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SUMMIT 2022**



Report on the Consultations: Transforming Education at all levels of Government in Bosnia and Herzegovina



**Ministry of Civil Affairs of
Bosnia and Herzegovina**



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Table of content

- Summary** 3
- Basic information about the consultation process** 4
- Background**..... 5
- Analysis of the situation in education in BiH** 6
 - Pre-pandemic period..... 6
 - Pandemic period (2020-2021) 9
- Key findings** 16
- Priority measures identified within 4 components of Consultations** 25
- List of Annexes** 29

Summary

Education systems in Bosnia and Herzegovina in the past two years (2020-2021) faced numerous challenges caused by the COVID-19 pandemic. Although unprepared, the education authorities in Bosnia and Herzegovina managed to organize classes, aware of the fact that access to teaching and the quality of teaching were significantly lower in comparison with pre-pandemic period.

Student achievements according to PISA survey from 2018 indicate Bosnia and Herzegovina was facing insufficiencies in organized education already in the pre-pandemic period. Besides, the percentage of children enrolled in preschool education, as an indicator of good preparation of children to fulfil their overall potential is significantly lower in relation to other European countries.

At the end of 2021, the assessment of the quality of online teaching and assessment of the needs of teachers during online teaching demonstrate the diversity of perceptions among teachers, students and school management, albeit agreeing on several conclusions: future - both teaching staff and students have given preference to in-person teaching, online teaching has opened the door to positive changes in the education sector regarding ICT infrastructure in schools, strengthening digital and pedagogical competencies of teaching staff, and opportunities for innovation in teaching, paying attention to mental health and well-being of students and teaching staff has evolved into a priority action for development..

In BiH the Consultations on transforming education that would accelerate and improve the implementation of Agenda 2030 and the Sustainable Development Goal 4 were generally accepted as a good driving force for achieving a greater understanding of future activities and measures in education.

This report presents the results of a consultation process with authorities from education, health and finance sector, civil society organizations, youth, teachers, academia, parents and the private sector. The involvement of representatives of vulnerable groups during the prioritization process was taken into account.

Bosnia and Herzegovina, with the consent of the participants in the consultations, is committed to accelerating progress on Agenda 2030 and achieving the SDG 4.

Basic information about the consultation process

To prepare for the Summit, by preparing the **Report, including the summary, to the Secretariat of the Summit on the Consultation Process in BiH and the Declaration of Commitment on Education Transformation**, education authorities in BiH, assisted by United Nations, UNESCO and UNICEF, which are globally in charge of providing technical support to countries in preparation for the Summit, organized consultations with relevant actors in the education sector that resulted in the commitment of education authorities in BiH and consensus on priority measures to transform education, building on existing plans, programmes and initiatives, and to address pandemic-related learning gaps.

National Convenor: Ministry of Civil Affairs of BiH (on behalf of all relevant education authorities in BiH)

Support: UNESCO and UNICEF in cooperation with the Office of the Resident Coordinator in BiH

Consultation period: 1 April – 15 August 2022

Number of persons covered by the consultation: 1,418 persons (769 f, 649 m)

Consultation method:

- Recommendations collected during three **consultation meetings** with the selected actors:
 - education authorities (June 1, 2022 in the UN building in Sarajevo);
 - civil society organizations engaged in the field of education, members of the academic community, student unions, youth councils, parents associations, including parents of children with disabilities, representatives of the private sector (June 6, 2022 in the UN building in Sarajevo);
 - youth (June 10, 2022 via the online platform).
- Consolidated data obtained through **online surveys** from selected target groups (governmental and non-governmental actors relevant to the education sector, including ministries of education, ministries of health, ministries of finance, civil society organizations, teachers, student unions, youth councils, parents' associations, including parents of children with disabilities)
- **Official data** on public education from statistical and administrative sources, as well as available studies for 2020/2021.

Background

Bosnia and Herzegovina is organizing a consultation process from April to August 2022 to respond to the global initiative to promote and accelerate Sustainable Development Goal 4 "**Ensure inclusive and equitable quality education and promote lifelong learning opportunities**".

Due to the growing need for educational transformation following the interruptions of education process caused by the COVID-19 pandemic, which further exacerbated inequalities in education, the UN Secretary-General is organizing **Transforming Education Summit on 19 September 2022**. This event will be preceded by a **preparatory summit in Paris from 28 to June 30, 2022**. The summit seeks to renew the global commitment to education as an important public good. Instead of agreeing on a new global standard in education, **the focus is on mobilizing ambitions, measures, solutions, and solidarity** to meet existing commitments: encourage reimagining education process to **help overcome pandemic learning gaps** and revitalize efforts to achieve the Sustainable Development Goal 4 by 2030.

Essential focus: the consultation consists of four components with the following objectives:

- **Encourage targeted action** to ensure full educational recovery from the consequences of the pandemic, drawing on available evidence of multidimensional effects of educational disruption (proper nutrition, protection of girls, health and well-being, learning disabilities, absenteeism, etc.)
- **Identify a package of levers and priority measures** to transform education and accelerate progress towards shared commitments in the field of education, drawing on lessons learned from educational responses and innovation during the pandemic, integrating new ways of thinking, approaches, resources and learning methods into education policies and practice.
- **Creating a commitment to increased and more effective public funding of education**, thus ensuring greater equality in the distribution and greater efficiency in utilization. It would be important to identify additional innovative and cross-sectoral mechanisms that can ensure sustainable domestic funding for education.
- **Review or establish educational goals and benchmarks** with regard to the consequences of the pandemic and the ambitions needed to make the greatest possible progress by 2030, based on seven global and thematic SDG4 indicators endorsed by the 2019 Global Education Meeting.

Analysis of the situation in education in BiH

Bosnia and Herzegovina is a decentralized country composed of two entities - the Federation of Bosnia and Herzegovina, and Republika Srpska, with Brcko District of Bosnia and Herzegovina as a separate administrative unit. According to the constitutional order of Bosnia and Herzegovina, education is under the full jurisdiction of Republika Srpska, ten cantons in the Federation of Bosnia and Herzegovina and Brcko District of Bosnia and Herzegovina. Each of these 12 administrative units has its own Ministry of Education, education legislation and budgets, creates and implements its own education policies, adopts curricula, standards and norms, and has all other rights and obligations arising from their full responsibility for the organization and the functioning of the education system in their territory.

Due to the complex organization of the education sector, a coordination system has been established. Since 2003, the Ministry of Civil Affairs of Bosnia and Herzegovina has been responsible for coordinating activities, harmonizing entity government plans and defining strategies at the international level, including education sector. The Federal Ministry of Education and Science performs administrative, professional and other tasks determined by law related to the coordination of planning and activities in the field of: preschool, primary, secondary and higher education.

At the level of Bosnia and Herzegovina, three agencies for education have been established: the Agency for Preschool, Primary and Secondary Education (APOS0), the Agency for Development of Higher Education and Quality Assurance (HEA BiH) and the Centre for Information and Recognition of Documents in Higher Education (CIP), as well as advisory bodies in the field of education: the Conference of Ministers of Education in Bosnia and Herzegovina, the Rectors Conference of Bosnia and Herzegovina and the General Education Council in Bosnia and Herzegovina.

In Bosnia and Herzegovina, levels of education include: pre-school education (ISCED 0), nine-year primary education (ISCED 1 -2) which is mandatory and free for all children aged six to fifteen, secondary education (ISCED 3 and 4) which is optional in most administrative units and higher education (ISCED 5-8).

Pre-pandemic period

Student achievements

Even before the pandemic began, BiH's education systems faced multiple challenges. The results of the Programme for International Student Assessment (PISA) from 2018 show that 15-year-old students from BiH fall three years behind their peers from OECD countries, with more than 50% of students not reaching the minimum level of functional literacy in mathematics, reading and science. Socio-economically advantaged students in BiH achieved better results in reading than disadvantaged students by 58 points in the PISA 2018 survey¹.

Stagnation in student achievements poses a risk of permanent dropping out of school and training among children and young people, as well as the loss of opportunities for continuing and completing education and searching for useful and lucrative business opportunities. Furthermore, it also poses a risk in further increasing the already high rates young people not participating in

¹ <https://aposo.gov.ba/sadrzaj/uploads/PISA-2019-izvie%C5%A1%C4%87e-za-BiH.pdf>

employment or education, and the data from 2019 indicate a figure of 21% (21.1% of women and 22.1% of men).²

Attendance rate of school and preschool education

In BiH, there is a reduced influx of students caused by the trend of decreasing population growth rate and the trend of emigration. According to the data of the Agency for Statistics, in 2019/2020 there were 498,645 students and 51,355 teachers (at all levels of education). In just one year, a significantly smaller number of students enrolled in primary and secondary schools, as well as university students was registered. Moreover, 273,795 students were enrolled in 1,785 primary schools in 2019/2020 school year, that is 5,719 less compared to 2018/2019 school year. As for enrolment in secondary schools, in 2019/2020. school year, 112,933 secondary school students were enrolled in 315 schools, which is 4,831 less than in 2018/2019. school year. Lastly, 7,662 students less were enrolled at the universities in 2019/2020 winter semester compared to the same period in 2018/2019.

