy to choose among preapproved textbooks, and exceptions exist for certain topics.** There are exceptions to this in textbooks required for teaching under international programs, resources for religious education where the competent body are religious communities, yet still verified by the Ministry. Secondary schools can also add new

---

[44] Tuzla Canton

[45] West Herzegovina Canton

[46] Teachers are entitled to one hour of compensatory working time for each hour of overtime in RS

[47] For instance, in secondary education teachers dedicate 31.5 hours for teaching and teaching related tasks, including professional development, in HN, and in Tuzla this ranges from 20-22 working teaching hours for primary schools to 18-24 hours per week in secondary schools.

[48] USAID (2017).

[49] The Framework Law for Primary and Secondary Education explicitly aims to harmonize curricula, subjects and syllabi for a common core curriculum while also allowing public and private schools to have the freedom to create and realize educational contents on their own.

curricula in the form of extra classes, elective classes or in the form of new subjects but there are regulations in place for that.

Box 1: Case Study on Aligning Teacher Autonomy with Self-Improvement in Estonia

Estonia provides a strong case study of the importance of teacher autonomy as a component of education quality enhancement. According to the Teaching And Learning International Survey (TALIS) 2018 results, Estonian teachers have high autonomy compared to other countries.[50] 93 percent of Estonian teachers reported that have control over determining course content, have a voice in developing vision and goals of their school (84 percent) and are encouraged to participate in school decisions (87 percent).

So how does a country build teacher autonomy that can result in high student outcomes? Teachers policies in Estonia are the result of an integrated and focused policy strategy that started in 2014. In 2014, the Estonian government developed an integrated strategic set of teacher policies embodied in the Estonian Lifelong Learning Strategy 2020.[51] This allowed for teachers to go through standardized procedures of training and learning but allowed them a sense of autonomy when they stepped into their classes. A large reason for this level of autonomy and the success in terms of student outputs can be attributed to their CPD. Estonian teachers can choose independent training, training in state and municipal institutions and training in private schools with training licenses. Most in-service training focuses on high level teaching skills, like diagnosis, reflection, analyses of student needs and assessment of the impact of their practices on student learning.[52] This type of CPD supports teacher autonomy by equipping teachers with the skills to adapt instructional techniques and meet the needs of different students in the same classroom.

Another structure that aids with teacher autonomy is the creation of a self-evaluation tool by the Ministry of Education. The aim of this tool is to stimulate self-assessment and self-reflection of teachers, teams, and schools. Teachers can use this tool for personal professional development. The electronic tool is built around teacher competences and standards and allows teachers to rate themselves against teacher standards. This tool helps teachers to select areas for self-improvement in in-service training, which further helps to create a link between their self-evaluation, their degree of autonomy, and the resources available to teachers to address areas of improvement through different forms of CPD.[53]

School Leadership and School Autonomy/Accountability

77. **Effective school leadership can play a critical role in enhancing learning outcomes, addressing inequities, and improving efficiency.** Research has shown that school leadership has a powerful but indirect effect on student learning as mediated by other people, events and organizational factors, namely teachers and the school's climate, which in turn support student success.[54] School leaders influence the motivation, capacities and working conditions of teachers who in turn shape classroom practices and student learning. School leaders play managerial, political, instructional, institutional, human resource, and symbolic leadership roles in their schools. To obtain large effects, educators need to create synergy across the relevant variables, and among all stakeholders who work hard to improve education, school

---

[50] https://www.oecd.org/education/talis/TALIS2018_CN_EST_Vol_II.pdf
[51] https://www.hm.ee/sites/default/files/estonian_lifelong_strategy.pdf
[52] https://www.oecd.org/education/talis/TALIS2018_CN_EST_Vol_II.pdf
[53] https://www.oecd.org/education/talis/TALIS2018_CN_EST_Vol_II.pdf
[54] Hallinger and Heck (1998)

leaders are uniquely well positioned to ensure this synergy. Research points to three important roles for effective school leaders: (i) improving student learning and raising the quality of schools; (ii) providing a bridge between policy and practice; and (iii) connecting schools with the wider community.

78. **School leadership plays a crucial although indirect role in improving student learning and raising the quality of schools, particularly in disadvantaged schools**. A large body of research has consistently demonstrated that effective school leadership is associated with improved school outcomes.[55] There is no single case of a school improving its student achievement record in the absence of talented leadership.[56] Highly effective school leaders can raise the achievement of a typical student in their school by between two to seven months of learning in a single school year.[57] The effects of school leadership on student learning account for about a quarter of the total school effects, and the greater the challenges faced, the greater the impact of the leader's actions.[58] The effect of school leadership is therefore more pronounced in schools that display challenging circumstances.

79. **School leadership provides an essential bridge between educational policy and practice.** School leaders are responsible for operationalizing almost all education initiatives aimed at improving student learning and raising the quality of schools. The success or failure of any policy ultimately depends on the actions and motivations of school leaders who play a major role in implementing education policies and education reform.[59] Whereas higher levels within systems of education can provide policy directions for schools, policy success often depends on actions of leaders at the school level. For centrally initiated reforms to become meaningful to all school-level stakeholders, they need to be associated with internal school improvement activities in a coherent way. Successful implementation and institutionalization of reform requires leadership at the school level to promote adaptations of school processes and systems, as well as cultures, attitudes and behaviors.

80. **School leadership connects the school with the wider school community.** School leaders play an important role in strengthening the ties between school personnel and the communities that surround them. Leaders of the most successful schools in challenging circumstances are highly engaged with and trusted by the schools' parents and wider community. They also try to improve achievement and well-being for children by becoming more involved with other partners and integrating the work of the school with employers, social welfare agencies, universities and training providers, and other organizations in pursuit of actions to improve school performance.[60]

---

[55] Teddlie and Reynolds, 2000; Waters et al., 2003, Leithwood *et al.*, 2005; Louis et al., 2010; Hanushek et al., 2013; Leithwood and Riehl, 2005
[56] Louis et al. 2010.
[57] Hanushek et al., 2013
[58] Leithwood et al. (2004)
[59] Fullan, 2001; Hopkins, 2008
[60] Fullan (2001); Cotton (2003); Benecivenga and Elias (2003).

School Resource Constraints

81. **School principals in BiH perceive a large shortage of education materials and resources which presents an obvious constraint to school improvement efforts.** PISA 2018 highlights discrepancies in school resources, both in terms of educational materials and human resources. In BiH, school principals highlight a significant shortage of materials, whereas shortages of teaching staff are not considered a constraint. This is similar to other countries in the region, though BiH stands out in terms of the shortage of educational materials (see Figure 13 below). The low perceived shortage of teaching staff is consistent with earlier findings on small classes and low student-teacher ratios in many schools in BiH. Even so, the perceived shortages of materials appears to be a greater constraint rural and lower SES schools, but also in very large schools in terms of enrolment size. This suggests that the resource problem may be relatively generalized, except in the most privileged schools.

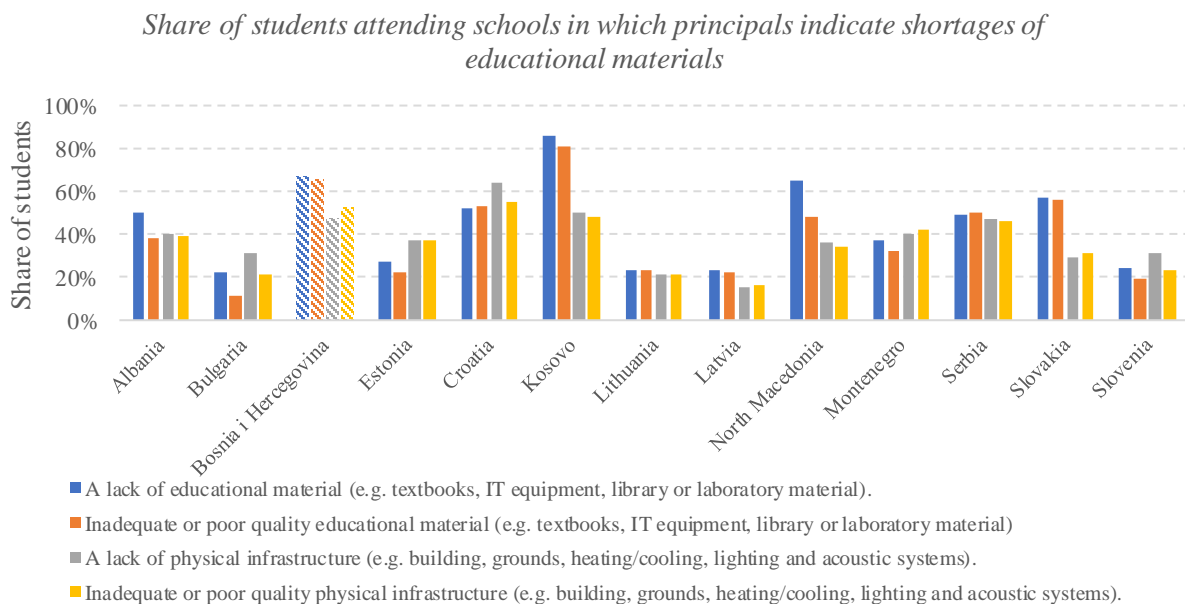*Figure 13: Perceived shortage of education materials/resources and staff*

Shortage of education materials/resources and staff (BiH and comparator countries)

Shortage of educational materials in BiH by location, school size and school SES
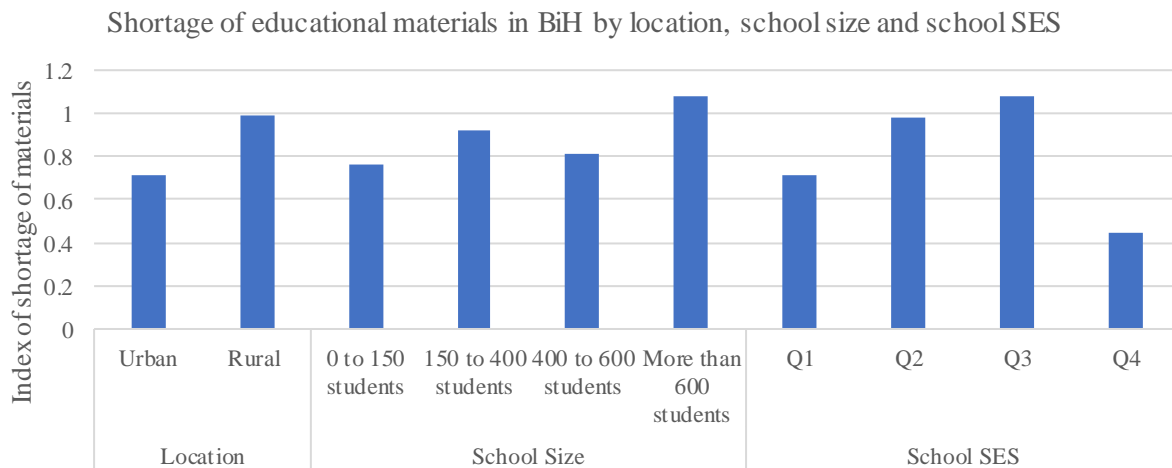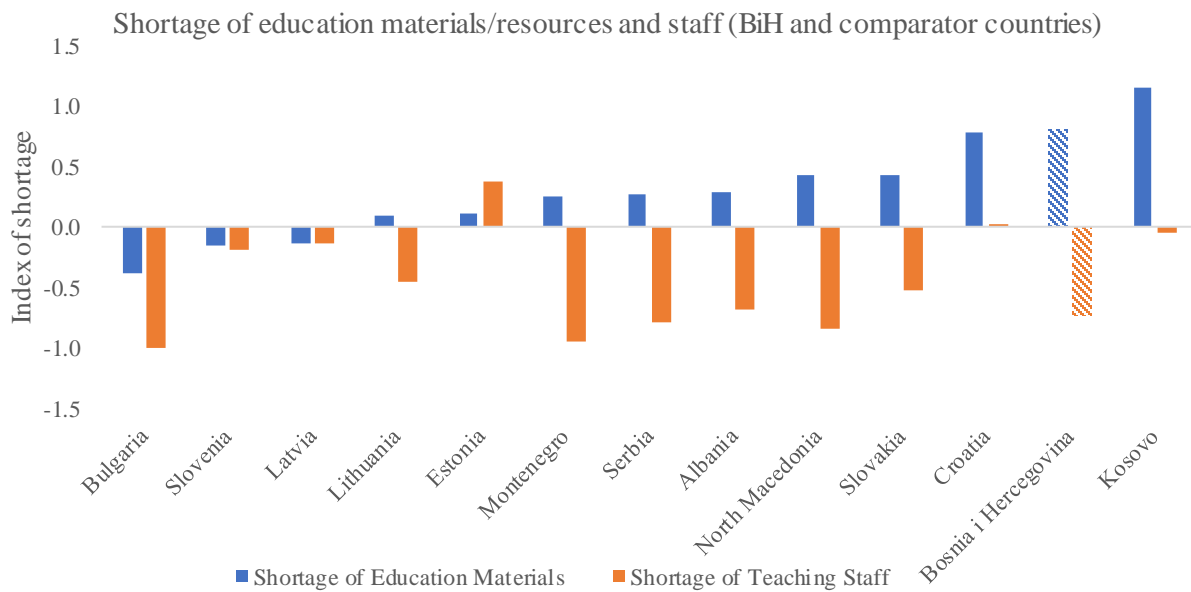
Source: Authors' analysis of PISA 2018

Note: Index of shortage of education materials and teaching staff is created in the PISA dataset as a composite of multiple questions related to perceived shortages. The average on the index is zero and the standard deviation is one across OECD countries. Positive values reflect principals' perceptions that the shortage of educational material or teachers hinders the capacity to provide instruction to a greater extent that the OECD average.

82. **Limited or low-quality educational materials, including textbooks, information technology (IT) equipment, and library or laboratory material appears to be the greater constraint, according to school principals in BiH.** Digging deeper into what education materials and school resources are more scarce in BiH, Figure 14 below disaggregates the shortage index by its four components: (i) a lack of educational material (e.g. textbooks, IT equipment, library or laboratory material); (ii) inadequate or poor quality educational material (e.g. textbooks, IT equipment, library or laboratory material); (iii) a lack of physical infrastructure (e.g. building, grounds, heating/cooling, lighting and acoustic systems); and (iv) inadequate or poor quality physical infrastructure (e.g. building, grounds, heating/cooling, lighting and acoustic systems). Figure below shows that lack of materials and physical resources is relevant in all resources, especially quantity and quality of education materials, and not as much in terms of quantity and quality of physical infrastructure. This is an important finding regarding the types of resource constraints that school leaders identify in BiH and the obvious barriers they present for school improvement efforts.

Figure 14: Perceived shortage of education materials/resources disaggregated by resource, by country

Share of students attending schools in which principals indicate shortages of educational materials

■ A lack of educational material (e.g. textbooks, IT equipment, library or laboratory material).

■ Inadequate or poor quality educational material (e.g. textbooks, IT equipment, library or laboratory material)

■ A lack of physical infrastructure (e.g. building, grounds, heating/cooling, lighting and acoustic systems).

■ Inadequate or poor quality physical infrastructure (e.g. building, grounds, heating/cooling, lighting and acoustic systems).

Source: PISA 2018 data.
Note: Results display the proportion of students for which principals respond "to some extent" or "A lot" to the question on whether the lack of a specific resource hinders instruction.