School attendance rates are significantly lower among vulnerable groups. Among Roma children, 69% attend primary school and 23% secondary school, with a higher enrolment rate for boys (rates for girls are 67% in primary and 18% in secondary education). Similar to primary education, Roma children and children with disabilities are at higher risk of dropping out of secondary education. Children on the move in some parts of BiH face significant challenges in accessing primary and even more so secondary education. Poverty, lack of access to schools and low awareness of the importance of education are the main factors for young people dropping out of school.³

As the total number of registered **children with disabilities** is less than 2% of all school children, it is considered that some children with disabilities attend regular education without their difficulties being identified, while others drop out or do not attend any form of education. In most BiH administrative units, evaluation committees issue recommendations for special or inclusive education. Estimates rely on the medical model of disability and are not consistent with the social model advocated by the International Classification of Functioning, Disability and Health.

Most preschool children, also in a year before starting school, do not have access to **preschool** programmes. The rate of participation in organized learning (one year before the official age for enrolment in primary school) for the population of 5 year-olds is 30% equally for girls and boys.⁴ Only 24.6% of children aged 3 to 5 and 6.7% of children aged 0 to 2 attend pre-school education. Given the importance of opportunities for children to learn in a structured environment in early childhood, the low coverage rate of preschool education points to the need for improvements in this area. In 2017, BiH adopted the Platform for the Development of Early Childhood Care and Education for the period 2017-2022⁵, which set a 100% coverage of preschool programmes for children in the year before starting school (including shortened preparatory or compulsory programmes), increasing the coverage of children from 3 to 5 years of age to 50% and increase the coverage of children aged 0 to 2 years to 20% by the end of 2022. According to the Framework for the Realization of Sustainable Development Goals in BiH, the planned values of coverage of preschool education for children aged 3 to 6 are 30% (2023) and 60% (2030). In accordance with

² Agency for Statistics BiH Labour Force Survey in BiH, 2018 and ILO STAT Bosnia and Herzegovina Country profile: <https://ilostat.ilo.org/data/country-profiles/> and https://www.ilo.org/shinyapps/bulkexplorer11/?lang=en&segment=indicator&id=EIP_NEET_SEX_RT_A

³ Situation Analysis on status of children in BiH, UNICEF BiH 2022: <https://www.unicef.org/bih/izvje%C5%A1taji/situaciona-analiza-o-polo%C5%BEaju-djece-u-bosni-i-hercegovini>

⁴ Agency for Statistics, BiH, Regular report on education, School year 2020/2021. i

⁵ http://mcp.gov.ba/attachments/bs_Migrirani_dokumenti/Va%C5%BEni_dokumenti/Va%C5%BEno-Strategije/Platforma_za_razvoj_pred%C5%A1kolskog_odgoja_i_obrazovanja_u_BiH_za_period_2017._%E2%80%93_2022._%28%29b.pdf

the set target values within Sustainable Development Goal 4⁶, education authorities in BiH in the coming period plan to increase the coverage of children in preschool education programmes in the year before starting school, bearing in mind that the planned values reach 36% (2025) and 42.7% (2030).

Gender gap in education

Working-age women have a lower levels of education than men in BiH. Significantly higher share of women than men in BiH completed only primary education (49% compared to 29%), with a similar gap in achievement in favour of men in terms of secondary education (60.9% compared to 41.7%). The gender gap in higher education is significantly lower, only one percentage point in favour of men.⁷

Lower educational accomplishments, especially for women in rural areas, are an important factor contributing to lower employment rates and self-employment. It is assumed that women in urban areas have twice as many years of schooling as women in rural areas. Several factors can be used to explain these facts, including the persistence of traditional gender norms in terms of household responsibilities and involvement in various seasonal agricultural activities. All of these factors are conducive to limiting school years, dropping out of school or skipping classes. Other factors that may contribute to the lower educational attainment of women in rural areas are distance from school (especially at the secondary level), insufficient transport and difficult terrain.⁸

The educational choice of women and men affects their earnings later in life. Fewer men than women study in general education (8% vs. 13% for women), social sciences, business, law (10% vs. 23%) and services (17% vs. 25%). In contrast, 54% of men studied engineering and civil engineering, compared to only 19% of women.⁹

Despite the poor results of the PISA 2018, in BiH, 93% of students complete secondary education, which is higher than the EU average (83%)^{10,11} Over 75% of secondary education students in BiH are enrolled in **technical and vocational schools**, of which 70% are boys (in this age group, the difference in gender representation is most pronounced). In other types of secondary schools, the percentage of girls is much higher.¹² The reason for this stems from the cultural and historical roots of boys' orientation towards attending education that has traditionally been perceived as "male". Research on the gender gap in science, technology, engineering and mathematics has shown that students, regardless of gender, believe that men are better programmers, mechanical engineers, astronomers, civil engineers and electrical engineers, while women are better psychologists and journalists.¹³

The hourly wage gap for the 16-64 population working for wages or hours is nine percent. This means that the difference between the average hourly wage of men and women is nine percent of a man's salary. Lower paid 'women's' jobs exist in both the public and private sectors and in the informal economy. Sectors primarily associated with lower wages include education, health,

⁶ UNESCO Institute for Statistics, National SDG 4 benchmarks, 2021 <https://en.unesco.org/gem-report/node/3617>

⁷ Agency for Statistics BiH, Labour Force Survey 2015

⁸ Gender Analysis Report for Bosnia and Herzegovina, USAID 2016
<http://www.measurebih.com/uimages/Edited20GA20Report20MEASURE-BiH.pdf>

⁹ Agency for Statistics BiH, [Household Budget Survey 2011](#)

¹⁰ Eurostat, ključni podaci o zemljama obuhvaćenim proširenjem, 2019,
<https://ec.europa.eu/eurostat/documents/3217494/9799207/KS-GO-19-001-EN-N.pdf/e8fbd16c-c342-41f7-aaed-6ca38e6f709e?t=1558529555000>.

¹¹ Agency for Statistics BiH, Labour Force Survey 2015

¹² Agency for Statistics BiH, Women and Men in BiH (2020)

¹³ UN Women, Gender gap in STEM and proposed mitigating measures, 2020
[Gender Gap in STEM BiH BHS-min.pdf \(unwomen.org\)](#)

culture and agriculture.¹⁴ Gender gap research shows that compared to female students, male students are more convinced that science is a better career choice for men than for women, that men are more talented in math than women, that they are better scientists than women, that math is a better career choice for men, that women love science less than men, and that women who enjoy studying computer science are "weird."¹⁵

Education systems in BiH reflect the representation of 68% of women in the teaching workforce; however, women's participation in management positions is declining from 83% in pre-school institutions to 35% in higher education.¹⁶

Financial framework for education in BiH

Public expenditure on formal education in Bosnia and Herzegovina in 2019 amounted to 1 billion and 410 million BAM or 4.1% of gross domestic product, which is similar to the average in the EU (4.7%) and the OECD (4, 5%).¹⁷ The plans of the education authorities indicate an increase in the allocation of financial resources at all levels of government in BiH, given that the target value by 2030 has been increased to 4.6%.¹⁸ However, when it comes to funding per student, BiH spending is significantly lower than the EU and OECD average, especially at the level of primary education (ISCED 1 and 2). In 2018, BiH spent 0.1% of its GDP on pre-school education (ISCED 0), 0.6% on primary (ISCED 1 and 2) and 2.4% on secondary education (ISCED 3), compared to the OECD average of 0.5%, 1.4% and 1.9%, respectively. One of the reasons why BiH spends a high share of available resources on secondary education (ISCED 3) is that many students enrol in vocational programmes, which are often more expensive because governments have to constantly adapt infrastructure and materials for practical learning. At the same time, overall funding at the secondary level (ISCED 3) remains very low, which is reflected in the quality of teaching and learning.¹⁹

Public, private expenditures and funds from abroad for education institutions in 2019 amounted to 1 billion 550 million BAM or 4.4% of gross domestic product. Of the total amount of expenditures for education institutions, public expenditures were 90.9%, private expenditures 8.7%, and 0.4% were funds from abroad.²⁰

In the structure of total expenditures for education institutions, expenditures for preschool education were 5%, for primary education 49%, for secondary education 23% and for higher education 22%.

Student expenditures from public and private sources of financing amount to an average of 2,942 BAM, where the largest amount is allocated for secondary education.²¹

Pandemic period (2020-2021)

Since March 2020 education authorities have included most children in online education. Therefore, 99% of children and young people in primary, secondary, and higher education had a basic access to online education. However, despite this data, significant differences and

¹⁴ Gender Analysis Report for Bosnia and Herzegovina, USAID 2016

<http://www.measurebih.com/uimages/Edited20GA20Report20MEASURE-BiH.pdf>

¹⁵ UN Women, Gender gap in STEM and proposed mitigating measures., 2020

[Gender Gap in STEM BiH BHS-min.pdf \(unwomen.org\)](https://www.unwomen.org/en/digital-library/publications/2020/05/gender-gap-in-stem-bih-bhs-min.pdf)

¹⁶ Agency for Statistics BiH, Education Statistics for school year 2019/2020 <http://bhas.gov.ba/Calendar/Category/15>

¹⁷ Agency for Statistics, Financial statistics of education sector

¹⁸ UNESCO Institute for Statistics, National SDG 4 benchmarks, 2021 <https://en.unesco.org/gem-report/node/3617>

¹⁹ OECD Reviews of Evaluation in Education in Bosnia and Herzegovina, OECD 2022: <https://www.oecd-ilibrary.org/sites/a669e5f3-en/index.html?itemId=/content/publication/a669e5f3-en>

²⁰ Agency for Statistics, Financial statistics of education sector, 2019

²¹ Agency for Statistics, Financial statistics of education sector, 2019 (pre-school 3,10 BAM; primary 2,685 BAM, secondary 3,129 BAM, higher 2,943 BAM)

inequalities in the quality of access to online education were identified. More specifically, there were children and young people without adequate access to information and communication technologies (ICT) and Internet. Roma children disproportionately did not have access to education during the pandemic. They make up at least 6% of the total number of children without access to ICT and the Internet. Pre-school children were the largest group that did not have access to education during the closure of education institutions. Namely, between mid-March and mid-May 2020, as many as 82% of children stopped attending preschool education during the preschool institutions closure.

Education authorities, teaching staff, parents and students have made important efforts to ensure and monitor online teaching, prevent disruption of teaching, learning, and potential learning loss, but some difficulties in ensuring affordable and quality online education were identified.

Access to Education

According to the data collected from the 2021 document "Analysis of Existing Elements of ICT Infrastructure for Primary, Secondary and Higher Education in the Administrative Units of Bosnia and Herzegovina", all higher education institutions (100%) have a stable Internet connection. In BiH, only 13% of schools meet the standards of Internet uploads and downloads, and as many as 28% of schools do not have Internet access. Furthermore, almost 20 students use one computer, compared to 1.2 students in OECD countries.²² When it comes to equipment for children with disabilities, out of a total of 1,764 primary schools and 314 secondary schools, only 48 primary schools and 17 secondary schools use assistive technology / equipment in working with children with disabilities.²³

A total of 25% of students at higher education institutions had difficulty accessing online teaching²⁴, while 18.44% of primary school students had difficulty accessing online platforms used in teaching during the COVID-19 pandemic.²⁵

Furthermore, according to UNICEF's 2020 U-Report, 45% of young people complained about difficulties in accessing online education due to the need to share devices with siblings, as well as the lack of adequate learning space.

The quality of teaching and teachers' needs during distance and blended education in primary and secondary schools and higher education institutions during the COVID-19 pandemic in BiH

During the pandemic, the situation in the education sector was determined in relation to the needs of teachers in primary, secondary (including TVET) and higher education for all education systems in BiH through studies²⁶ with a representative sample.

²² UNICEF (2022) Mapping of ICT resources in elementary and high schools in BiH, UNICEF 2022i srednjih škola u Bosni i Hercegovini

²³ UNESCO (2021), Analysis of ICT infrastructure for primary, secondary and tertiary education in all administrative units in BiH, p 23..

²⁴ UNESCO-UNICEF (2022), Analysis of quality delivery of online education during COVID-19 pandemic in higher education, p.24..

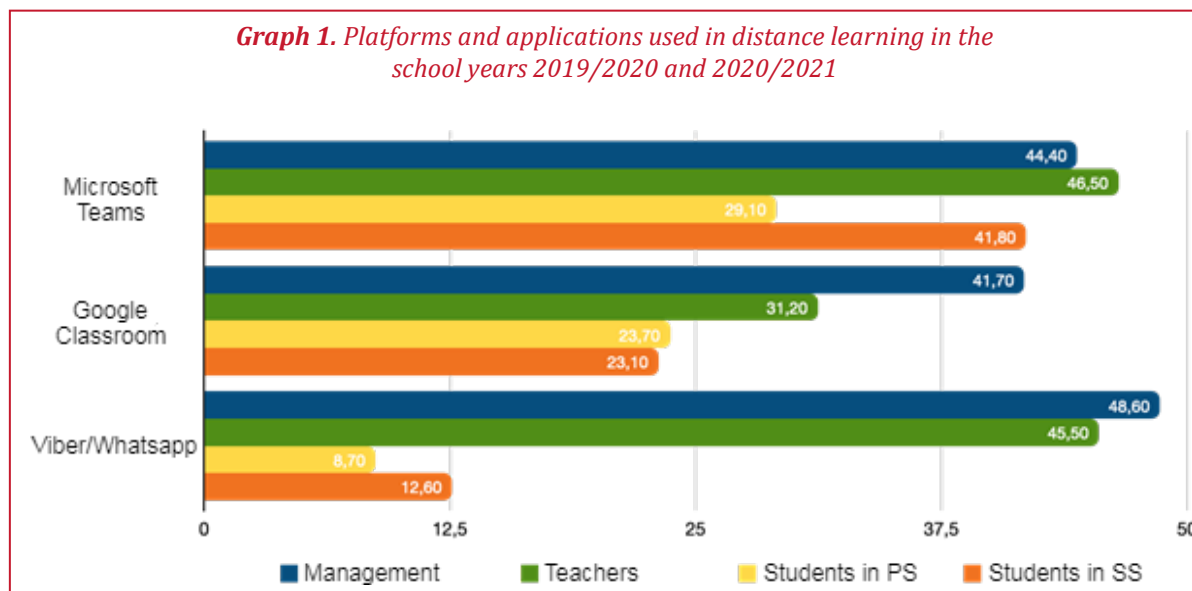
²⁵ UNICEF-UNESCO (2022), Analysis of quality delivery of online and blended education in primary and secondary (and TVET) schools during COVID-19 pandemic, p.21.

²⁶ UN Joint project 'Reimagine Education for marginalised girls and boys during and post COVID-19 pandemic' implemented by UNICEF, UNESCO and ILO and financed by UN COVID-19 Response Fund in 2021 supported the following studies and policy development in BiH:

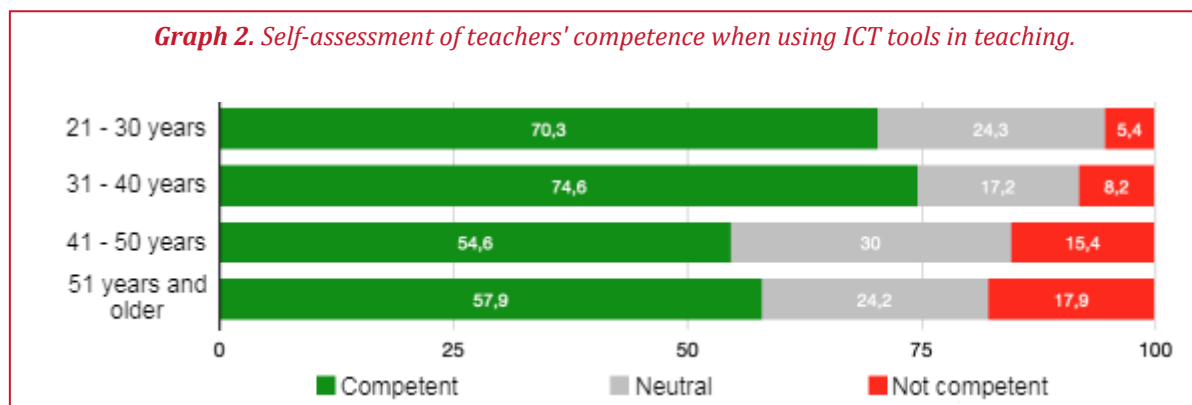
1. Analysis of attitudes on mental health and well-being of female teachers in Una-Sana and West-Herzegovina;
2. Analysis of attitudes on mental health of students and teachers in Republika Srpska;
3. Analysis of quality delivery of online education in primary and secondary education in BiH;
4. Analysis of needs of teachers for quality delivery of online education in primary and secondary schools in BiH;
5. Analysis of quality delivery of online education in higher education in BiH;
6. Analysis of needs of teachers for quality delivery of online education in higher education;
7. Analysis of quality delivery of online education in Technical Education and Vocational Training;
8. Analysis of ICT infrastructure in primary and secondary schools in BiH;

The studies show the insufficient level of digital skills of teachers, unequal understanding of the concepts of distance learning and preparation for online teaching, as well as different perceptions of students about the quality of online teaching. On the other hand, there is a representation of recognizing the benefits of using digital tools and online teaching in the context of improvements in the quality of teaching and maintaining the motivation of students during classes.

Findings:



Students mostly used the Microsoft Teams platform in distance learning, while teachers used Microsoft Teams and mobile applications for Viber / WhatsApp communication almost equally.