Autonomy in planning and managing school budget

83. **The school's autonomy in planning and managing their budgets appears limited among the five jurisdictions in scope.** Most often, school budgets are the mandate of the respective Ministry of Education. There are currently no determinants that specify the principals' role in creating the operational school budget. Then, the school principal's autonomy in this area is often limited to a budget and financial plan proposal, to be subsequently approved by the respective school council. However, it is not always clear who proposes and prepares the school budget. The adoption and monitoring of the execution of the financial plan relies most often on the school council[61]. Schools can also request additional funds via alternative mechanisms, which can include parents and caregivers' donations or a direct request of additional funds from the entity or cantonal budget resources.

84. **While preparation and proposal of school budgets can fall within the remit of the school's autonomy, schools receive little guidance on how to do so.** This is the case in Sarajevo and West Herzegovina cantons, where the principal of a primary school, secondary school, secondary school center and school center proposes the school's financial plan. Thereafter, the approval lies with the school council and the Ministry of Education. Rarely guidelines are in place for the preparation of these budgets. If these exist[62], they emphasize the type of information that has to be provided for the Ministry of Education and Culture to provide a calculation of the school resources, and do not include consultation processes with parents or other school community members. In the cantons, it is the school council that both adopts the school annual budget and corresponding financial plans. In these cases, no guidelines exist to orient that process and clarify how school councils or school staff should go about this,

85. **In practice, the lack of guidance in this area means that school operational budgets are approved based on the previous budget executions, with occasional modifications.** Where more detailed procedures are in place, these entail a budget request submission to the Ministry of Education for the forthcoming fiscal year, but still guidelines on how these are reviewed by the authorities is missing. Recommendations do exist for parameters used to define employee salaries and contributions, which comprise the vast majority of fiscal resources, but this also helps to further explain the non-salary resource constraints that schools face.

86. **Guidelines are in place for teaching-staff salaries, which involve consultation between the Ministry and the Trade Union and are often captured in collective agreements.** However, The Collective Agreements for Primary and Secondary Education Activities are not in force in all territories[63], and where that is the case teaching-staff salaries are defined by ordinary labor law, according to minimum hourly wages. There is no documentation that outlines whether parents or community members can be a part of the consultation process to determine the teaching staff salaries.

87. **Guidelines also often exist for salary and compensation of non-teaching staff.** These are often contained in collective agreements or negotiated between trade unions and regional cantonal level governments, and do not include parent consultation. In some instances, these

---

[61] Article 136 of the Law on Primary Care and Education of Republika Srpska and Article 128 of the Law on Secondary Education and Care of Republika Srpska
[62] Rulebook on Primary School Financing and Rulebook on Secondary School Financing in Republika Srpska
[63] Not in West Herzegovina Canton

guidelines establish a salary floor for non-teaching staff which cannot be lowered by employers.[64] Guidelines can also define[65] the salary bases and the specific additional compensations or other entitlements.[66]

Role of school council

88. **School councils are key components of school management and governance in BiH.** Their composition is varied, but commonly includes parents and teachers, as well as Government representatives, school founders, as well as the teachers' council. In practice, representation and influence of political parties through the local governments' involvement in school councils is generally strong, and they exert influence on school councils' decisions including selection of principals. The processes of selection and appointment to the school council are varied: they can involve an appointment by the Ministry of Education and Culture upon proposals form school employees, founder, parent council members, and local authority (RS), or also an appointment to the Cantonal Government (Sarajevo) upon an advertised public competition. Principals do not have any influence on the functioning of the council (Tuzla) or can explicitly not be the school council members, as in West Herzegovina Canton. Appointments are effective for a timebound term (four years most often unless earlier dismissal). Rarely detailed rules and rulebooks on the Selection, Competences and Method of Operation of these school councils exist[67]. Ultimate oversight of the school's operations is performed by the respective Ministry[68], and this oversight includes adequacy of the school council's operations and the potential removal of the school council if considered inadequate. However, this reflects the fact that school-based management led by school councils is only partially in place in BiH given that the respective Ministry still retains considerable influence over the operations of schools and school councils.

89. **School councils are involved and participate in the school's operation, in collaboration with other school decision makers,** including the school principal. Their role involves financial and budgetary responsibilities, including annual work programs, financial plans, and the monitoring of their execution. In Sarajevo Canton, this is carried out in coordination with other school bodies, for example the preparation of the school budget and financial plan might be led by the principal, but the final signoff is the remit of the school council.

90. **School councils are expected to have both voice and oversight over the school budgetary and financial matters.** Even though the mandate on the overall school budget lies with the Ministry of Education, it is the school council that provides the final approval to the detailed specific use of such funds. School councils therefore lead financial oversight in their final sign-off and adoption of the annual financial plans and ultimately decide on the use of the school's

---

[64] The RS Government and Trade Union of Education, Science and Culture (at the central level) shall determine the salaries of non-teaching staff and once this cost is set, the employer cannot set a salary that is lower.
[65] Under Article 32(2) of the Collective Agreement for Primary Education Activity in Tuzla Canton and Collective Agreement for Secondary Education Activity in Tuzla Canton,
[66] Sarajevo Laws on Primary Care and Education and Law on Secondary Education, Collective Agreements
[67] For example, in Sarajevo Canton, the Rulebook on the Selection, Competences and Method of Operation of Primary School Councils define the procedure for calling Schooling Council meetings.
[68] Under Article 10 of the HNC Law on Primary Care and Education and Article 104 of the Law on Secondary Care and Education,

financial resources and acquired own revenues on a proposal by the school principal.[69] Beyond financial and budgetary responsibilities, school councils can engage in other school functioning decisions in the enhancement of care and educational work, including working conditions, particular school campaigns, communication between students, teachers and parents, and support for the parent community (Tuzla).

91. **School councils also have legal authority, voice and competencies in matters related to learning inputs in the classroom and curriculum implementation.** The school council is involved in the issues related to the daily and weekly organization of work and weekly and annual number of hours by grades, and has legal authority to voice an opinion on learning inputs to the classroom through the enactment of annual work programs. They can also be involved in devising learning inputs such as curriculum implementation objectives and tasks, streamlining of teaching and learning and school employee professional development and innovation of classes and teaching process. Additionally, the school council is involved in issues relating to pupil attendance, curriculum and teaching materials, or decision on the second foreign language.

92. **Schools councils' competencies in matters of personnel management or community involvement are varied and more limited.** Schools councils can decide on the need for further teacher recruitment, have a voice in employee appointments and dismissal, as well as participate in teacher transfer and removals, sometimes based on the school principal's proposal. Exceptionally[70] this occurs only if triggered by an employee appeal.

School Leadership

93. **Requirements to the appointment of school principal positions focus on qualifications rather than leadership capabilities.** Typically, requirements include a specified length of teaching experience (five years in a teaching role) and educational credentials (a college degree or more for primary education and at least a first-cycle university degree for secondary education). In some cases, like West Herzegovina Canton, it is also necessary that candidates have a pedagogical-psychological-didactic-methodological education. In Sarajevo Canton, secondary school principals are to follow specific mandatory training within one year of appointment, as prescribed by the Minister, but evidence for the extent to which this occurs is rare. However, in all cases, requirements are specified based primarily on qualifications— teaching experience and educational credentials—which may not adequately reflect the candidate's leadership skill or capacity for effective school leadership. In fact, principals' roles are limited to at most two consecutive terms, each of four years, regardless of leaderships skills, capacity or results.

94. **The roles and responsibilities of school principals are articulated in the respective laws on primary and secondary education, though the focus is heavily geared towards school administration and ensuring the school's compliance with legal rules and regulations, rather than on instructional leadership.** School principals' key tasks are defined in the

---

[69] Law on Primary Care and Education of Republika Srpska (Article 136) and Law on Secondary Education and Care of Republika Srpska (Article 128).
[70] Only in Sarajevo

respective laws on primary and secondary education and associated rulebooks, with a focus on administration, monitoring, and compliance. For example, key tasks include proposing and submitting the school's annual work program, implementing decisions of professional bodies and the school board, proposing rulebooks on internal organization of the school and other internal regulations, monitoring data entry into pedagogical documentation, signing documents, and reporting to the relevant Ministry. As mentioned earlier, school principals play an important role in internal teacher evaluation and in organizing professional development and training, but the focus of such activities in the policy framework is oriented towards compliance rather than instructional leadership.

Box 2: Instructional Leadership and Leadership Competences

As noted by the ET2020 Working Group on Schools, school leadership should be much more than management. The head, or principal, is expected to have a vision for the school with the right mix of competences and charisma to support school staff and guide the school towards learning objectives for students. Accordingly, school leaders should combine attributes of leader, manager, entrepreneur, and coach and be involved in instructional leadership, developing leadership capacity within the school, managing the organization, and leadership school improvement efforts.[71] In general, school leaders must assume responsibilities in an ever-wider range of areas: instruction, school culture, management, strategic development, micro politics, human resources, and external development. This requires a considerable amount of their time and can be particularly challenging. To address these challenges and ensure that the right people with the right leadership practices become school principals, policymakers need to focus on leadership competences, careers for school leaders, and collaborative leadership practices within schools.

Effective school leaders provide instructional leadership by concentrating their efforts and resources on improving teaching and learning for all students as the center of planning and staff development. First and foremost, this involves guaranteeing access to the critical curriculum for all students by customizing curriculum where permitted, adapting to the needs of different learners in the school, and ensuring that teachers follow the curriculum and are knowledgeable about and deeply involved in the school's curricular program. It also involves observing instruction in classrooms, mentoring teachers and providing feedback, monitoring curriculum implementation, and protecting teachers' instructional time and buffering teachers from distractions.[72]

95. **The recruitment and appointment process to school leadership positions is not standardized, but in general it can be a politicized process without competence-based criteria in place**. The school board has to publicly announce the competition for the position, approximately three months prior to the expiration of the principal's term. But then onwards selection, approval and appointment processes vary across jurisdictions. The Framework Law requires school boards to play a key role in the appointment process of school principals. It can be the school board that selects and appoints principals (Sarajevo Canton), a proposal of the Minister and appointment by the Government from amongst a list of candidates who meets conditions of the competition (RS), or a selection made by the school board upon previous approval of the Ministry (Herzegovina-Neretva Canton). In some cases (Tuzla Canton) additional criteria are used including a positive expert recommendation from the Pedagogical

---

[71] EC (2018b).
[72] Robinson et al (2008); Marzano et al. (2005); Hallinger (2005)

Institute, along with consent from the Ministry. In cases with only one applicant, selection into principal positions may not be competitive as long as the candidate meets the minimum criteria. Candidates are not expected to pass a written test or demonstrate satisfactory performance in leadership positions prior to application; the lack of defined leadership competences combined with the recruitment and appointment processes that rely heavily on school boards together with consent or approval of the government means that selection of school principals can be highly politicized in practice.[73]

Box 3: Case Study on Building a Strong Pipeline of School Leaders in Slovenia

Slovenian school principals report more engagement in instructional leadership than principals in other OECD countries.[74] This is the result of investments over the last decade in Slovenia in in stronger instructional leadership by creating specific policies for school principals. These policies are a blend of guidelines and support. For the guidelines, the Ministry of Education introduced requirements, licenses and certificates for principals. The formal requirements for principals in Slovenia include: (1) a teaching qualification; (2) five years teaching experience; (3) second promotion of the Slovenian teaching career ladder; and (4) a school leader license.[75]

In order to attain a license[76], school principals have to follow the mandatory Headship License Program.[77] For continued professional development of principals, there is also a Headship Certificate Program. Both programs are organized by the National School for Leadership in Education (NSLE) in Slovenia.[78] This public institution was established in 1995 in order to support the professional development of principals. The activities and responsibilities include professional development, training and other education programs, publishing academic books and journals as well as promoting research and experimental development in education. Some of its main functions can be seen below. In the last few years, nearly half of the programs are co-funded by the European Social Fund.[79]

Headship License Program:
The participants in this program[80] are headteacher candidates, i.e. newly appointed headteachers or aspiring headteachers. The program is implemented in small groups of around 20 participants. These participants engage in activities such as workshops, group work, case studies, role playing, shadowing, exchange of participants' experiences, presentations of organizations, face-to-face meetings with experienced headteachers, etc. The goal of the Headship License Program is to train participants for the tasks of school and kindergarten leadership and management as defined within education legislation, as well as to develop skills and competencies contributing to personal and organizational efficiency in school leadership.

The program for Headship License consists of six compulsory modules:

- *Introductory module*: headteacher as a manager and as a leader, teamwork, change management, trends in education

---

[73] This phenomenon is discussed in detail in Komatsu (2013).
[74] http://www.oecd.org/education/Education-Policy-Outlook-Country-Profile-Slovenia.pdf
[75] OECD (2016) Education Policy Outlook: Slovenia. OECD. http://www.oecd.org/slovenia/Education-Policy-Outlook-Country-Profile-Slovenia.pdf
[76] http://en.solazaravnatelje.si/activities.html
[77] *OECD: Background report for Reviews of School Resources: the Teaching Workforce:* http://www.oecd.org/education/school-resources-review/backgroundreportSlovenia.pdf
[78] http://en.solazaravnatelje.si
[79] http://en.solazaravnatelje.si/
[80] http://en.solazaravnatelje.si/Activities.html?#HeadshipLicenceProgramme

- *Organizational theory and leadership*: organizational theory, models of school organization, school leadership
- *Planning and decision making*: vision, planning, methods to decision-making
- *Head teachers' skills*: managing conflicts, running meetings, communication skills, observing lessons
- *Human resources*: culture, motivation, professional development, teaching and learning
- *Legislation*

The main objectives of the program are:

- For the participants to meet the requirements for leadership and management tasks defined in Slovenian education legislation;
- To advance knowledge and skills that contribute to personal efficiency and organizational effectiveness;
- To prepare the participants for the Headship License.

Headship Development Program: CPD for Head Teachers

The Headship Development Program is designed for experienced head teachers. After ten plus years of headship, a need emerges to acquire additional knowledge and skills, which the individual has started to develop within the programs of the NSLE. The Head Teachers Development Program thus systematically promotes life-long learning of head teachers and introduces new forms of networking. The program is composed of four intertwined methods of work: three three-day modules, one one-day elective activity, mutual advisory work and project work.

The goals of the program include:

- Deepen knowledge and develop individual skills for the educational leadership of school;
- Understand the role of the head teacher and modern trends, the needs of political, economic, social, legislative and culturally altered environment in which schools operate;
- Develop skills for self-evaluation and assessment of one's own work, as well as for professional development planning with main focus being the efficiency of school leadership;
- Expand the understanding and develop a critical view of innovations happening within the school and of participating in local and global trends, consequently ensuring flexibility and comparability of pupils;
- Train participants in order to be able to use, by means of modern analytical methods, the relevant data and research in their planning and decision-making;
- Present one's own practice with others in professional communities and search for new solutions for leadership in schools

96.   **There is more consistency in the monitoring and evaluation of the school principal's work and performance, though principals are not held accountable for school performance or student learning outcomes**. The evaluation of principals' work includes supervision and evaluation of their performance of duties set by law, and it is carried out by the Ministry, and carried out annually, or at most every two years. The methods and criteria for evaluation of principals' performance are adopted by the Minister according to the respective rulebook, and they may also depend on professional supervision of the Pedagogical Institute and opinion of the school board. There is not, however, an expectation that school principals be accountable for student learning outcomes or school performance. Rather, principals are held accountable to fulfill the

responsibilities defined in the legal framework. The Ministry has the prerogative to dismiss the school leadership (principal, acting principal or assistant principal) if, in consultation with the municipality it considers that they are not fulfilling their duties.

97.   **Whereas school principal duties appear to be consistently defined, this is not the case for their salaries and compensation.** These duties are often spelled out in detail in the respective laws on primary and secondary education, as well as the associated rulebooks defined at the entity level in RS and cantonal level in FBiH. Salary schedules for primary and secondary school principals are not defined separately, but their compensation is reflected by job complexity coefficients which are used to adjust base salaries. For example, in Sarajevo Canton, according to the 2020 Collective Agreement for Preschool and Primary Education, the job complexity coefficient for school principals is 4.8, compared to a senior advisor teacher (4.1), advisor teacher (3.9), or teacher mentor (3.8). In Herzegovina-Neretva Canton, salary coefficients are different: 2.32 for primary school principals and 2.79 for secondary school principals. Despite the fact that school principals in BiH have similar expectations and responsibilities in all jurisdictions, the differences in salary coefficients may create different incentives for potential candidates. Attracting strong and qualified candidates to become school principals depends on comprehensive efforts to ensure that the career is attractive and rewarding relative to the efforts expected.

Assessment and Accountability

98.   **All jurisdictions conduct both external school assessments as well as student learning assessments, though results are not standardized across schools.** According to the respective laws on primary and secondary education and associated rulebooks, the Pedagogical Institutes are in charge of setting criteria and methodologies for school assessments, which absorb elements of external assessments of teacher quality as described above. School quality assessments in some jurisdictions like RS and Tuzla Canton include progress on student learning measures, along with other elements such as school governance, teaching and learning, curriculum implementation, extracurricular activities, community engagement, physical conditions, and other elements. However, in RS and Tuzla Canton, the prevailing legal frameworks do not provide for concrete tools or standardized approaches to conducting such school assessments. Other jurisdictions including West Herzegovina Canton and Herzegovina-Neretva Canton do not define clear criteria for school assessments.

99.   **Assessment results are used for the purposes of school operational or pedagogical adjustments.** Results from these assessments are shared with the School Council, parent council and Pedagogical Institutes (Sarajevo), and then sometimes escalated to the minister level. The results of these assessments are analysed at the cantonal level and recommendations are then obtained for each school, which is then encouraged to elaborate corresponding developmental plans according to the respective dimensions of the school quality assessment. In some cases, such as Herzegovina-Neretva and West Herzegovina Cantons, schools are not obligated to make use of assessment results to make pedagogical, personnel, or operational adjustments. In practice, this means that school directors and school councils may use their assessment results to make operational or pedagogical adjustments, though this is clearly dependent on school leadership capacity and school resources.

100.   **Standardized student assessments are present in some jurisdictions in the form of state Matura final examinations, though school-based assessments are more common.** Sarajevo and Tuzla Cantons have external Matura final exams for students leaving primary school after Grade 9, with results being a part of the decision for enrollment in secondary schools. However, for the most part, students participate in numerical learning assessments that are graded at the school according to a scale of 1 (insufficient) to 5 (excellent). Jurisdictions do analyze and publicly disseminate information on student learning,[81] though the results are not comparable across schools since the assessments are not conducted externally or standardized.

101.   **The prevailing policy framework does not hold schools accountable for student assessment results.** The policy setup regarding student assessment results is that—when available—they will inform external school assessments conducted by Pedagogical Institutes. Schools may use the results to make adjustments at the school-level, but this is not required. Instead, the more in-depth specialized supervision results of the external assessments inform teacher and expert associate performance assessments and advancement, so the accountability chain works via the performance assessments of staff. School leaders however are not accountable for student learning assessment results, and the lack of standardized approaches to assessment further confounds the situation.

102.   **In terms of schools' financial accountability, the situation varies across jurisdictions but in general regulations for financial accountability at the central level are lacking, as are instruments that link funding to performance or outcomes.** If established at the school level, these mechanisms can involve internal system controls or self-appointed committees whereby control of expenditure of their own funds is reported to cantonal Ministries periodically. Special legal acts related exclusively to the education sector are missing. Rarely[82] guidelines are in place at the cantonal level, where regulations have specified the school rules, including, among other things, the method of acquisition and distribution of the operational resources, while also specifying the authority competent to supervise their implementation. There is no evidence of performance-based financing to incentivize better school operations. Input-based funding that is heavily geared towards salaries means that schools in practice have very limited resources over which they could be accountable.

System Management

103.   **Quality and capacity of management at the education system level is also a critical driver of workforce effectiveness and ultimately learning outcomes.** Global evidence indicates the importance of taking a systems approach to workforce effectiveness, but it also demonstrates that education systems often suffer from two related weaknesses: (i) conflict priorities that compete with efforts to improve learning outcomes; and (ii) incompatibility or incoherence between different elements within the education system.[83] Failure to tackle these technical and political barriers can trap countries in a low-learning, high-inequality equilibrium.

---

[81] For example, RS Pedagogical Institute posts analysis for previous years by semester on monitoring and analyzing student achievement in learning and behavior. https://www.rpz-rs.org/261/rpz-rs/Analiza/postignuca/ucenika/na/polugodistu/i/kraju/skolske/godine

[82] Only Tuzla

[83] World Bank (2018).

104.   **This section presents findings from the survey of public education officials conducted in four cantons of FBiH among staff of Education Ministries and Pedagogical Institutes.** This in-depth survey collected information on the capacity and orientation of the education bureaucracy in four participating cantons: Sarajevo, Tuzla, Herzegovina-Neretva, and West Herzegovina. It covers four major areas of system management and coherence: (i) learning goals and associated targets, monitoring and incentives; (ii) accountability and mandates, including coherence of roles, transparency within agencies, and accountability of public education officials; (iii) quality of bureaucracy, including knowledge and skills, work environment, merit, and motivation/attitudes; and (iv) impartial decision making, including prevalence of politicization in decision-making processes. Across the four cantons, the survey covered a total of 49 officials which represented about 66 percent of the target audience in the four jurisdictions. Respondents were employed on a permanent basis in their positions, with an average of 11 years of experience in their current institution. Respondents have been working in their current jobs for an average of 9 years, while they have spent an average of 14 years in the civil service. 72 percent of the respondents are in charge of monitoring school performance, while another 20 percent are responsible for finances and planning.

Learning Goals

105.   **Responses from BiH public education officials evidence clear challenges in their respective institutional performance targets and learning goals at the cantonal level.** Evidence reveals that across all cantons, criteria for measuring progress towards targets is lacking (Figure 15). Even when targets and learning objectives are defined, they are found to be immeasurable and not aligned to cantonal learning objectives. Likewise, employees of Ministries of Education and Pedagogical Institutes believe that performance targets are clearly defined but not measurable, and loosely related to the cantonal learning objectives. Respondents from all cantons express a general understanding of the institutional goals and how their work and daily tasks contribute towards them, yet they also admitted that limited quantitative criteria exist for measuring their progress towards targets, and that the need for additional or more detailed criteria has been identified. Non-managerial level civil servants believe that staff are familiar with the broadly set institution's goals, but not with the way goals are related to their daily tasks.

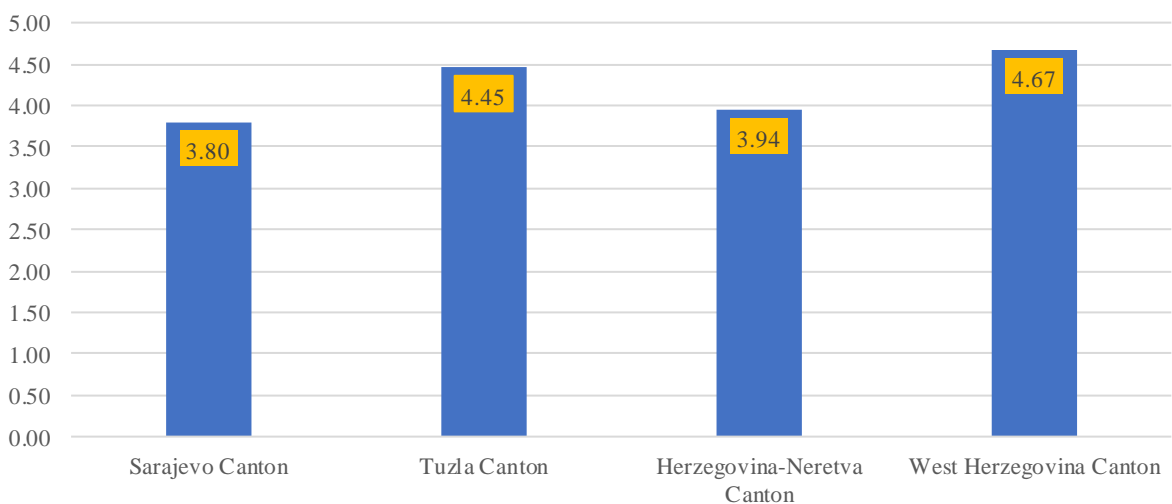*Figure 15: Measurability of Institution's Targets, by Canton and Institution Type*
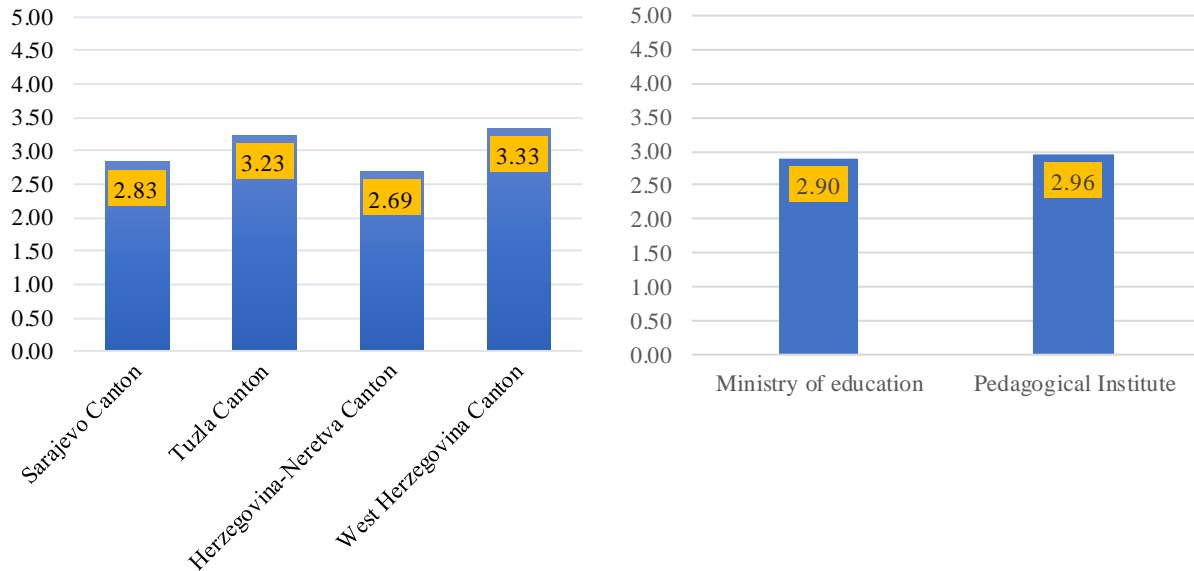
Source: BiH Survey of Public Education Officials

Note: Scale measures degree to which institution's targets are measurable, ranging from 1 (*targets are not measurable*) to 5 (*detailed quantitative benchmarks and intermediate goals exist to measure progress on the organization's targets*).

106.   **Overall, school performance towards set targets and learning objectives is not monitored.** Evidence is mixed as to whether institutions monitor school performance, and while most respondents believe that there is process in this regard, this is based on an incomplete set of indicators (Figure 16). Only in West Herzegovina Canton did respondents believe that performance is monitored formally, continuously, and based on a full set of school performance indicators. This is also the institutional understanding, as respondents at Ministries of Education and Pedagogical Institutes consider that school performance indicators are formally monitored.

Figure 16: Monitoring School Performance in Achieving Learning Objectives, by Canton
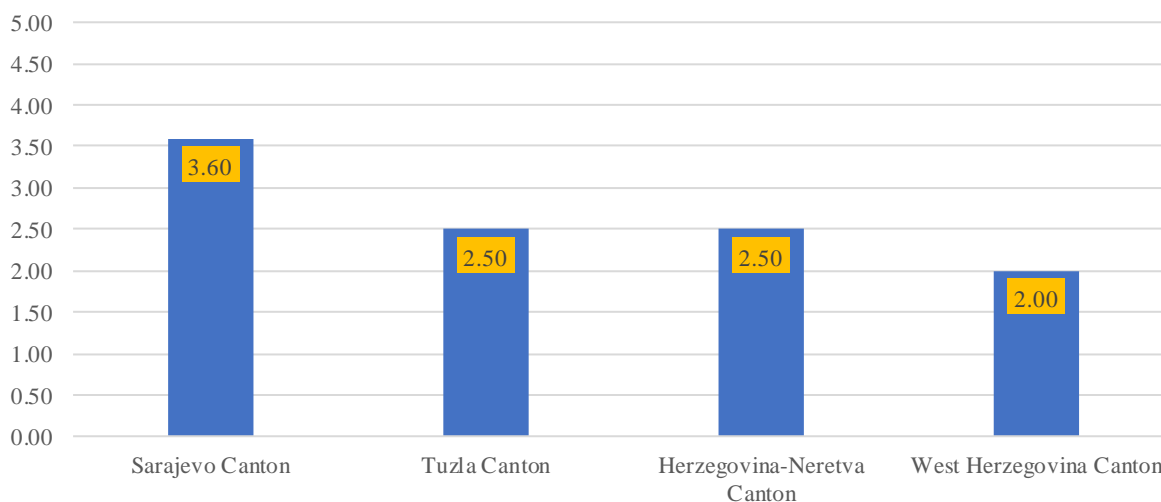

Source: BiH Survey of Public Education Officials

Note: Scale measures degree to which target institution tracks how schools perform towards achievement of learning targets, ranging from 1 (*organization does not track school performance*) to 5 (*full set of school performance indicators are tracked formally and continuously for all schools*).

107.   **Functional systems for collecting and monitoring education data are at different stages of development across the four cantons, but in all cases, respondents agreed that the system of education data collection does not work well.** Regardless of which institution they work in, respondents believe that there is a system in which education data is collected, but that this system does not work well. In particular, respondents from Herzegovina-Neretva Canton noted that there is no management information system in place, though there are other less efficient means of collecting data. Sarajevo Canton pointed out that such a system was established but it does not work well or does not have broad coverage. In Tuzla Canton and West Herzegovina Canton, respondents stated that a system for education data monitoring is functioning, but it is not updated regularly or consistently. Views expressed on the process and frequency of school performance assessments are vastly different across jurisdictions and institutions, evidencing an unclear process. The school performance information is not considered for relevant decision making, such as school budgets, though this also differs by canton (Figure 17). In Sarajevo Canton, respondents were more likely to report that budgets were based on systematic indicators of need with decisions aligned to cantonal learning goals, while informal criteria are more common in West Herzegovina Canton.

Figure 17: Use of School Performance Data to Inform School Budgets, by Canton

Source: BiH Survey of Public Education Officials
Note: Scale measures degree to which target institution tracks how schools perform towards achievement of learning targets, ranging from 1 (*budgets are divided evenly among schools or in an ad hoc way regardless of circumstances*) to 5 (*budgets are based on systematic indicators of need and create complementary incentives for school performance aligned to cantonal learning goals*).

108.   **The stakeholder community, including parents and community representatives, do not have regular opportunities for engagement with Ministries or Pedagogical Institutes regarding school performance or student learning.** Respondents were asked to indicate what is the most common way they or the institution where they work receive feedback from parents and community representatives when rewieving school performance and student learning. According

to respondents, in Sarajevo Canton and Herzegovina-Neretva Canton, ad hoc feedback from parents and community representatives is obtained in writing by post or e-mail, or formal meetings are organized. In Tuzla Canton, feedback from parents and community representatives is obtained through ad hoc informal meetings or telephone calls. Finally, in the West Herzegovina Canton, regular formal meetings with parents' associations and community representatives are organized. In all cases, respondents acknowledged that the current level of engagement is not formalized and that there are not regular opportunities for engagement with education authorities.