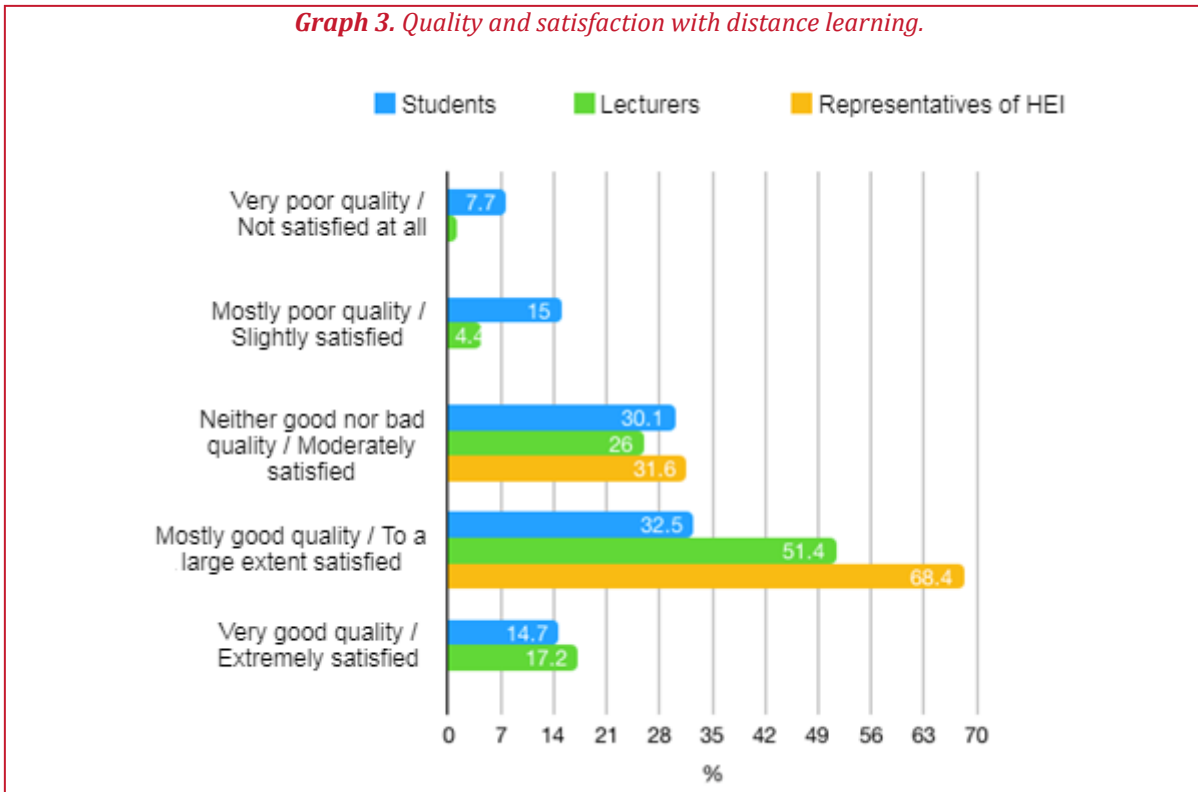


9. ICT Standards for primary, secondary and tertiary education in BiH;

10. In finalisation: Guidelines for quality delivery of blended learning with focus on digital and pedagogical competencits for teachers in primary, secondary and tertiary education;

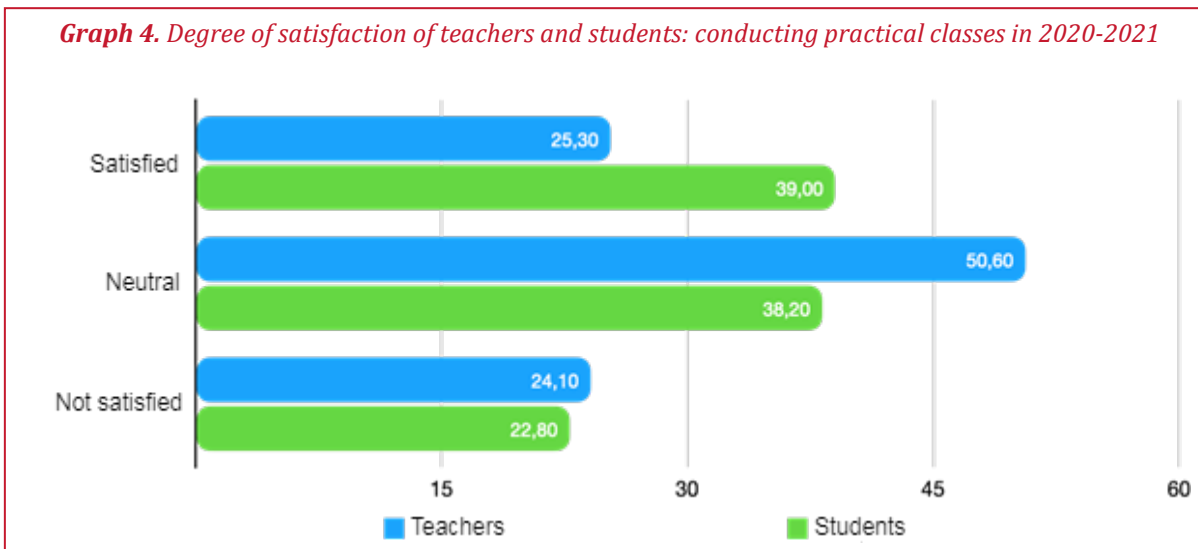
11. Real-time Monitoring of education in primary and secondary schools of Una-Sana and West Herzegovina cantons.

Graph 3. Quality and satisfaction with distance learning.



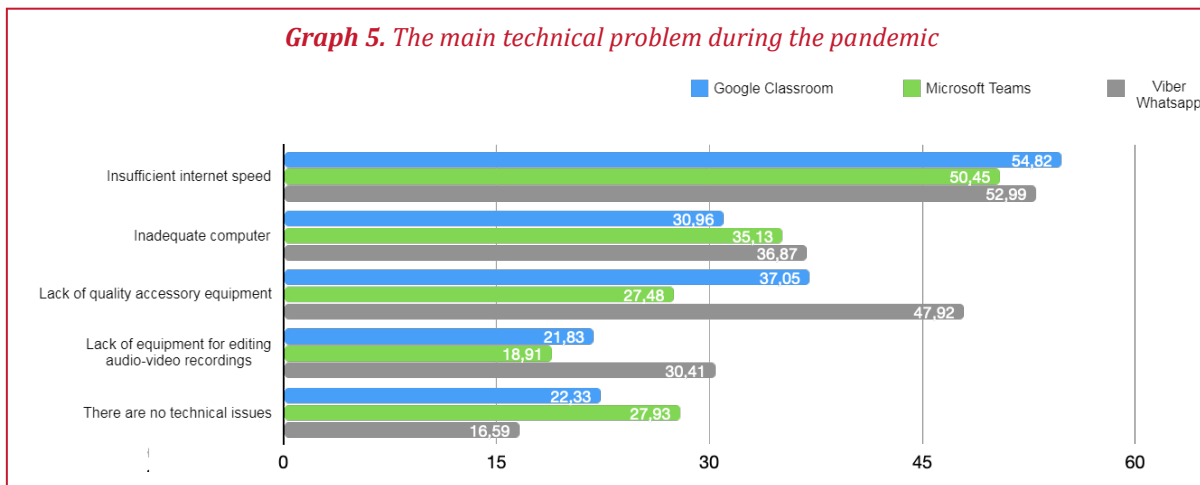
The first observed result is that slightly less than half of the surveyed students (47.2%) think that the quality of distance education was mostly good or very good, while two thirds of the teachers (68.6%) are largely or exceptionally satisfied with the teaching. There are two possible explanations for this discrepancy in ratings. The first is that the data reveal the true picture, that is, the optimistic overestimation of the quality of teaching by the teachers. Another explanation is that there may have been more students who wanted to express their dissatisfaction with the teaching. At the same time, it should be emphasized that it is encouraging that there is a generally positive assessment of teaching during the pandemic, especially by students.

Graph 4. Degree of satisfaction of teachers and students: conducting practical classes in 2020-2021

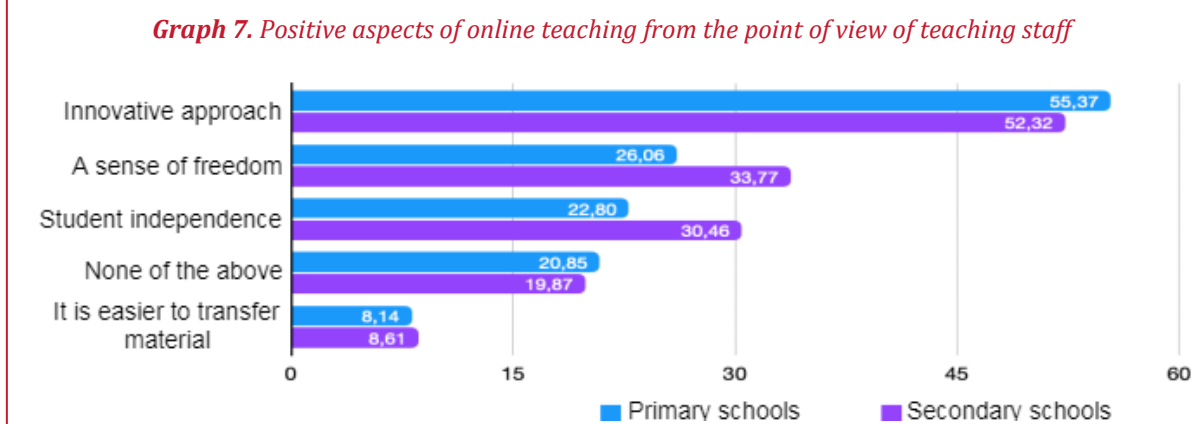
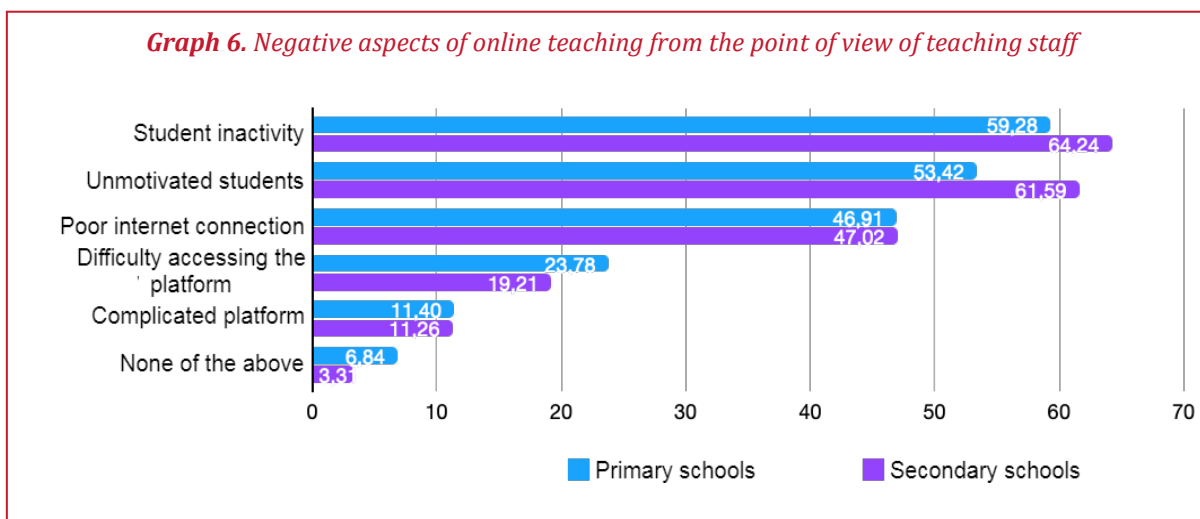