Accountability and Mandates

109.   **Educational responsibilities and mandates regarding the evaluation of student knowledge involve duplication of efforts and overlap in functions.**   Organizational responsibility for evaluation of student knowledge is assigned to multiple institutions, sometimes with a significant overlap of functions, and as a result there is some lack of clarity (Figure 18). This was noted particularly for Sarajevo Canton. Even in cases where the responsibility is clearly defined, as with Herzegovina-Neretva Canton, there is still some degree of overlap in functions. The views regarding the clarity of these mandates differ between Education Ministries and Pedagogical Institutes, with respondents from the latter more likely to report that the organizational responsibilities for student learning assessments are clearly defined.

Figure 18: Clarity in Organizational Responsibility for Learning Assessments
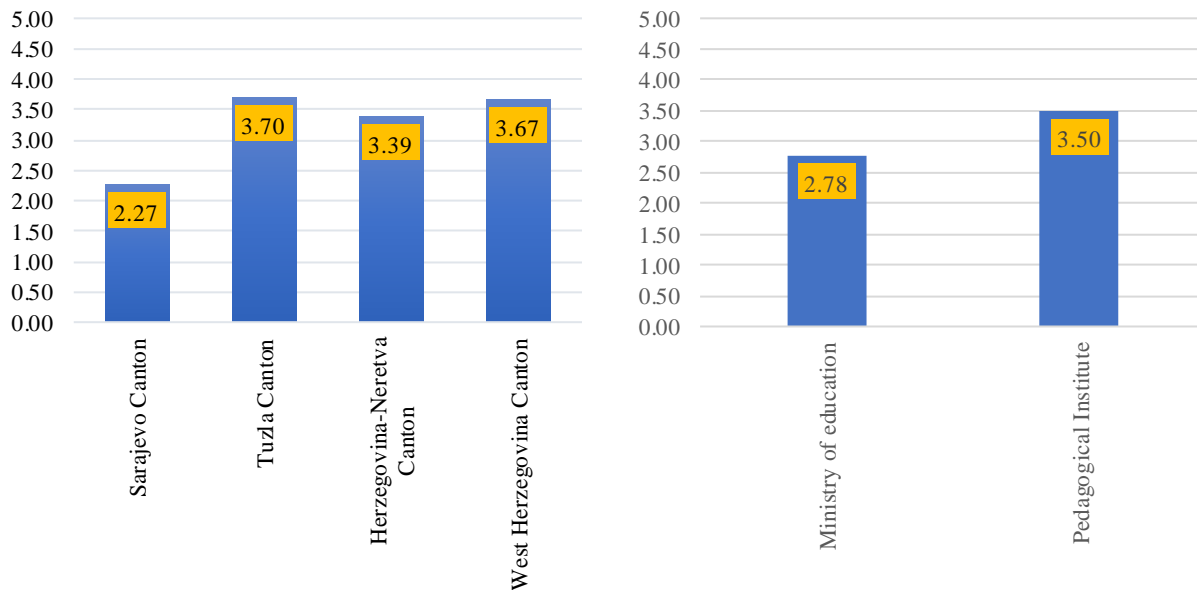
Source: BiH Survey of Public Education Officials
Note: Scale measures degree to which organizational responsibility for student learning assessments is clear, ranging from 1 (*organizational responsibility is not clear*) to 5 (*organizational responsibility is clearly assigned to a single organization*).

110.   **Duplications and overlap in mandates are also acknowledged by public education officials in areas of teacher supervision and coaching.** The respondents from Sarajevo Canton believe that the organizational responsibility for the supervision and guidance of teachers is assigned to multiple institutions and that there is a significant overlap of functions. Even when these responsibilities are clearly defined, authorities from the other cantons reported that there

remains an overlap of functions. Ministry staff are more likely to report overlaps in functions in the areas of teacher supervision and coaching, whereas Pedagogical Institute staff are more likely to report that organizational responsibility is clear.

111.   **All authorities reported that their organizations take steps to publicize achievements of performance targets in recognition of the importance of transparency, but accessibility of information remains a challenge in some cantons (Figure 19).** Respondents were asked to assess whether the institution where they work publishes the results of its work. Respondents from Sarajevo Canton and West Herzegovina Canton reported that institutions where they work publish basic information on the results of their work, but that this information is not always in an accessible or user-friendly format. Respondents in Tuzla Canton and Herzegovina-Neretva Canton assessed that institutions where they work publish basic information on the results of their work systematically, and that this information is made public in an accessible format. Respondents employed in Pedagogical Institutes were more likely to state that their organization makes public its achievement of performance targets. All respondents confirmed a high level of institutional commitment to transparency, though the expectation of transparency is not always applied or it happens frequently after a long delay.

*Figure 19: Transparency of Public Education Authorities*
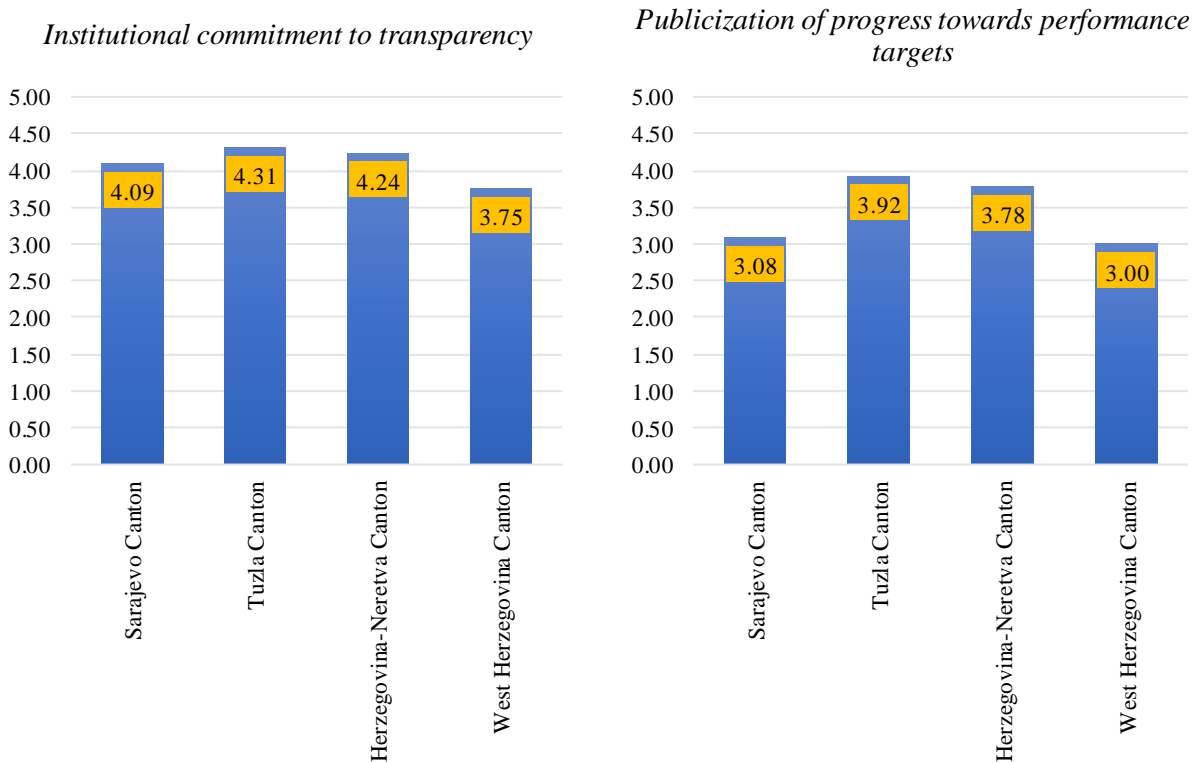
Institutional commitment to transparency

Publicization of progress towards performance targets

Source: BiH Survey of Public Education Officials
Note: Scale measures degree to which respondents believe their organizations are commited to making its activities transparent to the public (1-low, 5-high).

Source: BiH Survey of Public Education Officials
Note: Scale measures degree to which respondents believe their organizations make public their achievements of performance targets (1-low, 5-high).

Quality of Bureaucracy

112.   **Education officials self-describe themselves as relatively satisfied with their experience of working in the government, though many officials believe that no matter how well they do their job, it will not make a difference for student achievement.** In general, respondents across the board expressed "relative satisfaction" with their employment experience in the government, rated as 4 on a scale of 1 to 5 (Figure 20). Highest satisfaction was found in Tuzla Canton, while relatively lower satisfaction in Herzegovina-Neretva and West Herzegovina Cantons. Staff of Pedagogical Institutes and non-managerial level civil servants tend to express slightly lower levels of satisfaction relative to their peers. Even so, about 33 percent of the survey respondents reported that employees feel 'most of the time' or 'always' that no matter how well they do their job, it will not make a difference in student achievement. 65 percent of respondents share this feeling at least some of the time. The share of employees who agree with this sentiment either 'most of the time' or always' is higher among Ministry staff compared to Pedagogical Institute staff, non-managerial civil servants, and in Sarajevo and Herzegovina-Neretva Cantons.
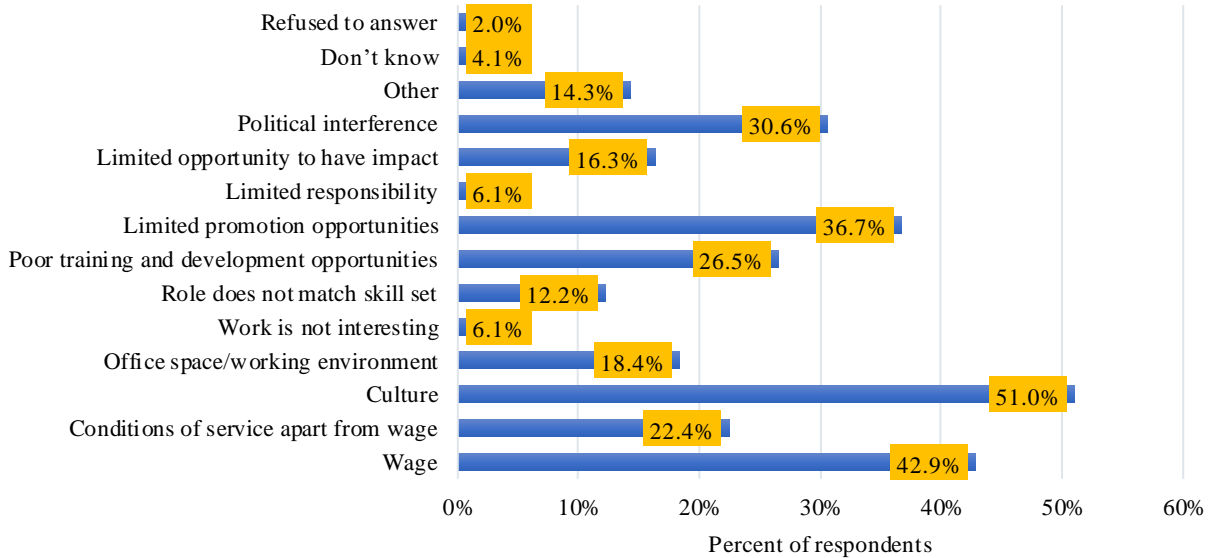
Figure 20: Job Satisfaction Among Public Education Officials
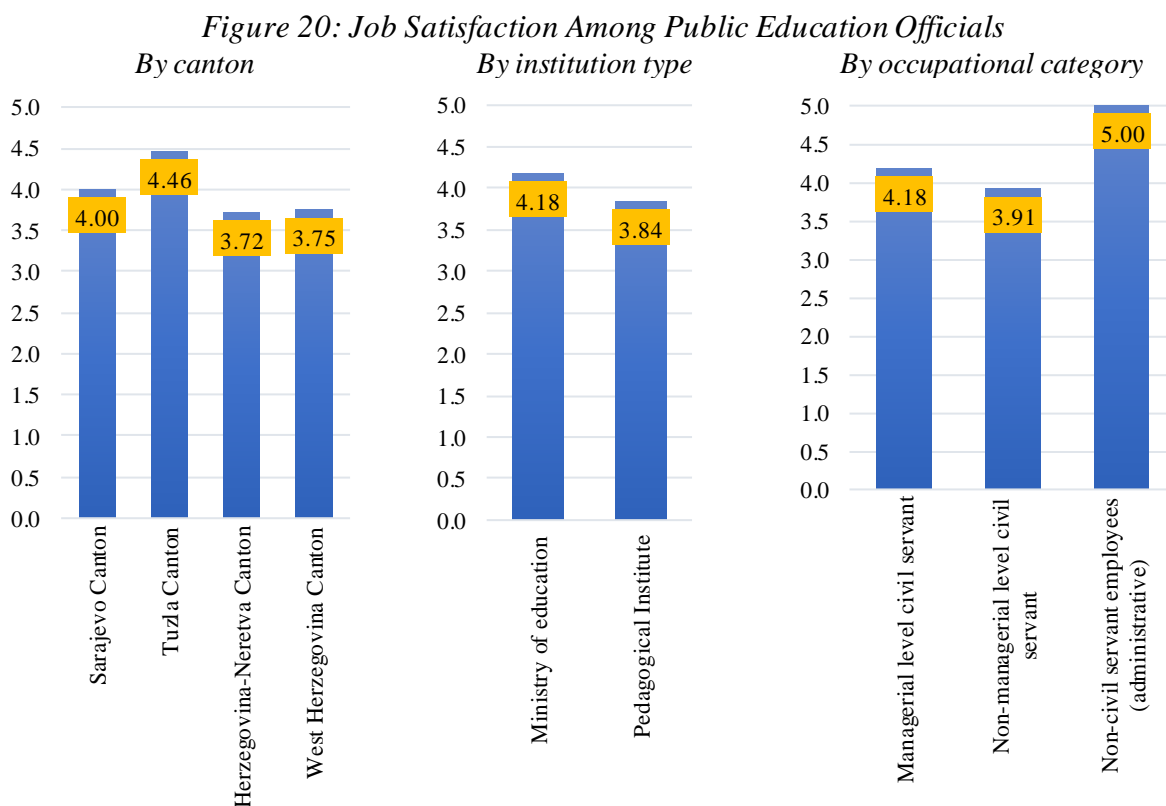
Source: BiH Survey of Public Education Officials

113.   **Working conditions and workplace culture in education decision-making bodies including Ministries and Pedagogical Institutes need to be strengthened.**   Survey respondents were asked to select the aspects of their work environment that would be most likely to make them want to change jobs (Figure 21). Workplace culture, selected by over half of the respondents, was identified as the top concern, followed by wage, and limited promotion opportunities. An additional concern—political interference—was identified by about a third of respondents, along with poor training and development opportunities for staff. Together

these point to a need to prioritize stimulating and motivating working conditions and environments for the professional civil servants in the education bureaucracy.

*Figure 21: Reasons for wanting to change jobs*

114.   **Education public officials report a moderate level of mutual trust, with higher levels of trust in Pedagogical Institutes, but an overall limited ability for innovation and adoption of new practices in day-to-day work.** Across all four cantons, about 65 percent of the survey respondents reported that they could trust their colleagues to meet their commitments 'most of the time' or 'always.' That said, levels of mutual trust appear to be higher amongst the staff of Pedagogical Institutes compared with Ministries. Respondents in all cantons agreed that their respective institutions were encouraging of staff proposals of innovative solutions to specific problems, while also admitting that either (a) the ability to adopt new practices was limited, or (b) that the adoption of such innovative practices is rare in practice. Both of these findings—on trust and scope for innovation—is an understandable result of the limited staffing capacity and highly legalistic approach to organizing work.

115.   **Public education officials confirm that personal or political connections play a role in job promotions.** However, there is considerable variation on perceptions regarding meritocratic processes for job promotions. Strong views of a meritocratic process, in which promotions are based solely on merit or job performance, were reported in Herzegovina-Neretva and Tuzla Cantons, and amongst managerial level civil servants (Figure 22). Ministry staff were also more likely to report meritocratic promotion. On the other hand, staff of Pedagogical Institutes, non-managerial civil servants, and staff in Sarajevo and West Herzegovina Cantons were more likely to report that personal or political connections play at least some role in recent promotions in the organization.

Figure 22: Assessment of Meritocratic Processes in Job Promotions
By canton   By institution type   By occupational category
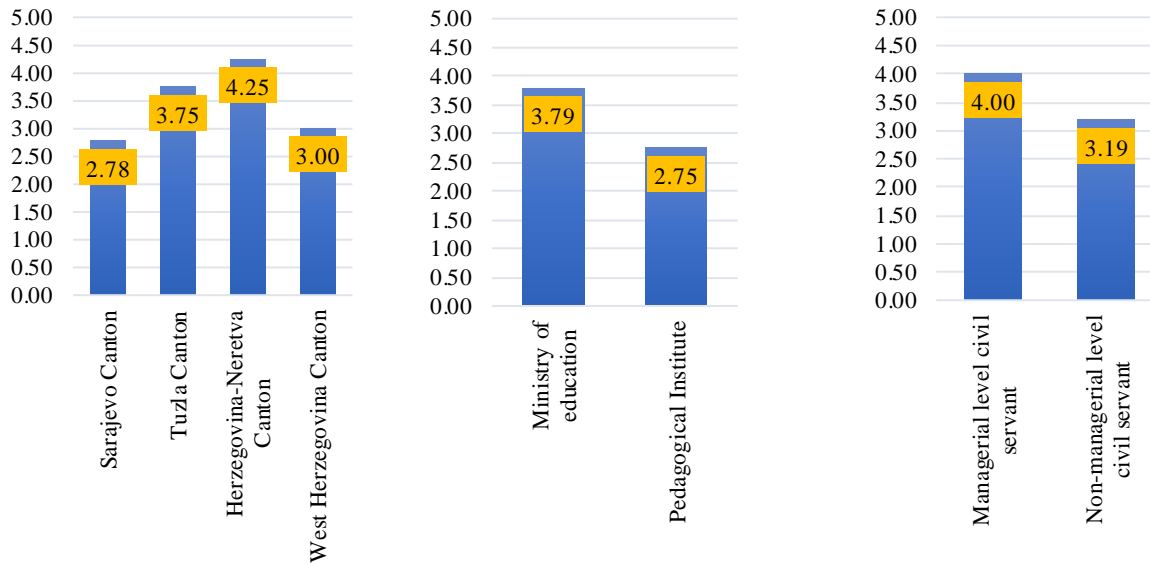
Source: BiH Survey of Public Education Officials

116.   **Among education officials, there are differing opinions among the circumstances in which students may deserve additional attention, reflecting some entrenched institutional norms.** Respondents were asked to agree or disagree with various normative statements about teacher absence, student attention, and students' intelligence (Figure 23). These statements are intended to assess opinions and motivations of public officials. Ministry staff as well as education officials in Tuzla Canton were more likely to have fixed views about students' intelligence and circumstances when students deserve more attention than others. On the other hand, staff of Pedagogical Institutes were more likely to disagree with all statements, which likely represents the larger role they play in supervising and assessing teachers and students in the classroom.

Figure 23: Public Education Officials' Opinions on Learning
By canton   *By institution type*
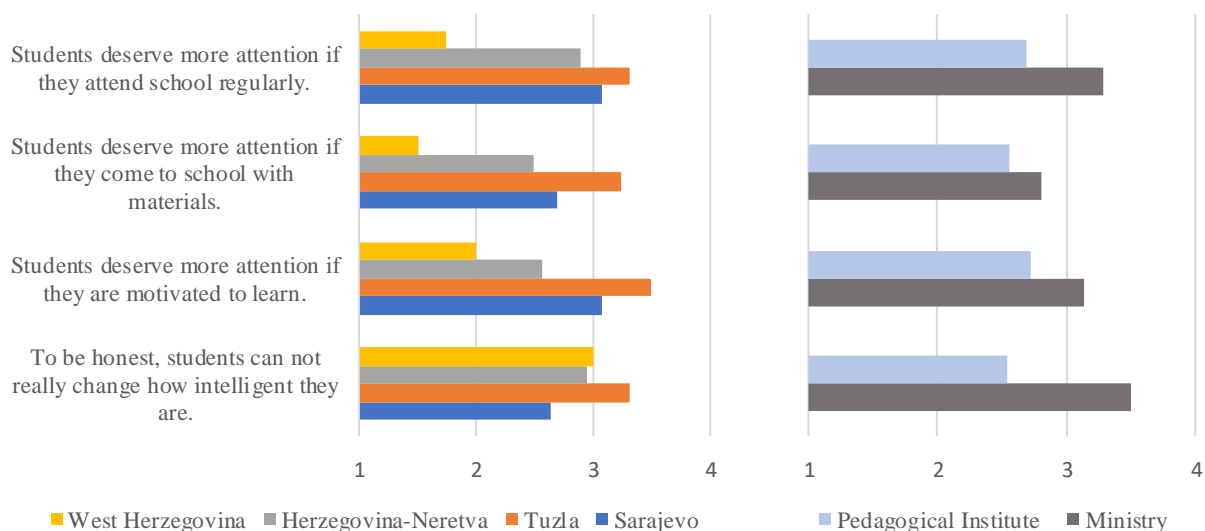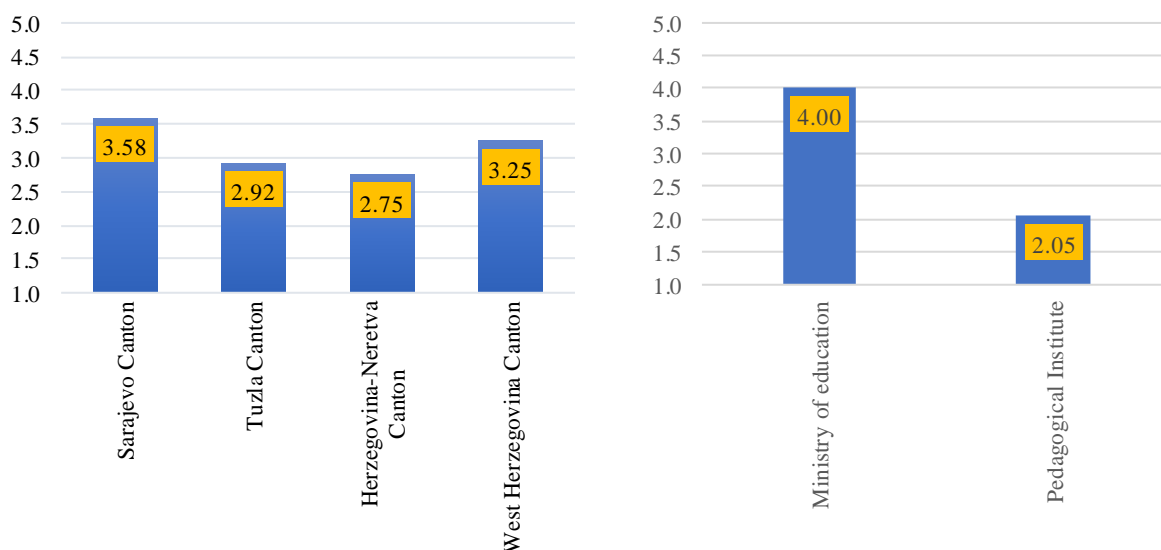

Source: BiH Survey of Public Education Officials

Note: 1 = Strongly Disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree

Impartial decision-making

117.   **Decision making on matters related to the teaching workforce, including hiring and promotions, are seen to be based to some extent on political connections, rather than merit, with a lack of clarity on how such policy decisions are made.** As with the above analysis on job promotions, similar conclusions were found regarding hiring decisions. Pedagogical Institute staff, along with non-managerial civil servants and staff in Sarajevo and West Herzegovina cantons were more likely to agree with the statement that hiring decisions in the respective organization are more likely to be based on political connection rather than merit.   Most respondents agreed that policy decisions related to how many teachers to hire are based on either a policy of equal distribution across municipalities or a needs assessment, but officials in Sarajevo and Herzegovina-Neretva Cantons were more likely to say that such decisions are made in an ad hoc manner, or based on political influence. Nearly one-quarter of surveyed respondents did not know how such policy decisions are taken.

118.   **The perceived rationale for and impartiality of other policy decisions related to resources, such as where to build a new school or which schools to renovate, also vary.** Interestingly, Ministry staff believe that such decisions related to where to build a new school or which schools to renovate are based on an assessment of needs of each municipality, while staff of the Pedagogical Institutes reported that there is no clear system for taking such decisions and that instead it is done in an ad hoc manner. Perceived impartiality in such decision-making processes also varies across cantons (Figure 24).

Figure 24: Impartiality of Decision-Making Regarding School Construction or Renovation

By canton

By institution type

Source: BiH Survey of Public Education Officials
Note: Scale measures degree of impartiality in decision-making, ranging from 1 (*based on political influence*) to 5 (*based on needs assessment of each municipality, paying special attention to distinct needs for maintaining existing infrastructure and building new infrastructure*).

119. **Though employees did not perceive any preferential treatment resulting from membership in a trade union, respondents did report that trade unions would not be supportive of a hypothetical reform to introduce teacher evaluations as a way to improve pedagogical practices.** The majority of teachers are members of trade unions in the four cantons included in the survey. In general, public education officials agreed that teachers do not receive preferential treatment (e.g. promotions, placements, or transfers) as a result of union membership, and they do not need to be a member of a union in order to get a job in a school. However, there was more agreement among respondents that trade unions would not be supportive facilitators or champions of reforms aimed at improving pedagogical practices. Respondents considered the hypothetical case of teacher evaluations, and about 65 percent of respondents said that the trade union would either block or criticize the reform, take a neutral stance, or they did not know how the trade union would react. Only 6 percent of respondents said that the trade union would support its effective adaptation and implementation.

IV. Recommendations

120. Strengthening effectiveness of the education workforce and ultimately the quality of learning outcomes in BiH is an imperative for all relevant authorities in the country—at the state, entity, and cantonal levels. However, there are also short-term imperatives to respond to the impacts of COVID-19 on the education sector, to restore and recover learning losses that have accumulated as a result of school closures and the transition to remote/distance teaching and learning, and to promote equity and inclusion to address preexisting disparities in learning. The section below includes a series of recommendations which represent issues common to all jurisdictions included in the study, and which are likely to be most applicable as well for other jurisdictions not included in this study. Though there are in some cases significant variations across jurisdictions, recommendations presented below are intended to serve as a foundation for collective and mutual development of the education sector more generally, including with support of coordinating and technical bodies like MoCA, APOSO, and the FBiH MoES.

121. The recommendations are grouped according to the four framework elements of the BiH Education Functional Review: (i) Learners, (ii) School Inputs, (iii) Teachers, and (iv) School and System Management. They include a mix of recommendations that would involve different degrees of educational impact, fiscal or economic costs, political feasibility, and time horizons. **Table 4** contains a unified matrix of recommendations that attempts to categorize each on these four dimensions. This categorization effort is based on consultations with local experts, as well as international evidence such as the recommendations of the Global Education Evidence Advisory Panel on cost-effective approaches to improve global learning.[84] The table should be read horizontally, with each recommendation considered independently of the others, though the ideal scenario would involve a progressive mix of such recommendations. **Table 5** introduces a hierarchy for prioritization, with three groups of actions: (i) *quick wins* that are estimated to produce educational benefits which outweigh the costs in a relatively short time frame; (ii) actions to build *stronger systems* through improved service delivery mechanisms over a medium-term time

---

[84] World Bank and UK Foreign, Commonwealth & Development Office (2020).

horizon; and (iii) larger *fundamental reforms* that hold potential for significant improvement of educational outcomes and the education system more broadly, but which involve higher costs over a longer-term horizon. However, a caveat should be mentioned: while these recommendations are based on the analysis provided here, as well as literature and expert consultations, the implementation of such recommendations should involve detailed feasibility analyses and further consultations with officials, experts, and the public.

122.   While the recommendations listed below incorporate best international practices and have proven to be effective in other settings, the probability of success is not guaranteed; hence, a general recommendation which accompanies all those listed below is to incorporate a focus on evaluation strategies along with design and implementation of education policies to determine the extent to which interventions are having the desired impact and to adjust their design appropriately as needed.

Learners

123.   **Develop tools to assess extent of learning loss due to school closures and implement large scale learning programs (such as accelerated learning or tutoring programs) to mitigate learning loss and prevent exacerbation of inequity.** To plan learning recovery, education systems need to assess students' post-COVID19 learning level. As BiH slowly reopens their schools at varying capacities, it will be important for the ministries of education to; (i) assess teachers that could participate in accelerated learning/remedial programs, (ii) identify students in the school population in need of support (learning, financial or nutrition) and (iii) assess overall learning loss so that accelerated/remedial programs can be targeted correctly. Based on these assessments, BiH should plan to implement large-scale remedial programs to mitigate learning loss and prevent exacerbation of learning inequality after school closures. Examples of these programs can be seen in countries like Brazil where a nation-wide remedial program (*Programa Acelera Brasil of Ayrton Senna Foundation*) has been implemented.[85] There are also promising examples of accelerated learning programs in various country settings, such as Bangladesh, Cambodia, Ghana, Honduras and Tanzania, which indicates the range of possible modalities.[86] Lessons from such programs could be harnessed in service of post-COVID19 school planning within BiH.

124.   **Develop efficient systems to use data and monitoring to track reintegration, learning, and health of all students.** Strong administrative data systems are the backbone of early warning systems that have the ability to identify who is likely to drop out, and therefore could be targeted for interventions. For example, many school systems in Europe and beyond leverage their rich administrative data available for increasingly effective dropout prediction and prevention.[87] This pandemic underlines the importance for the BiH education system to better harness their administrative data for enhancing targeted student support.

---

[85] World Bank (2020a).
[86] Longden (2013).
[87] O'Cummings and Therriault (2015); EC (2013).

125.   **Support learning at home by distributing books, digital devices, and/or resource packs for remote learning to children and parents.** Learning inequality has been seen as a feature of the BiH learning system. In the face of the pandemic, the most educated and wealthiest families will be able to cope with the challenges posed by the crisis and sustain their children's learning at home. They are more likely to have computer equipment and connectivity; a space to work; to have books and other learning materials at home; they are more likely to have the knowledge necessary to support their children, teach them academic subjects themselves as well as to provide emotional and motivational support. This means that as schools reopen in varying degrees in BiH, disadvantaged children in BiH will find themselves even further behind. To mitigate this, it is imperative that BiH authorities support learning at home (in cases of further closures or for areas where school closures are still being enforced) by distributing resources such as books, digital devices and/or resource packs for remote learning.