Although most students and teachers are indecisive about their satisfaction with the distance learning when it comes to **practical teaching**, the findings show that they are somewhat more satisfied than dissatisfied. Some of the employers stated that nothing is planned and

systematically organized at the level of each school, which means that there is room for improvement in the implementation of practical distance teaching.



Regardless of the platforms used, teachers generally identified insufficient Internet speed as a problem.



The positive and negative aspects of online teaching are interesting for several reasons - teachers identified student inactivity and lack of motivation as one of the main problems, but more than

half of teachers identified innovative approaches to education as a positive aspect. This leads to a dilemma: is student inactivity caused by teachers' failure to try to be more innovative or has inactivity led teachers to be more innovative? It was further noted that many teachers emphasized a sense of freedom as another identified positive aspect of distance learning.

Real-time Monitoring

In order for education authorities to monitor the perceptions and opinions of students and teachers and have a better overview of the situation in households about the availability of ICT equipment, a survey was conducted in 2 pilot cantons in BiH - Una Sana and West Herzegovina canton. The survey largely confirmed findings of the previously conducted studies and provided insight into the real-time situation.

Digitalization of education

In 2021, "Analysis of the Existing Elements of ICT Infrastructure for Primary, Secondary and Higher Education in the administrative units of Bosnia and Herzegovina" mapped the needs of education institutions to implement full digitalization of all teaching processes, after which the digitalization process was systematically regulated by the **"Basic Technical Standards for Information and Communication Technology in Education Systems in Bosnia and Herzegovina"** a document prepared by all ministries responsible for education. This document set the recommended standards for all levels of education, determining the minimum technical characteristics of the ICT equipment, by category which can enable unhindered access to digital learning.

Development of quality online and blended learning in technical and vocational education and training (TVET) in BiH

A major challenge during the COVID-19 pandemic was to ensure the quality of the implementation of the teaching process (curriculum), especially practical teaching, by providing technical conditions for access to digital learning tools and platforms.

Although the sudden transition to distance learning (learning in a digital environment) and blended learning caused by the COVID-19 pandemic was a challenge for teachers and schools at the secondary level, it proved to be even more complex for technical and vocational education and training (TVET). The teaching content in technical and vocational education is more diverse than the teaching content in general education, as it has to respond to a number of different professions, each of which requires narrowly vocational content. In addition, TVET to a greater extent implies conducting practical classes and workshops at school laboratories, as well as learning through practical work at companies.

As the majority of the unemployed in Bosnia and Herzegovina have completed three or less than three grades of secondary school²⁷ and primarily complete secondary vocational education programmes, it is important to continuously improve the curriculum in secondary vocational schools, based on learning outcomes and key competencies. This process should involve cooperation with all relevant actors to align curriculum with the needs of the labour market, and to provide students with knowledge, skills and competencies that will improve their employment opportunities.

²⁷ Institute for Statistics FBiH, 2018; Institute for Statistics, Republika Srpska, 2018.

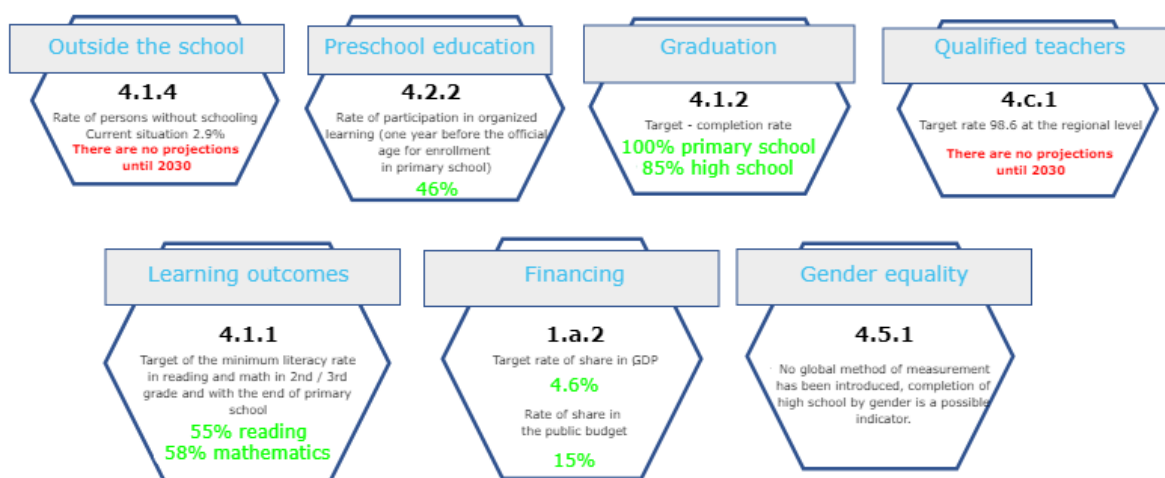
Reviewing or setting educational goals and benchmarks

In April 2021, the governments of Bosnia and Herzegovina adopted the "Framework for the Realization of the Sustainable Development Goals in Bosnia and Herzegovina", where **education was recognized as an accelerator of two development directions, contributing to smart growth and a society of equal opportunities** to realize the principle "No one should be excluded" of the 2030 Agenda. The framework contains seven sub-objectives within SDG 4, three of which are also global objectives for SDG 4, including the indicator of labour equality.

In order to strengthen the responsibility of education authorities in BiH to achieve sub-goals within SDG 4, in 2021 statistical information systems in the field of education were developed. Systems provide data for 32 educational sub-goals, including data on seven global target values for SDG 4, and also those related to the development of teachers' skills, higher education, technical and vocational education. This has **improved the informed planning of policies and budgets for achieving the Sustainable Development Goals related to education.**

An insight into the 7 main indicators, with the current situation that BiH strives for and on which it will report on progress, is given in the overview:

7 main values for monitoring the rate of achievement of the Sustainable Development Goal 4 by 2030 in Bosnia and Herzegovina
(Source: UNESCO, Institute for Statistics, Global monitoring report on the achievement of the SDG4 target by country; 2021)

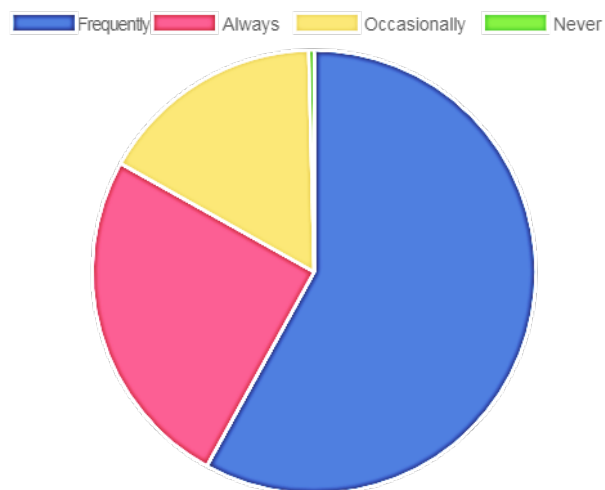


Key findings

In the period from 10 to 18 May 2022, data were collected through an online questionnaire for target groups whose representatives were also present at the consultation meetings. The results of the surveys by target groups are listed as follows:

Academia

Graph 8. To what extent should digital tools be used in education?



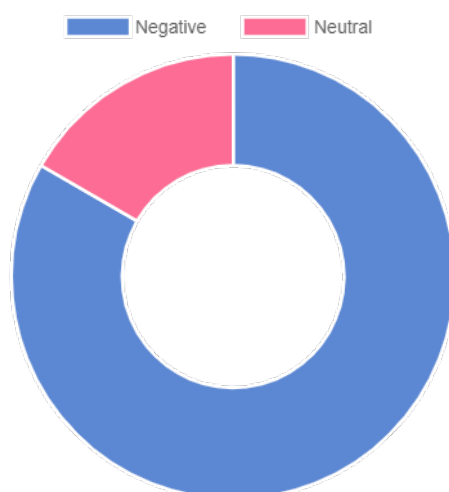
More than 80% of respondents believe that digital tools should be used in education either always or frequently.