126.   **Expand access to pre-primary education and early learning opportunities for children**. Recent PISA and TIMMS results from BiH display the importance of improving access to early learning opportunities. BiH has one of the lowest levels of access to pre-primary education among peers. Access to early childhood education (ECE) in BiH is especially low at a mere 15 percent, which is in stark contrast with the EU average of 95 percent. Low capacity in urban areas is one factor explaining low enrollment in preschool. Despite high demand among parents for preschool education in certain urban areas (there are waiting lists in larger towns such as Sarajevo, Banja Luka, Brčko, and Mostar), existing infrastructure and funding are insufficient to meet this demand. In 30 of BiH's 143 municipalities, not a single school has a preschool program. ECE enrollment rates were especially low in rural areas where fewer than 8 percent of children attend any type of ECE. In rural areas, higher levels of unemployment, less disposable income, and cultural norms about childrearing limit ECE enrollment. The low ECE access in BiH is of great concern considering strong global evidence on the importance of ECE in helping develop foundational cognitive and socioemotional skills, and helping individuals escape inter-generational poverty. Additionally, a positive externality of greater participation in ECE is the effect it can have on increasing female labor force participation, which is of particular interest in BiH. However, learning gains from expanding access to preschool are conditional on the quality of services, so the quality improvement agenda is directly connected to the agenda of expanding access.

127.   **Increase instructional time in basic education and maintain progress towards a common core of learning standards.** Recent PISA and TIMSS results highlight a need for increasing instructional time within BiH and to continue the process of implementing common learning standards. BiH has relatively low instructional time compared to other countries, which negatively affects students' opportunity to learn—a key element of education quality—as well as the efficiency of service delivery. The difference between BiH and the average for other comparator countries is equivalent to over 100 days of schooling for Grades 1-4. Not only does this impact quality of education, but it also influences the efficient use of instructional time and teachers' working hours. This is an important consideration, since the demand for teachers is driven by the curriculum and teachers' working hours (along with class size norms). PISA 2018 results also showed that around one-third of students said they skipped a whole day of school or arrived late within the two weeks prior to the assessment, which further limits instructional time. Additionally, the degree of decentralization has led to varying implementation of learning

standards and the politicization of education in BiH. Continued progress towards implementation of the common core curriculum defined on the basis of learning standards is critical.

School Inputs

128. **Reform school funding frameworks to introduce per capita financing of schools and give schools the opportunity to manage a portion of funds in support of their school development plans, together with sufficient capacity building and clear guidelines and parameters for the use of funding.** As noted here and in earlier analysis, the current model of input-based school funding is inefficient, and it prioritizes salaries for staff and expense of necessary funds for inputs needed for quality enhancement like learning materials, teachers' CPD, technology, or infrastructure investments. School financing based on the number of students (output-based) would help to enhance efficiency, equity, and transparency, if implemented rigorously. Entity and cantonal governments may wish to reconsider the option of introducing a per-capita financing scheme, together with a mechanism for school development grants that schools could use themselves to support school development plans. This would help to empower school leadership to take ownership of learning outcomes and conditions in their schools while also creating the incentives for schools to improve planning, management, and reporting on teaching and learning outcomes. Such resources for school development could be designed progressively with a pro-equity approach that orients a larger share of resources to disadvantaged schools to address unequal starting conditions. Other experiences with school financing reform in Europe and Central Asia highlight the importance of ensuring protections for remote schools or minority populations to prevent any negative impacts on access to education; any revisions to the school funding framework in BiH could be designed accordingly. Introduction of new responsibilities in this area would also need to be aligned with appropriate capacity building and guidelines for local authorities and school leaders.

129. **Invest wisely in technology to address material shortages while enhancing the ability of teachers to reach every student, particularly in context of COVID-19 and impacts on learning losses.** Educational technologies work best when they complement the work of teachers and enhance teacher effectiveness. Technology can help to improve the status of the teaching profession and to streamline the work of teachers in supporting learning recovery of students in the aftermath of COVID-19. While educational technologies should not be seen as a simple solution to complex problems, they present several opportunities to address the unique challenges of the education systems in BiH, such as low access to assessment data and limited availability of CPD opportunities. Greater use of technology-based solutions to facilitate remote instruction and formative student assessment in the near-term is an important objective in and of itself to address the learning losses that are stemming from COVID-19, school closures, and less effective distance learning modalities. Additionally, technology-based solutions for teacher CPD and for data collection and governance in the education sector present opportunities to address the institutional weaknesses of the Ministries and Pedagogical Institutes. For example, a state-level electronic platform managed by APOSO could help to build synergies between the work of the respective Pedagogical Institutes to help develop capacity for both assessment and teacher CPD.

Teachers

130.   **Implement a consultative outreach effort aimed at building support for adoption and implementation of competency-based professional standards for teachers.** The adoption of standards that have been developed but not yet implemented is an important first step to align teacher careers with effective personnel management. However, this will likely involve further sensitization and consultation efforts with teachers and trade unions, particularly on the form, method of instruction, and types of use for the teacher professional standards. This is important for building ownership of the standards as part of a 'professionalization' effort, rather than a top-down imposition. Initially, such standards could be used only for low stakes efforts, such as for teacher self-assessment and identification with mentors of needed training and CPD; this could help to buy ownership of the standards among teachers. Eventually, it will be important to use these standards to help align and enhance initial teacher education programs, strengthen professional entrance exams, develop professional development programs and courses, and eventually introduce a stronger merit-based approach to teacher promotion that is based on demonstration of competences. Evidence from other countries on the effects of implementing rules-based teacher recruitment shows that it works through selection (stronger candidates opt to apply to teaching positions) and screening (entry evaluations are sufficiently designed to distinguish between candidates). Clear standards can help with both aspects of teacher recruitment and also contribute to stronger system alignment within and between jurisdictions.

131.   **Improve guidance, support and resources for mentor teachers.** The review found that the supports available for mentor teachers are limited, and expectations are not clear. That said, the role of mentoring to support new teachers during their induction training (as well as to support established teachers) is critical for further development. Mentoring may also play a valuable role in enhancing teachers' sense of self-worth (for new teachers) while also giving experienced teachers the opportunity to take on additional roles.[88] Professionalizing the role of mentoring in schools and investing in the development of school-level mentoring capacities are important directions to strengthen the value-added of mentoring as a critical element of induction programs. Clarifying the roles and expectations for teacher mentors while also investing in structured and collaborative mentoring programs that allow teacher mentors to learn from each other would be valuable next steps. Further training for teacher mentors should also be a key component of further initiatives in this area.

132.   **Establish a career model of teachers' salaries to create a more differentiated salary structure linked to opportunities for performance bonuses and career progression.** Competitive salaries are considered essential for raising the quality of the teacher workforce. However, as noted in the Phase 1 report, teachers' salaries are on par with the public sector and about 25 percent higher than private sector salaries (though there is significant variation across the five cantons with available data[89]). However, differentiating the salary structure to reflect and reward performance and career progression according to transparent and meritocratic processes should be the long-term objective. This would require a more standardized and transparent process of adjusting allowances and coefficients in line with collective bargaining agreements. Payroll

---

[88] EC (2018b).
[89] Sarajevo, Tuzla, Zenica-Doboj, Una Sana, and Posavina Cantons.

allowances such as meal and transport allowances and other benefits need to be managed and adjusted carefully to avoid perverse incentives, whereas bonuses linked to teacher performance could be used more effectively to reward teachers for taking on important non-teaching tasks. As the role of trade unions is very strong in defining salaries and compensation, proactive engagement with trade union leaders on the needs for and advocacy of reform would be critical to generating the requisite level of political support to advance in this area.

133.   **Introduce new forms of classroom observations to improve effective monitoring of teacher performance.** The review found that classroom observation is an important element of external evaluations, and it can also a part of more formative support provided as part of internal evaluations led by the school principal or by peers. However, the policy framework and implementation capacity of Pedagogical Institutes and schools could be strengthened by investing in new forms of classroom observation tools. Simple open-source classroom observation tools like the World Bank's TEACH instrument can help to measure time on task, as well as quality of teaching practices like classroom culture, instruction, and socioemotional skills. Such tools should be simple enough to be adopted widely across jurisdictions (even if adaptation is required) and to strengthen capacity to monitor teacher performance while serving a formative purpose as well, both for teachers who benefit from the observations as well as the experts who conduct them.

134.   **Expand use of external student assessments to inform teachers' work in the classroom and to inform teachers' professional development needs.** Although school-based student learning assessments are common in the jurisdictions assessed, external standardized learning assessments are generally not available with the exception of international assessment surveys like PISA and TIMSS. BiH needs to invest in well-designed external student assessments to help teachers guide students, improve system management, and ultimately focus society's attention on learning. From the point of view of workforce effectiveness, such assessment tools can help to identify hidden exclusions, inform teachers' needs assessments for professional development, inform school budgets and highlight resource constraints. Without such standardized information allowing for comparisons across schools, policymakers are operating in the dark. APOSO could lead this effort, building on previous initiatives to measure student learning assessments in Grades 3 and 6, with additional support to enhance its institutional capacity.[90] However, there should be a strong commitment and clear plan for how to use the results in practical and formative purposes, rather than for "naming, blaming, and shaming." If done well, such assessments should be used to help target better for resource allocation, professional development, and planning. Again, buy-in and commitment from educators is important to guarantee success.

135.   **Expand opportunities for continuous in-service training for teachers, including by enhancing capacities of Pedagogical Institutes and through school-based CPD.** As mentioned, Pedagogical Institutes are officially responsible for teachers' CPD, but in practice many have very limited institutional capacity or fiscal resources to assess teachers' needs, design responsive training programs, and ensure a collaborative format that avoids the traditional one-off, seminar-based format that research shows is less effective. Alternatively, results from the OECD Teaching and Learning International Survey (TALIS) and the research literature suggest that school-based and collaborative forms of professional learning have promising effects on teaching practices and

---

[90] APOSO (2012).

student achievement.[91] Greater use of school- and network-based modalities such as professional learning communities can (a) help meet teachers' needs for continuous and collaborative training, (b) support the capacity of Pedagogical Institutes, and (c) help to align system and schools' training goals. There could be relevant uses of fairly low-tech applications to link up appropriate groups of teachers in more frequent by less intrusive ways, avoiding the need to remove them from the classroom. This could involve strengthening the school self-assessment process to improve schools' ability to identify training needs, while also strengthening Pedagogical Institutes' capacity to collaborate on CPD offerings. However, resources for school-based CPD are limited, and without explicit pro-equity efforts, disadvantaged schools will lack both the fiscal and human resources to capitalize on school-based CPD models. Extra support to disadvantaged schools would be needed both in terms of school self-assessment processes, planning, and provision of CPD.

Management

136. **Strengthen school leadership policy framework to professionalize the role of school principals as instructional leaders.** This review found that school principals in the selected jurisdictions have clearly defined roles and responsibilities in the system related to school administration, but they have limited roles and capacities as instructional leaders. Defining a framework of leadership competencies would be a first step in helping to align legislation and associated rulebooks governing school principals' careers. A short-term step could include measurement of school directors' managerial practices, helping to define principals' main responsibilities, linkages with teacher CPD, and students. This can also be an inexpensive way of providing feedback to school directors.[92] Linking principal appraisal criteria with school leaders' professional competencies as well as school performance would also be an important direction in the future, consistent with good practices from other countries. For example, in Australia, school principals are appraised with reference to state standards for school leadership and their learning needs defined in relation to the school's improvement plan. In Chile, school principals are required to agree on two to four institutional targets and corresponding indicators as part of the regular mandatory appraisal process, with the targets being aligned to the school's institutional objectives.[93]

137. **Introduce a clear school leadership career framework, including with a licensing process for school principals.** To strengthen school leadership in BiH, relevant authorities should consider introducing a clear career framework that includes a rigorous licensing process for school principals. Establishing a professional licensing program and associated process for licensure is the first step towards creating a strong recruitment structure. This process will ensure that candidates meet certain eligibility criteria. Having a pedagogical background is important because principals have both an administrative and leadership role to guide students, teachers and other

[91] Stoll et al. (2006)
[92] The World Management Survey is a valuable tool for providing feedback to school principals on managerial practices and capacities.
[93] OECD (2013)

stakeholders.[94] Once strong candidates are identified, it will be important to create a strong and differentiated career ladder, as mentioned above (where one of the pathways is school leadership). Singapore and Shanghai are good examples of countries that have clearly outlined career pathways for their school leaders. For example, in Singapore, teachers who wish to become school leaders have the option of choosing between three development tracks – teaching, leadership, and specialization.[95] Once teachers choose to enter the leadership track, they are vetted as part of a clear pathway directed at leadership positions such as subject heads, head of department, vice principal, or principal. Such a framework for developing school leadership talent helps to pre-identify candidates for leadership positions without necessarily removing the most senior and best teachers from the classroom.

138. **Institutionalize a school improving planning process as a tool for quality enhancement and management capacity building.** With the increased emphasis on improved teacher and school leadership capacities and skills, implementation of professional standards, and greater fiscal targeting and autonomy at the school level, relevant authorities in BiH should consider a strong strategy that promotes school improvement planning—a process that, when done well, brings these all together well and helps to prioritize school-level reforms on learning. At its core, strong school improvement plans are a school-level participatory approach that involves various stakeholders working towards a common goal. It acknowledges individual school needs, empowers local actors, analyzes quality of existing services, and builds a plan that targets specific needs within a school system. Evidence from high-performing education systems shows that successful school improvement processes involve several factors: (a) student assessment, (b) technical skills building for teachers and principals, (c) use of data as a tool to direct allocation of support, (d) clear standards of what students should know and be able to do; (e) rewards schemes for teachers and principals that recognizes high performance; and (f) supporting policy and legal framework.[96] In this sense, implementing school improvement planning processes at the school level in BiH would touch on some of the other above-mentioned recommendations.

139. **Strengthen the foundations for data-driven decision making at the school level by developing and publicizing school report cards and other information tools.** Although a key role of school principals is to support school self-assessments and to facilitate external evaluations by the Pedagogical Institutes, in practice this information is not publicized or organized in such a way that allows for comparisons across schools. This limits both the formative application of such tools, as well as the use of these tools for accountability purposes. A system of school report cards derived from administrative data, standardized student assessment data (where available), financial data, and school evaluations could be a valuable and meaningful starting point to develop the foundation for greater school autonomy and accountability over the medium-term. These report cards would also provide parents and families with information on school progress towards their development plans. Initially, these report cards could be piloted in the jurisdictions with more developed information systems already in place.

---

[94] This process could also include the process of including "Profiling Instruments". Profiling instruments are tools created with ideal profiles of school leaders, which are then used to identify potential school leaders from mid-career schoolteachers. The profiling tool aids school systems in compiling a "potential pool" of candidates who are then fast tracked into school leadership programs.

[95] Lee and Tan (2010).

[96] Mourshed et al. (2010).

140.   **Rationalize the functions of the Pedagogical Institutes and facilitate resource sharing to strengthen the network of Pedagogical Institutes.**   As described in the review, the Pedagogical Institutes have conflicting functions: they operate both as policy-making bodies by developing curricula as well as service providers by offering teacher training and by evaluating the compliance of schools' with established standards.   This weakens the value of the school inspection function that Pedagogical Institutes are currently playing.   Furthermore, low salaries and limited resources mean that these institutions—which should be comprised of experienced professionals—have limited capacity to manage these functions.   Therefore, rationalizing the functions of the Pedagogical Institutes while also enhancing their independence would be important to clarify their roles vis-à-vis the Ministries and prevent conflicts of interest.   This could involve either (a) revisiting and narrowing the allocation of functions for which they are responsible; or (b) strengthening their ability to manage the content for which they are responsible. Initially, this could involve an in-depth assessment of the content and structure of their CPD programs and the links with relevant assessments; this could be supported with the World Bank's In-Service Teacher Training Survey Instrument. Furthermore, investing in shared resources, digital platforms, staff training, and other such inputs would help to strengthen the efficiency of coordination amongst this network of institutions.