When asked about the prioritization of investment in education, the priorities were ranked as follows:



With 70 answers, the respondents answered that the improvement of infrastructure (spaces for practical classes, information systems, computer and laboratory equipment, server equipment) is the **number 1 priority** towards the goal of quality and inclusive education. With 60 answers, respondents answered that aligning the education sector with the labour market (strengthening the practical experience of students during higher education) is the **number 2 priority** towards the goal of quality and inclusive education. With 64 answers, the respondents answered that Investing in scientific research capacities of teaching staff and students is the **number 3 priority** towards the goal of quality and inclusive education. With 55 answers, respondents answered that investing in the mobility of teaching staff and students is the **number 4 priority** towards the goal of quality and inclusive education.

Graph 9. *Impact of the COVID 19 pandemic on students' mental health*



The majority of representatives of civil society organizations believe that the pandemic has left negative impacts on the mental health of students.

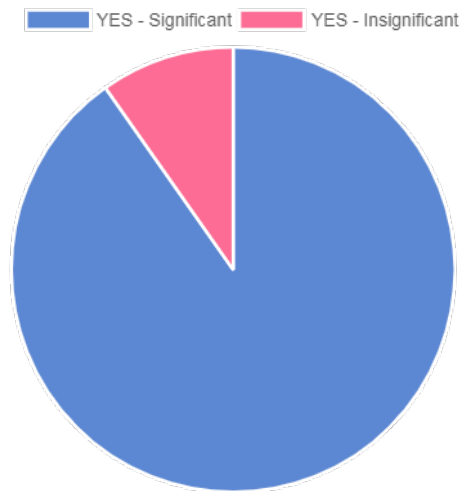
Respondents answered that *Improving infrastructure (teaching spaces, information systems, computer and laboratory / office equipment, server equipment)* is an equal **priority** towards the goal of quality and inclusive education *as raising the competencies of teaching staff (including ICT competencies)*. In addition, *raising students' competencies* for easier and faster integration into the modern labour market (including practical experiences) is a priority towards the goal of quality and inclusive education.



As an additional proposal of priorities, most of the representatives of civil society organizations focused on **innovations in education**, special and impartial plans and programmes, quality and improvement of knowledge as strategic directions.

The vast majority of answers given on the way of participation of civil society organizations were related to participation in creating programmes, influencing public policies, assistance through training for teachers and education authorities, and creating curricula.

Graph 10. Did COVID 19 pandemic had a negative impact on students' accomplishments?



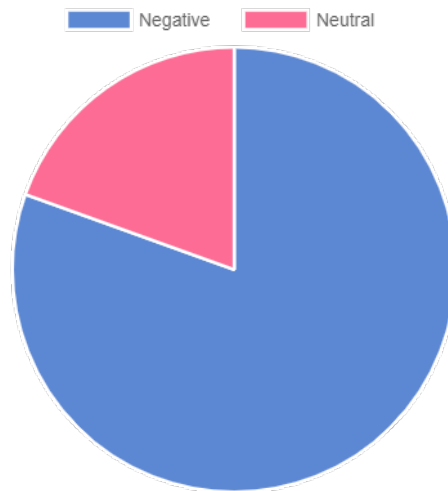
The vast majority of parents (over 90%) believe that their children faced learning losses in their student achievements.



Parents answered that *raising the competencies of teaching staff* (including ICT competencies) is the **number 1 priority** towards the goal of quality and inclusive education. The vast majority of respondents cited the use of digital platforms, e-learning systems, easy access to materials, recording lectures, information systems, facilitated interaction, as forms of innovation that have had a positive impact. In almost the same range of priorities, parents responded that *building the competencies of students* needed for easier and faster integration into the modern labour market (including practical experiences) is the **number 2 priority** towards the goal of quality and inclusive education.

When it comes to the question of mental health of students, most parents stated that the pandemic left a negative impact on mental health of their children.

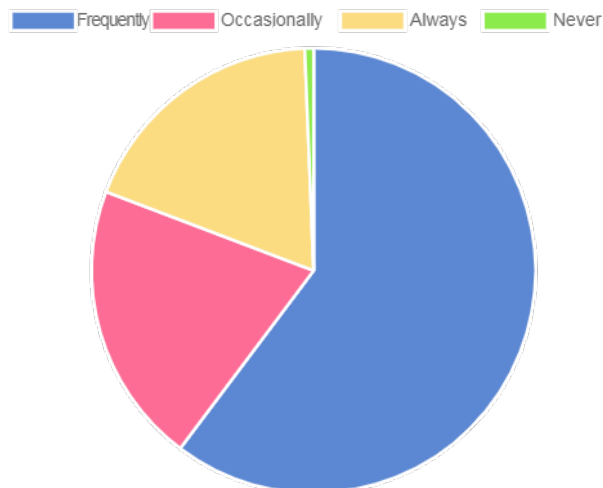
Graph 11. Impact of distance learning during COVID 19 on students' mental health



The vast majority of parents believe that distance learning left a **negative impact on mental health of students**

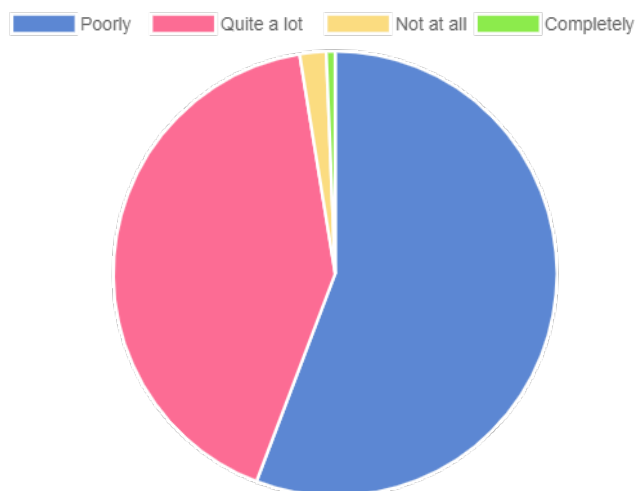
Teachers

Graph 12. To what extent should digital tools be used in education?



Teaching staff mostly believe that digital tools should be used in education, while more than 50% of respondents believe that digital tools should be used frequently.

Graph 13. To what extent do you believe that curricula is in line with the acquisition of skills needed for the 21st century?



Over 50% of the teaching staff do not think that the current curricula is in line with the attainment of skills needed for the 21st century.

With 64 answers, the respondents answered that the *improvement of infrastructure* (spaces for practical classes, information systems, computer and laboratory equipment, server equipment) is the **number 1 priority** towards the goal of quality and inclusive education. With 46 answers, respondents answered that *improving the competencies of teaching staff* (including ICT competencies) is the **number 2 priority** towards the goal of quality and inclusive education.

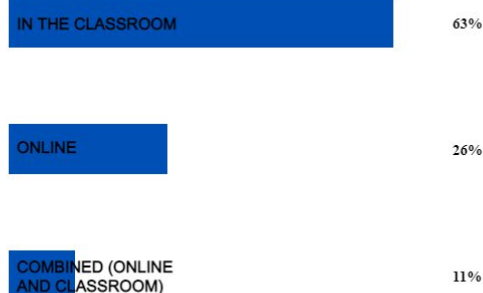


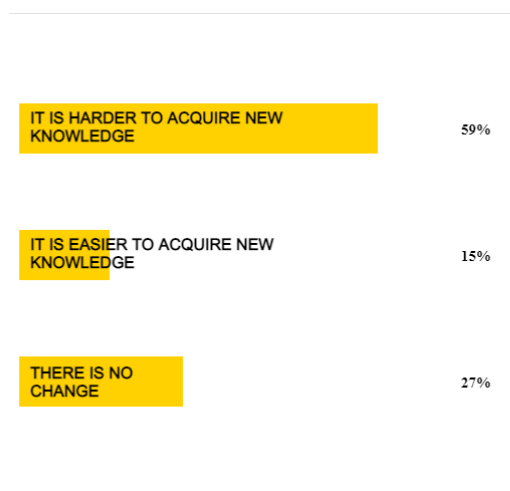
Youth

A survey for young people aged 15-30, conducted through the [U-report](#), with a total of 788 (359 F) respondents confirmed the findings of the aforementioned studies. Namely, young people prefer physical presence at schools, while they absolutely (95%) support the use of ICT equipment and digital tools in teaching. It is worrying that almost half of the young respondents think that the school does not prepare them enough, or prepares them inadequately for their future job.