141.   **Continue consolidation of classes and schools after the COVID19 pandemic is under control.** COVID19 has had a significant impact on learning, both in BiH and around the globe. In BiH as elsewhere, the priority as schools reopen will be to ensure that students can return safely to school with appropriate precautionary measures as needed. However, over the medium-term, as the pandemic is under control, it will be important for education authorities in BiH to facilitate the consolidation of classes and/or schools where feasible as an overall strategy to increase the efficiency of resources. The introduction of per-capita funding could create the incentives for this process, but authorities will need to facilitate it by conducting appropriate feasibility studies (to ensure that any consolidation activities do not impede access for any students) and ensuring adequate guidelines and community outreach efforts, including possible investments to improve the learning environment for students in consolidated classes or schools.

142.   **Invest in harmonized information systems and improved uses of technology for data collection and processing, including as an early warning system to prevent student dropout and further learning losses.** Good planning and evidence-based decision-making requires the availability of electronic, accurate, and comparable data for the education system. While some jurisdictions do have Education Management Information Systems in place, like Sarajevo Canton, the tool is primarily used for administrative rather than policy-making purposes. Such systems should be harmonized as much as possible across jurisdictions to allow for preparation of traditional education indicators consistent with international standards, while also providing sufficient information to policymakers to follow children's progress through the education system to identify gaps and constraints for particular student populations which may need further support. For example, students at risk of dropout or at risk of greatest disengagement, particularly stemming from the extended period of remote and distance learning induced by COVID-19, should be able to be identified in existing data systems to allow for prevention, intervention, and compensation measures to be developed accordingly.

143.   **Strengthen capacity and motivation among staff of Ministries and Pedagogical Institutes through supportive management practices and staff empowerment.**   There is substantial evidence from the public administration reform efforts around the world that supportive management practices which support the internal motivation of employees towards achievement of the organization's mission can be more effective than systems of incentives and penalties while rely heavily on measurement and reporting.[97]   While there is a clear need for more data for evidence-based decision-making, the evidence from the survey of public officials also suggests there is a need for empowerment of the bureaucratic level of staff by improving trust, working conditions, and transparency.   Interventions that enhance management practices in the education bureaucracy to cultivate creativity of staff, clarify objectives, roles, and responsibilities, and ensure opportunities for career and personal development are needed to balance the data-driven approach to management.

---

[97] Honig and Pritchett (2019).

Table 4: Unified Matrix of Recommendations

DOMAIN	RECOMMENDATIONS	Estimated Impacts and Costs			
		Educational Impact	Fiscal / Economic Cost	Political Feasibility	Time Horizon
		Low impact Medium impact High impact	Low cost Medium cost High cost	Low feasibility (strong opposition) Medium feasibility High feasibility (strong support)	ST = < 1 year MT = 1-2 years LT= 2+ years
LEARNERS					
Learning Recovery in Response to COVID-19	Develop tools to assess extent of learning loss due to school closures	Medium impact	Low cost for just-in-time assessments	High feasibility	ST
	Implement large scale learning programs (such as accelerated learning or tutoring programs) to mitigate learning loss and prevent exacerbation of inequity	High impact	Low-medium for ALP/tutoring	High feasibility	
	Develop efficient systems to use data and monitoring to track reintegration, learning, and health of all students	Low-to-medium	Low	Medium-high feasibility	ST
	Support learning at home by distributing books, digital devices, and/or resource packs for remote learning to children and parents	Medium to high	Medium (depends in scale)	High feasibility	ST
Ensuring Learners are Prepared and Motivated to Learn	Expand access to pre-primary education and early learning opportunities for children	High impact	Medium-high cost	High feasibility	MT LT
	Increase instructional time in basic education and maintain progress towards a common core of learning standards	High impact	High cost	Medium feasibility	MT
SCHOOL INPUTS					
Funding	Reform school funding frameworks to introduce per capita financing and give schools opportunity to manage funds in support of school development plans	Medium impact	Medium-high cost	Low feasibility	MT LT

Technology	Invest wisely in technology to address material shortages while enhancing the ability of teachers to reach every student, particularly in context of COVID-19 and impacts on learning losses	High impact	Medium cost	High feasibility	ST MT LT
TEACHERS					
Aligning Teacher Careers with Effective Personnel Management	Implement a consultative outreach effort aimed at building support for adoption and implementation of competency-based professional standards for teachers	High impact (but protracted)	Low cost	Low/medium feasibility	ST MT
	Improve guidance, support and resources for mentor teachers	Medium impact	Medium cost	High feasibility	MT LT
	Establish a career model of teachers' salaries to create a more differentiated salary structure linked to opportunities for performance bonuses and career progression	Medium impact (but protracted)	Low cost (high fiscal benefits)	Low feasibility	LT
Enhancing Teacher Skills and Practices	Introduce new forms of classroom observations to improve effective monitoring of teacher performance	Medium impact	Low cost	Medium feasibility	ST
	Expand use of external student assessments to inform teachers' work in the classroom and teachers' professional development needs	High impact	Medium cost	Medium feasibility	LT
	Expand opportunities for continuous in-service training for teachers, including by enhancing capacities of Pedagogical Institutes and through school-based CPD	Medium impact (depends on form of training and competency standards)	Medium cost	High feasibility	MT LT
MANAGEMENT					
School Leadership, Autonomy and Accountability	Strengthen school leadership policy framework to professionalize the role of school principals as instructional leaders	Medium-to-high impact over longer term; lower impact in short term	Low cost	Medium feasibility	MT
	Introduce a clear school leadership career framework, including with a licensing process for school principals	Medium impact (but protracted)	Medium cost	Low-medium feasibility	MT LT
	Institutionalize a school improvement planning process as a tool for quality enhancement and management capacity building	High impact	Medium cost	High feasibility	ST MT

	Strengthen the foundations for data-driven decision making at the school level by developing and publicizing school report cards and other information tools	Medium impact	Low-medium cost	Medium feasibility	MT LT
System Management	Rationalize functions of the Pedagogical Institutes	Low impact	Low cost (efficiency gains)	Low feasibility	ST MT
	Facilitate resource sharing to strengthen network of Pedagogical Institutes	Low-medium impact	Medium cost	High feasibility	
	Continue consolidation of classes and schools after the COVID19 pandemic is under control	Low impact	Medium costs	Low feasibility	MT LT
	Invest in harmonized information systems and improved uses of technology for data collection and processing, including as an early warning system to prevent student dropout and further learning losses	Medium impact	Medium cost	Medium feasibility	MT LT
	Strengthen capacity and motivation among staff of Ministries and Pedagogical Institutes through supportive management practices and staff empowerment	Low impact	Low cost	High feasibility	ST

Table 5: Directions for Prioritization

Quick Wins Educational impacts outweigh economic and/or political costs; relatively shorter time horizon	• Implement large scale learning programs (such as accelerated learning or tutoring programs) to mitigate learning losses • Institutionalize a school improvement planning process as a tool for quality enhancement and management capacity building • Develop tools to assess extent of learning loss due to school closures • Invest wisely in technology to address material shortages while enhancing the ability of teachers to reach every student, particularly in context of COVID19 • Support learning at home by distributing books, digital devices, and/or resource packs for remote learning to children and parents • Expand access to pre-primary education and early learning opportunities • Implement a consultative outreach effort aimed at building support for adoption and implementation of teacher professional standards • Introduce new forms of classroom observations to improve effective monitoring of teacher performance
Stronger Systems Educational impacts accrue through stronger service delivery mechanisms over medium-term time horizon	• Develop efficient systems to use data and monitoring to track reintegration, learning, and health of all students • Expand use of external student assessments to inform teachers' work in the classroom and teachers' professional development needs • Strengthen school leadership policy framework to professionalize the role of school principals as instructional leaders • Strengthen capacity and motivation among staff of Ministries and Pedagogical Institutes through supportive management practices and staff empowerment • Improve guidance, support and resources for mentor teachers • Expand opportunities for continuous in-service teacher training, including by enhancing capacities of Pedagogical Institutes and through school-based CPD • Increase instructional time in basic education and maintain progress towards a common core of leaning standards • Facilitate resource sharing to strengthen network of Pedagogical Institutes • Strengthen the foundations for data-driven decision making at the school level by developing and publicizing school report cards and other tools
Fundamental Reforms Significant educational impacts over longer time horizon; relatively higher costs	• Invest in harmonized information systems and improved uses of technology for data collection and processing, including as an early warning system to prevent student dropout and further learning losses • Introduce a clear school leadership career framework, including with a licensing process for school principals • Establish a career model of teachers' salaries to create a more differentiated salary structure linked to opportunities for performance bonuses and career progression • Rationalize functions of the Pedagogical Institutes • Reform school funding frameworks to introduce per capita financing and give schools opportunity to manage funds in support of school development plans • Continue consolidation of classes and schools after the COVID19 pandemic is under control

Annex 1: Conceptual Framework: Alignment of Functional Review Domains for Workforce Effectiveness and Education Policy Goals

FUNCTIONAL REVIEW DOMAINS	Policy Goals		
	Teacher Policy	**School Autonomy and Accountability**	**System Alignment and Management**
	SABER Teachers	*SABER School Autonomy Accountability*	*Survey of Public Officials*
TEACHER CAREERS AND MANAGEMENT	• Setting clear expectations for teachers • Recruitment and employment • Compensation • Retirement rules • Teacher representation and voice • Attracting the best into teaching • Motivating teachers to perform	• Level of autonomy in personnel management	
TEACHER SKILLS AND PRACTICES	• Preparing teachers with useful training and experience • Professional development • M&E of teacher quality Supporting teachers to improve instruction • Monitoring teaching and learning • Teachers' workload and autonomy • Matching teacher skills with student needs		
SCHOOL LEADERSHIP, AUTONOMY AND ACCOUNTABILITY	• Leading teachers with strong principals	• Level of autonomy in planning and management of school budget • Role of school council in school governance • School and student assessment • Accountability to stakeholders	
SYSTEM MANAGEMENT			• Learning goals • Accountability and mandates • Quality of bureaucracy • Impartial decision-making

Note: Policy goals are derived from World Bank's Global Education Policy Dashboard, which includes SABER instruments and the Survey of Public Officials.

Annex 2: List of Laws and Regulations Reviewed

Republika Sprska
- Rulebook on Primary School Financing (Article 2) and Rulebook on Secondary School Financing (Article 2)
- Article 168(2) of the Law on Primary Care and Education in Republika Srpska
- Official Gazettes of RS
- Law on execution of the budget of RS
- Article 158(3) of the Law on Secondary Education and Care of Republika Srpska
- Law on Primary Care and Education of Republika Srpska
- Law on Secondary Education and Care of Republika
- Article 49 of the Law on Primary Care and Education of Republika Srpska
- Article 88 of the Law on Secondary Education and Care of Republika Srpska
- Article 136 of the Law on Primary Care and Education of Republika Srpska
- Article 128 of the Law on Secondary Education and Care of Republika Srpska
- Rulebook on Amendments to the Rulebook on Primary School Financing
- Rulebook on Secondary School Financing (Article 3(2))
- Trade Union of Education, Science and Culture
- Law on the Salaries of the Employees in the Fields of Education and Culture
- Special Collective Agreement for the Employees in the Fields of Education and Culture of Republika Srpska
- http://vladars.net/sr-SP Cyrl/Vlada/Ministarstva/mf/PPP/Pages/Dokument_okvirnog_budzeta.aspx
- https://eacea.ec.europa.eu/national-policies/eurydice/home_en
- Izvještajima se može pristupiti preko sljedećeg linka:https://www.rpz-rs.org/261/rpz-rs/Analiza/postignuca/ucenika/na/polugodistu/i/kraju/skolske/godine#.Xs8jpDozZPa
- Law on the Budget System of Republika Srpska (Article 60(1))

Herzegovina-Neretva Canton
- Bosna i Hercegovina, Federacija Bosne i Hercegovine, Federalno ministarstvo finansija: Dokument okvirnog budžeta federacije bih za period 2019. -2021., juni 2018 (http://www.fmf.gov.ba/v2/userfiles/userfiles/file/2018/budget2018/DOB%202019-2021BOS.pdf)
- Zakon o izvršavanju budžeta za 2019. Godinu: http://www.fmf.gov.ba/v2/stranica.php?idstranica=147&idmeni=15
- http://www.fuzip.gov.ba/bundles/websitenews/gallery/files/47/1490693631Zakon_o_bud%C5%BEetima_u_FBiH_(_Sl_novine_FBiH_,_broj__102_13).pdf
- Dokument okvirnog budžeta federacije bih za period 2019. -2021., juni 2018
- (http://www.fmf.gov.ba/v2/userfiles/userfiles/file/2018/budget2018/DOB%202019-2021BOS.pdf
- SLUŽBENE NOVINE, br.4 ponedjeljak, 19. septembar 2005. Hercegovačko-neretvanski kanton: Pedagoski standard i normativi Osnovnog školstva Hercegovačko-neretvanskog Kantona (https://monkshnk.gov.ba/Sektor/Index/1
- Zakon o srednjem obrazovanju Hercegovačko neretvanskog kantona, prečišćeni tekst: http://cms.monkshnk.gov.ba/Upload/Dokumenti/06)%20-80c83a2.pdf
- Budžet HNK za 2020. godinu. https://mfhnk.ba/uploads/QUz1C2.pdf

- Dokument okvirnog budžeta za period 2018.- 2020. , the Ministry finansija the Herzegovina-Neretva Canton https://mfhnk.ba/uploads/DZsEbA.pdf
- Nacrt proračuna/budžeta HNŽ/K za 2020. prema funkcionalnoj klasifikaciji https://mfhnk.ba/uploads/crqjI0.xls
- The Law on Primary Care and Education in HNC
- Law on Secondary Care and Education in HNC
- Official Gazettes of Herzegovina Neretva
- Collective agreements for the act of education in Herzegovina Neretva
- http://cms.monkshnk.gov.ba/Upload/Dokumenti/KRITERIJI%20za%20provedbu%20javnih%20konkursa%20u%20osnovnim%20i%20srednjim%20%C5%A1kolama%20na%20podru%C4%8Dju%20HNK-bad1690.pdf
- Pedagogical Standards and Norms for Primary and Secondary Education
- http://www.fipa.gov.ba/publikacije_materijali/zakoni/07.12.2018%20ZAKON%20O%20RADU%20FBIH.LAT.pdf

Sarajevo Canton
- Law on Budget in the Federation of BiH
- Law on primary care and education in Sarajevo
- Law on secondary education in Sarajevo Canton
- Budžet Kantona Sarajeva 2020
- Rulebook on inclusive education
- Pravilnik o sadržaju i načinu vođenja pedagoške dokumentacije u osnovnoj školi
- Official Gazettes of Sarajevo Canton
- Labor Rulebook and the Rulebook on the Systemization of jobs
- Rulebook on the Selection, Competences and Method of Operation of Primary School Councils of Sarajevo Canton
- Rulebook on internal evaluation of knowledge of primary and secondary students
- BiH law on public procurement ordinance
- Law on Unique Identification Number in BiH
  Labor Law: http://www.fipa.gov.ba/publikacije_materijali/zakoni/07.12.2018%20ZAKON%20O%20RADU%20FBIH.LAT.pdf
- Pravilnik sa kriterijima za iskazivanje prestanka potrebe za zaposlenicima koji su djelomično ili potpuno ostali bez radnih zadataka i postupak popune upražnjenih radnih mjesta u osnovnim i srednjim školama kao javnim ustanovama na području Kantona Sarajevo. Službene novine Kantona Sarajevo, br. 26/2015.
- Pravilnika sa kriterijima za prijem radnika u radni odnos u predškolskim ustanovama, osnovnim i srednjim školama kao javnim ustanovama. Službene novine Kantona Sarajevo, br 35/2017.
- Pedagogical Standards and Norms
- Law on Disability and Pension Insurance
- Rulebook on Assessment, Acquisition and Promotion