I like the most when I attend classes:

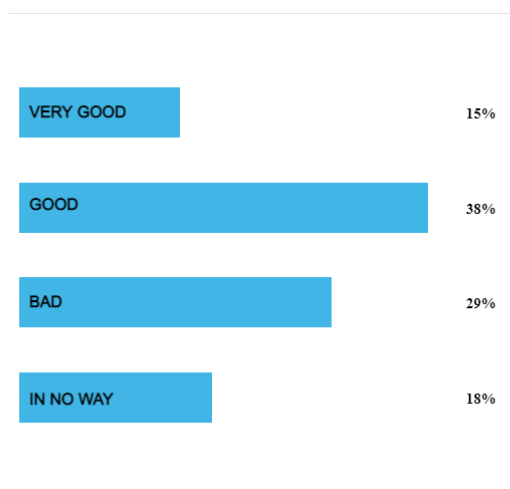
788 answered out of 2592 respondents





Due to my education during the pandemic, I noticed that:

758 answered out of 788 respondents

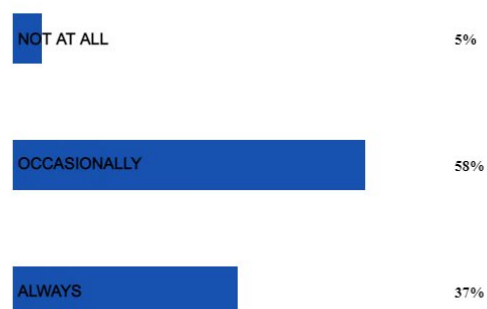


How much do the things you learn at school prepare you for your future job?

733 answered out of 741 respondents

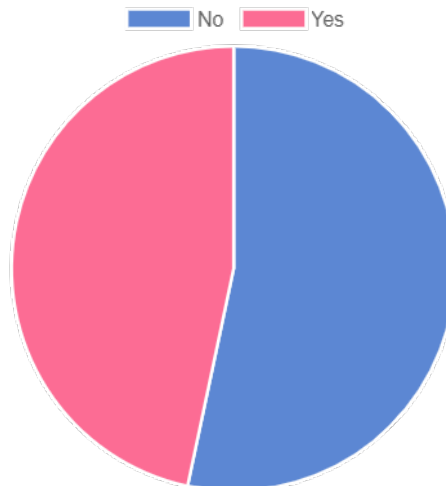
To what extent should digital resources (PC, laptop, phone, smart boards, online platforms, MS Teams, Google Classroom, etc) be used in education?

741 answered out of 758 respondents



Most adolescents and young people could not identify one single positive example that their teacher used during distance learning which contributed to their learning. A small number of respondents mentioned positive examples such as quizzes, presentations, mind maps, and the use of video materials in teaching. When asked what they would change in their school, most adolescents and youth answered that they would change everything. Other things they would change include the system, professors, curriculum, work modalities and teaching, with the increase in the use of modern and digital technology.

Graph 14. Did the ministry notice significant gaps in student achievement as a result of the COVID-19 pandemic?



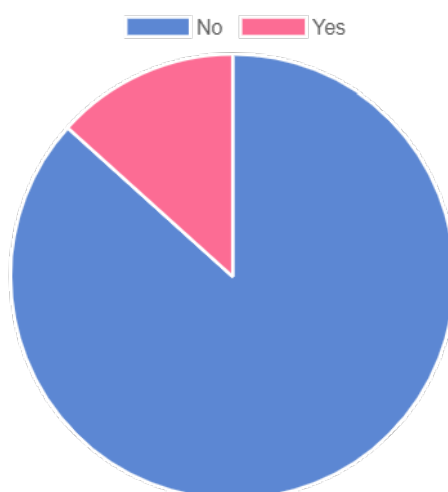
Ministries unlike other target groups are almost equally divided on the existence of gaps in student achievements caused by the pandemic.

In elaborating the above question, in the case of observed achievement gaps, what measures were taken by the ministries in order to prevent them, the respondents answered the following:

- ❖ Development of implementation plans and programmes for all subjects and grades in which the focus was on curricula relevant to continuing education with the elimination of less important facts and the organization of IT training for all employees in education.
- ❖ Recommendations to schools to go through lessons and assignments again, remedial classes deal with the content missed due to the pandemic.
- ❖ Organization of public TV broadcasting for distance learning, with the organization and installation of Office 365 tools in all schools where they were not installed. Supporting videos for teachers, students and parents to use Office 365 tools. Creating platforms for students and teachers. Adoption of various bylaws that shift the focus from learning for assessment to learning how to learn.
- ❖ Continuous provision of guidelines on the implementation of the teaching process in the digital environment, recommendations for the methods of student assessment, active cooperation with parents, continuous education of teachers to work in the digital environment.

It is noticeable that if there were gaps in student achievements, the respondents stated that the most emphasized learning losses pertained to socially marginalized children, students with disabilities and students in lower grades of primary school and secondary vocational schools (lack of practical training). A small part of the answers referred to the fact that such assessments have not been performed or are expected in the coming period.

Graph 15. Has there been an increase in the number of students who dropped out of school due to the COVID-19 pandemic?



Most of the responses (13) from the ministries indicate that there was no increase in students who dropped out of school due to the pandemic. Those who cited an increase in dropouts, as measures to combat dropouts, cited the provision of technical equipment for high-risk schools and the improvement of the work of school professionals.

The assessment of the impact of the COVID - 19 pandemic by ministries on the mental and physical health of students and teachers was also addressed in a survey. The vast majority of answers referred to the existence of information about the decline in motivation, alienation of students and teachers, anxiety and physical consequences in the form of weight gain of students and teachers. A small number of responses indicate that analyses have not been performed or have been left to pedagogical institutes and are pending.



In listing the three key strategic directions of the ministry to achieve quality and inclusive education, most of the priorities were related to **curricular reform based on learning outcomes and improving the quality and efficiency** of education (55.33% of responses). A number of strategic directions mentioned related to **training and improving the competencies of teachers**. In equal representation, the priority of **digitalization of the education system and informatization** is stated (33%). A smaller number of the mentioned strategic directions were related to **better harmonization of education and the labour market**, as well as to **increasing the coverage of children with pre-school education and improving inclusive education** (20%).

When mentioning shortcomings in education systems over the past two years due to the rapid transition to online learning, the vast majority of responses stated low levels of digital competences of students and teachers, lack of digital content, partial implementation of content and low interest and motivation (80%). The same majority identified the lack of poorly equipped schools and school population with ICT equipment, the lack of Internet access in schools and households and the lack of communication between students and teachers. Only a small part of the answers referred to the issue of assessment, as well as the lack of practical teaching, both in secondary vocational and higher education.

When asked how the changes that have transformed the current way of providing education can serve to strengthen skills and competencies for the 21st century, all answers received from ministries indicate that the biggest step to achieving this came from improving digital competencies of teachers, students and parents, as well as enhancing infrastructure in schools and households, and increasing awareness of the importance of digital culture as a driver of innovation and entrepreneurship.

The following suggestions or statements were offered on how to better use the existing financial resources in education to create a favourable environment for quality and inclusive education:

- Frequent budget reductions in favour of other sectors, lack of funding for inclusion-related activities and limited funding in ministries.
- Strengthening the infrastructure of the Internet, ICT infrastructure and strengthening the digital competencies of teachers through professional development and digital teaching materials.
- Setting prices of each individual programme with the elimination of unnecessary programmes, as well as that most of the budgets are distributed on salaries and running costs in schools.

As obstacles in achieving the set goals of SDG4, respondents see the following:

- Financial barriers, lack of capacity, lack of funds for professional development of education staff (42.86%)
- Lack of political will, slowness in the adoption of new regulations and lack of coordination among various actors in the education system (35.71%)
- Lack of inclusion of all children in preschool education and inability of education authorities to act in this direction as well as lack of quality evaluation of information (21.43%)

Priority measures identified within 4 components of Consultations

The following is an overview of the priority measures according to the proposed components of the Consultation Process Guide, developed during the consultations with the target groups in Bosnia and Herzegovina:

1: Full educational recovery from the impacts of the pandemic

SHORT - TERM MEASURES

- **Perform an assessment of learning losses** among students at all levels of education, with special reference to losses among students from vulnerable and marginalized groups and students with disabilities.
- **Create a multidisciplinary crisis intervention team.** This team would be composed of representatives from relevant education institutions, professional services, teaching staff, but also representatives of the ministries of health and social welfare, finance, relevant civil protection services, parent associations (including parents of children with disabilities) etc. Its main task would be the development of contingency plans for extraordinary circumstances (caused by natural or human factors) which may lead to difficulties in performance and/or interruption of the educational process.
- **Define the terminology and include online/blended/hybrid teaching** in legislative acts at all levels of education and in all administrative units. In this way, future doubts regarding the pedagogical-methodological-didactic framework for conducting online teaching would be avoided, and through the definition of clear legal regulations the implementation of this teaching model in regular and extraordinary circumstances would be standardized.
- Continuously and systematically strengthen education systems in **use of digital tools** through introduction of online / blended / hybrid teaching in annual programmes and academic calendars of education institutions. This aims to improve digital competencies of managers, professional associates, teaching staff and students.
- **Support mental health and well-being of children and youth** through the existing models of good practice. It is necessary to link and strengthen the work of institutions from different sectors (education, health, social protection) that would aim at building preventive measures in education institutions to protect the mental health and well-being of children and young people.
- Engage in **benchmarking analysis** and compare practices and data on BiH with successful education systems that have developed approaches to digitalization of education.
- Establish and support **training centers for teachers at universities**, focused on development of teachers' specific pedagogical and didactic knowledge, skills and attitudes. .

2: Identifying a package of levers and priority actions for designing the 21st century education and accelerating progress towards shared education commitments

MEDIUM-TERM AND LONG-TERM MEASURES

During the consultations, the following strategic directions, priority actions and package of levers were identified as follows

1. Ensure access to education for all children and young people:

- Align legislation at all levels of education and in all administrative units with a **human rights-based approach**. Ensure the implementation of already existing legislation in education which is only implemented partly or not applied at all.