Tuzla Canton
- Law on the Budgets in the Federation of BiH („Official Gazette of FBiH", numbers: 102/13, 9/14, 13/14, 8/15, 91/15, 102/15, 104/16, and 5/18)

- Dokument okvirnog budžeta Federacije BiH za 2019.-2021. godinu, juni 2018., Federacija Bosne i Hercegovine http://www.fmf.gov.ba/v2/stranica.php?idstranica=147&idmeni=15#
- Zakon o izvršavanju budžeta Federacije Bosne i Hercegovine za 2020. godinu http://www.fmf.gov.ba/v2/stranica.php?idstranica=147&idmeni=15
- TC Law on Primary Care and Education:
- TC Law on Secondary Care and Education
- Zakon o izvršenju budžeta TK za 2020. godinu, (2019), Službene novine TK, broj 16 - strana 1466.http://www.vladatk.kim.ba/Ministarstva/MF/2020/Zakon-o-izvrsenju-budzeta-_SluzbeneNovineTK_BR16-2019.pdf
- Law on the Execution of the 2020 TC Budget
- Smjernice ekonomske I fiskalne politike TK http://www.vladatk.kim.ba/Vlada/Dokumenti/2019/Smjernice_ekonomske_i_fiskalne_politike_TK_za_period_2020_-_2022._godina.pdf
- Collective Agreements for Primary and Secondary Education Activities
- Sporazum o utvrđivanju platnih razreda i koeficijenata za obračun plaće radnika u osnovnoj školi http://ssooiotk.com.ba/wp-content/uploads/2018/10/Sporazum-o-utvrdjivanju-platnih-razreda-i-koeficijenata-10-9-2018.pdf
- Rulebook on the Recruitment Requirements, Criteria and Procedure in Primary and Secondary Education Public Institutions in the TC Territory
- Pravilnik o eksternoj maturi u osnovnoj školi: http://www.osteocak.com/wp-content/uploads/2016/03/pravilnik-o-eksternoj-maturi-u-osnovnoj-skoli.pdf
- http://cms1.pztz.ba/userfiles/malamatura/files/Dokumenti/UputstvoZaTestiranje_2016.pdf
- http://cms.pztz.ba/userfiles/pztz/files/Mature/SrednjeSkole/Uputstvo%20za%20poaganje%20mature%20u%20srednjim%20skolama%202019_11.pdf
- http://pztz.ba/
- http://www.podaci.net/_gBiH/propis/Uredba_o_utvrdjivanju/U-uvpnrr63v0715-0802.html

West Herzegovina Canton
- Law on the Budgets in FBiH
- Law on the Execution of the West Herzegovina Canton Budget,
- Dokument okvirnog proračuna Županije Zapadnohercegovačke za 2020-2022. Ministarstvo finansija Županije zapadnohercegovačke, 2019.
- Law on Primary School Care and Education
- Law on Secondary School Care and Education
- Zakon o izvršenju proračuna Županije Zapadnohercegovačke za 2018. godinu. http://www.ministarstvo-financija zzh.gov.ba/images/stories/pdf/2018/zakon_o_izvr%C5%A1enju_2018_.pdf
- Rulebook on Primary and Secondary School Care and Education of Children with Special Needs.
- Zakon o budžetima u Federaciji Bosne i Hercegovine.:http://www.fmf.gov.ba/zakoni/Zakon%20o%20budzetima_bos.pdf
- Collective Agreements for Primary and Secondary Education Activities
- Labor Law
- https://eacea.ec.europa.eu/national-policies/eurydice/home_en
- The Rulebook on the Method of Student Monitoring and Grading in Primary and Secondary Schools

## Annex 3: Coverage and Target Audience for Survey of Public Officials

	Total Staff	Target audience (relevant education sector staff)	Number of interviews (sample)	% of target audience sampled
Herzegovina-Neretva Canton	**18**	**18**	**18**	**100%**
HNK Institute of Education Mostar	*6*	*6*	*6*	
HNK Ministry of Education, Science, Culture and Sports	*6*	*6*	*6*	
HNK Pedagogical Institute Mostar	*6*	*6*	*6*	
Sarajevo Canton	**34**	**23**	**13**	**57%**
KS Ministry of Education, Science and Youth	*23*	*13*	*6*	
KS Pedagogical Institute	*11*	*10*	*7*	
Tuzla Canton	**57**	**26**	**14**	**54%**
TZ Ministry of Education and Science	*39*	*9*	*7*	
TZ Pedagogical Institute	*18*	*17*	*7*	
West Herzegovina Canton	**19**	**7**	**4**	**57%**
WH Ministry of Education, Science, Culture and Sports	*19*	*7*	*4*	
Total	**128**	**74**	**49**	**66%**

Relevant Positions in Survey Target Audience
Minister or Assistant Minister
Secretary of Ministry
Expert Advisor for Primary Education
Expert Advisor for Secondary Education
Director of Pedagogical Institute
Head of Department
Expert Advisors for Subjects (Sciences, Languages, Etc.)
Advisor for Legal Affairs
Advisor for Monitoring and Curriculum Development

Annex 4: Governance Structure of Education in BiH

The BiH education system is highly fragmented with multiple layers of administration. BiH has fourteen government bodies organized into three tiers—state, entity/district, and canton. Education is governed at the entity level in RS, district level in Brčko District, and cantonal level in FBiH. The main decision-makers are the Ministry of Education and Culture (MEC) in RS, the Department of Education (DepEd) in Brčko District, and the 10 Cantonal Ministries in FBiH. The state-wide institutions including Ministry of Civil Affairs (MoCA) and the FBiH Ministry of Education and Science (MES) have coordinating roles, while the Agency for Preschool, Primary and Secondary Education (APOSO) is a state-level technical body responsible for standards and evaluation of education quality.
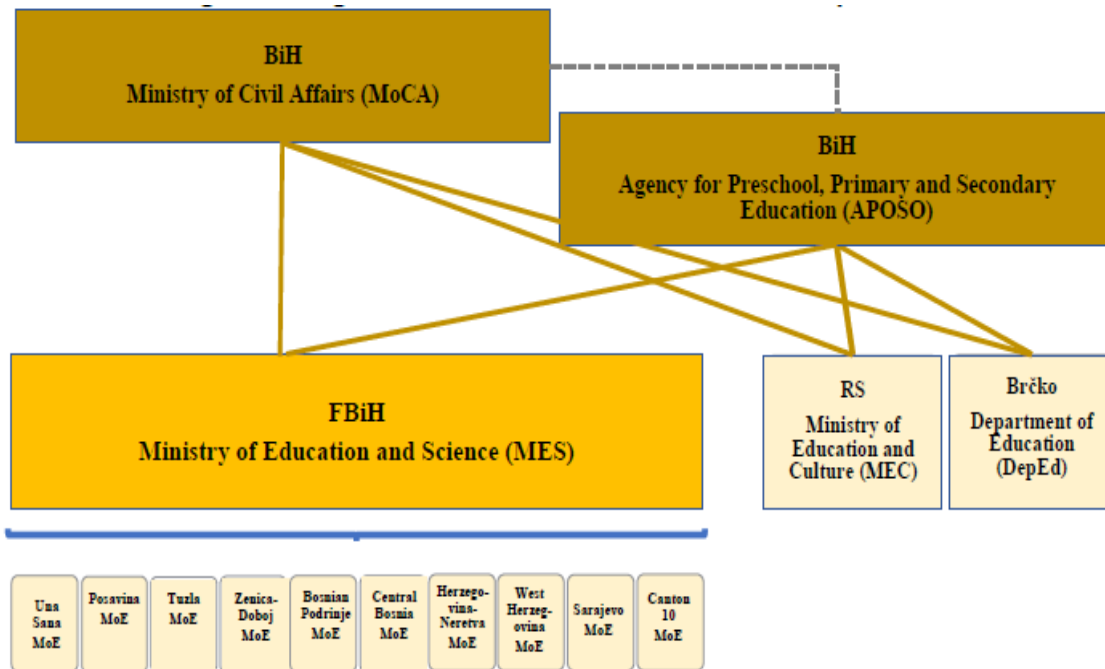
References

APOSO (2012): Stručni izvještaj. Definisanje standarda učeničkih postignuća za treći i šesti razred devetogodišnjeg

Araujo, M. D., Heineck, G., and Cruz-Aguayo, Y. (2020). Does Test-Based Teacher Recruitment Work in the Developing World? Experimental Evidence from Ecuador. IZA Institute of Labor Economics. Discussion Paper Series No. 13830.

Benecivenga, A. S. & Elias, M. J. (2003). *Leading schools for excellence in academics, character, socioemotional development.* Bulletin, 87 (637), 60-72.

Berlinski, S. and Schady, N. (2015). *The Early Years: Child Well-Being and the Role of Public Policy.* Inter-American Development Bank.

Britto, P. R., Lye, S. J., Proulx, K., Yousafzai, A., Matthews, S., Vaivada, T., and Perez-Escamilla, R. "Nurturing Care: Promoting Early Childhood Development." *Lancet* 389 (10064): 91-102.

Cotton, K. (2003). *Principals and student achievement: What the research says.* Alexandria: Association for Supervision and Curriculum Development.

Estrada, R. (2019). Rules versus Discretion in Public Service: Teacher Hiring in Mexico. *Journal of Labor Economics,* Vol. 37, No. 2.

European Commission. (2013). *Early Warning Systems in Europe: Practice, Methods, and Lessons.* Thematic Working Group on Early School Leaving. Brussels: European Commission.

European Commission (2018a). *Boosting Teacher Quality: Pathways to Effective Policies.* Luxembourg: Publications Office of the European Union.

European Commission (2018b). *Teachers and School Leaders in Schools as Learning Organizations: Guiding Principles for Policy Development in School Education.* Directorate-General Education, Youth, Sport and Culture: Produced by the ET2020 Working Groups.

European Union (2005). Functional Review of the Education Sector in Bosnia and Herzegovina: Final Report. EU CARDS Programme for Bosnia and Herzegovina.

Fullan, M. (2001). *The New Meaning of Educational Change* (Third Edition). New York, NY: Teachers College, Columbia University.

Glewwe, P. and Muralidharan, K. (2015). "Improving Education Outcomes in Developing Countries: Evidence, Knowledge Gaps, and Policy Implications." In *Handbook of Economics of Education.*

Hallinger, P. and Heck, R. H. (1998). Exploring the principal's contribution to school effectiveness: 1980-1995. *School Effectiveness and School Improvement, 9,* 157-191.

Hanushek, E. and Woessmann, L. (2011). How Much Do Educational Outcomes Matter in OECD Countries? National Bureau of Economic Research, Working Paper No. 16515.

Hanushek, E. A., G. F. Branch, and S. G. Rivkin. (2013). School leaders matter: Measuring the impact of effective principals. *Education Next,* 13(1), pp. 62-69.

Honig, D. and Pritchett, L. (2019). "The Limits of Accounting-Based Accountability in Education (and Far Beyond): Why More Accounting Will Rarely Solve Accountability Problems." Center for Global Development, Working Paper 510.

Hopkins, D. (2008). "Realizing the Potential of System Leadership," in Pont, B. D. Nusche and D. Hopkins (eds.), *Improving School Leadership, Volume 2: Case Studies on System Leadership,* OECD, Paris.

Komatsu, T. (2013). "Why do policy leaders adopt global education reforms? A political analysis of school-based management reform adoption in post-conflict Bosnia & Herzegovina. *Education Policy Analysis Archives,* 21(62).

Lee, C. and Tan, M. Y. (2010). Rating teachers and rewarding teacher performance: The context of Singapore. In *APEC Conference on Replicating Exemplary Practices in Mathematics Education.* Koh Samui, Thailand.

Leithwood, K. and Riehl, C. (2005). What we already know about successful school leadership. In W. A. Firestone & C. Riehl (Eds.) *A New Agenda: Directions for Research on Educational Leadership (*pp. 12-27). New York: Teachers College Press.

Longden, K. (2013). Accelerated learning programmes: What can we learn from them about curriculum reform. *Background paper for EFA Global Monitoring Report, 14.*

Louis, K., Dretzkey, B., & Wahlstrom, K. (2010). How does leadership affect student achievement? Results from a national survey. *School Effectiveness and School Improvement, 21(3),* 315-336.

Luyten, H., Hendriks, M., and Scheerens, J., eds. (2014). *School Size Effects Revisited: A Qualitative and Quantitative Review of the Research Evidence in Primary and Secondary Education.* Dodrecht: Springer International Publishing.

Mourshed, M., Chijioke, C., and Barber, M. (2010). *How the World's Most Improved School Systems Keep Getting Better.* London: McKinsey and Company.

Naudeau, S., Kataoka, N., Valerio, A., Neuman, M. J., and Elder, L. K. (2011). *Investing in Young Children: An Early Childhood Development Guide for Policy Dialogue and Project Preparation.* Washington, DC: World Bank. Directions in Development.

OECD (2005). Teachers Matter: Attracting, Developing and Retaining Effective Teachers. Paris: OECD.

OECD (2008). Improving School Leadership, Volumn 1. VOLUME 1: POLICY AND PRACTICE By Beatriz Pont, Deborah Nusche, Hunter Moormanhttp://www.oecd.org/education/school/44374889.pdf

OECD (2013). Synergies for Better Learning: An International Perspective on Evaluation and Assessment.

OECD (2017). *OECD Review of Integrity in Education: Ukraine 2017.* OECD Publishing, Paris.

OECD (2018). *Education at a Glance.* Paris: OECD Publishing.

OECD (2020). *Education in the Western Balkans: Findings from P*ISA. PISA, OECD Publishing, Paris.

O'Cummings, M., & Therriault, S. B. (2015). From Accountability to Prevention: Early Warning Systems Put Data to Work for Struggling Students. *American Institutes for Research.*

Popić, B. and Džumhur, Ž. (2019). TIMSS 2019 Encyclopedia: Bosnia and Herzegovina. International Association for the Evaluation of Educational Achievement (IEA). Available at https://timssandpirls.bc.edu/timss2019/encyclopedia/bosnia-and-herzegovina.html

Stoll, L. et al. (2006), "Professional learning communities: A review of the literature", *Journal of Educational Change*, Vol. 7/4, pp. 221–258, http://dx.doi.org/10.1007/s10833-006-0001-8.

Teddlie, C. and Reynolds, D., eds. (2000). *International Handbook of School Effectiveness Research.* London Falmer Press.

UNICEF and UNDP (2020). Social Impacts of COVID-19 in Bosnia and Herzegovina: Household Survey. Prepared by Prism Research & Consulting.

USAID (2017). Brief Overview of Main Challenges in Primary and Secondary Education in BiH. Monitoring and Evaluation Support Activity (MEASURE-BiH).

Waters, T., R.J. Marzano, and B. McNulty. (2003). *Balanced leadership: What 30 years of research tells us about the effect of leadership on student achievement.* Denver: Mid-continent Research for Education and Learning.

Woessmann, L. (2016). "The Importance of School Systems: Evidence from International Differences in Student Achievement." *Journal of Economic Perspectives.* Vol. 30, No. 3.

World Bank (2018). *World Development Report 2018: Learning to Realize Education's Promise.* Washington, DC: World Bank.

World Bank (2020a). COVID-19 Response Education Database. Internal Document.

World Bank (2020b). *Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes: A Set of Global Estimates (English).* Washington, DC: World Bank Group. Working Paper, Report No. 149796.

World Bank and UK Foreign, Commonwealth & Development Office (2020). *Cost-Effective Approaches to Improve Global Learning: What does recent evidence tell us are "Smart Buys" for improving learning in low- and middle-income countries?"* Recommendations of the Global Education Evidence Advisory Panel hosted by Building Evidence in Education Global Group (BE2).