- **Increase the enrolment in pre-school education** both in the year before starting school and for other age groups, especially for children from vulnerable groups.
- **Ensure equal access to primary, secondary and higher education** for all children and young people and **reduce early drop-outs and school leaving**, especially for children and young people with disabilities, children and young people from economically and socially disadvantaged groups, rural areas and children on the move. Equal access to education includes among other factors, increasing the enrolment of Roma children and including more girls in STEM programmes.
- **Improve the education infrastructure**, which encompasses **digital equipment in education and practical teaching as well as development of information systems**, with focus on open-source solutions.
- **Improve accessibility within education**, which includes architectural and communication accessibility, applying universal designs for learning and appropriate accommodation.
- **Ensure better transition and mobility** of students in and between different levels of education and different education systems in BiH.

2. Improve the quality of education:

- Design and implement **curricular reforms based on learning outcomes** in BiH education systems to enable children and students in attaining the knowledge, skills and competencies required for living and working in the 21st century.
- Work on **building and promoting open educational resources (OER)** based on learning outcomes or a specific curricula.
- Invest in **scientific research capacities and improving the mobility** of teaching staff and students as well as developing a culture of innovation in education.
- Invest in **capacity building of teaching staff** at all levels of education by **strengthening the digital and PPDM²⁸ competencies** necessary to achieve a quality educational process in the 21st century. In addition, it is necessary to train the teaching staff, but also the administration in the education on the specifics of digital pedagogy, and sensitize them to the unique psychological challenges such work implies. This measure includes improving the quality of initial education of teaching staff and establishing systematic and continuous professional development with the aim of reducing the generational gap between teachers and new generations of students. This also includes the establishment of mentoring system and peer support to teachers.
- **Establish and improve evaluation and assessment systems in education** to monitor the achievements of learning outcomes and the effectiveness of education systems. Moreover, at the university level special assessment of digital competencies should be requested for academic advancements, criteria for evaluating the work of higher education institutions should include digital aspects. At lower levels of education assessment of digital competencies of teachers should be included as part of licencing exams.
- Continuously work on the protection and improvement of **mental health and well-being of children and youth**, as well as teaching staff, with focus on prevention programmes. This includes developing childrens' and young peoples' awareness of healthy lifestyles.
- Work on **strengthening multidisciplinary professional associates' services** in schools and faculties, which includes revising norms and standards on the number of professional associates in schools.
- Address the overload of students with teaching materials and improve extracurricular activities for students.

²⁸ Pedagogical-psychological-didactical-methodical competencies

- **Involve representatives of the IT business sector** with experience in e-learning or other sectors identified as strong players in the labour market related to the **planning of the digitization process and its implementation**.
- Systematically **establish partnerships and support the engagement of civil society organizations** which is particularly important for improving the well-being of children and young people.
- Plan reform processes in education through a **consultative process** with a wide range of stakeholders (students, parents, teachers, civil society organizations, private sector).
- Improve the **coherence of learning outcomes through different levels of education**.
- Improve the **partnership with parents** in terms of a clearer definition of their role in education, especially in situations of crisis.

3. Improve opportunities for the development of children's and young people's skills for life and work in the 21st century:

- Recognize **the importance of non-formal education** as an important source of strengthening the knowledge, skills and competencies of young people.
- Improve secondary and university education programmes when it comes to **practical teaching** and link them to the needs of the labour market.
- **Redefine** the roles of teachers and students in the teaching process to transform students into active participants of learning with the aim of enhancing their socio-emotional, cognitive, functional and creative skills, innovation and critical thinking required for living and working in 21st century.

3: Ambitions to improve educational goals

- Through the implementation of above measures, continue to **work on achieving the set values for the Sustainable Development Goal 4 indicators** represented in the "Framework for the Implementation of the Sustainable Development Goals in Bosnia and Herzegovina"²⁹. If the need and opportunity arises, **reassess the established Global Benchmark Indicators** for the Sustainable Development Goal 4, as an important step forward for education authorities in formulating a commitment to transforming education by 2030.
- To strengthen the responsibility of BiH education authorities to achieve the Sustainable Development Goal 4 targets, it is necessary to continue developing education information systems for **informed policy and budget planning**. Reliable and comparable statistics on the sources and use of funding are needed to improve the planning, management and mobilization of resources. They are also essential for developing short-term responses and accelerated actions to get countries back on track to achieve the 2030 Agenda.

4: Ensuring sustainable public funding of education

- In the past two years, the education authorities in BiH have made **efforts in strengthening the legal, financial and administrative environment** for the implementation of quality education, especially digital learning, given the pedagogical and technical requirements that education institutions must meet and the necessary minimum qualifications of teachers for this learning modality. However, a trend of education budget reductions was present during the pandemic, and it is necessary to **reallocate resources within the existing budgets** in the

²⁹ <https://www.undp.org/bs/bosnia-herzegovina/publications/okvir-za-realizaciju-ciljeva-odr%C5%BEivog-razvoja-u-bosni-i-hercegovini>

coming period to address the challenges in the education sector. For this purpose, it is recommended to establish consulting processes with key actors for the purpose of more efficient budget planning. In addition, **cross-sectoral coordination in budget planning** needs to be improved to allocate public funds more efficiently.

- Considering the *Incheon Declaration and the Framework for Action for Education by 2030*, education authorities must ensure that the **share of education in GDP** remains at the rate of 4.6% by 2030 and that between 15% and 20% of public funds is allocated to education in order to achieve quality and inclusive education for all.
- An effective lifelong learning system can be developed only with the **active involvement and support of government, employers, workers and education institutions**, which is why in addition to increasing of public investing in adult education, it is much more crucial to create appropriate incentives to **increase private sector investment** in human capital development and employee training. Another socially significant indicator is recognizing and planning investments in **partnerships with civil society organizations**.
- Ensure financial resources for the continuous implementation of activities proposed by the measures, as well as monitoring of the implementation of the specified measures.

List of Annexes

Assessments/Studies/Standards

[Analysis of the existing elements of ICT infrastructure for primary, secondary and higher education in the administrative units of Bosnia and Herzegovina](#)

[Basic technical standards for information and communication technology tools in education systems in Bosnia and Herzegovina](#)

[Study on the quality of distance learning in higher education in Bosnia and Herzegovina during the COVID-19 pandemic](#)

[Study on the quality of distance learning and blended learning in primary and secondary education \(including TVET\) in Bosnia and Herzegovina during the coronavirus pandemic](#)

[Assessment on the negative effects of the COVID-19 pandemic on mental health and well-being of teachers in three cantons in BiH and their ability to provide psychosocial and mental health support for their students](#)

[EDUCATION IN THE AGE OF COVID-19 PANDEMIC - Attitudes of students, teachers, educators and professional associates about educational work during the COVID-19 pandemic in schools and preschools in the Republic of Srpska](#)

[Study on the needs of lecturers in distance learning in higher education in Bosnia and Herzegovina during the COVID-19 pandemic](#)

[Study on the needs of teachers in distance learning and blended learning in primary and secondary \(including TVET\) schools in Bosnia and Herzegovina during the coronavirus pandemic](#)

[Availability of ICT equipment and quality of distance learning among teachers and students in primary and secondary education in Una-Sana Canton](#)

[Availability of ICT equipment and quality of distance learning among teachers and students in primary and secondary education in West Herzegovina Canton](#)

[Guidelines and principles on standards in e-learning and blended learning with a focus on the digital and pedagogical skills requirements of teachers](#)

[Developing quality e-learning and blended learning in technical and vocational education and training \(TVET\) in Bosnia and Herzegovina - Guiding principles for institutions responsible for education and schools for TVET](#)

Results of online questionnaires per target group

[Ministries of education](#)

[Ministries of finance](#)

[Ministries of health](#)

[Academia](#)

[Teaching staff](#)

[CSO's – Civil society organizations](#)

[Parents](#)

[Youth](#)

[Youth: U-Report](#)

Consultation meeting reports

[Meeting of the ministers of education, June 1, 2022](#)

[Meeting of the civil society organizations and academia, June 6, 2022](#)

[Meeting with youth June 10, 2022](#)

SDG and BHAS Statistics

[Assessment of children not participating in the education process](#)

UNESCO Institute for Statistics (UIS) „National benchmarks on SDG 4 indicators“, 2021

[BHAS Expenditures in education per student as per level of education and source of funding](#)

BHAS SDG 4 benchmarks

BHAS Financial Statistics in Education - 2019

List of Graphs

Graph 1. Platforms and applications used in distance learning in the school years 2019/2020 and 2020/2021.....	11
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Graph 2. Self-assessment of teachers' competence when using ICT tools in teaching.	11
Graph 3. Quality and satisfaction with distance learning.	12
Graph 4. Degree of satisfaction of teachers and students: conducting practical classes in 2020-2021.....	12
Graph 5. The main technical problem during the pandemic	13
Graph 6. Negative aspects of online teaching from the point of view of teaching staff.....	13
Graph 7. Positive aspects of online teaching from the point of view of teaching staff.....	13
Graph 8. To what extent should digital tools be used in education?	16
Graph 9. Impact of the COVID 19 pandemic on students' mental health.....	17
Graph 10. Did COVID 19 pandemic had a negative impact on students' accomplishments?	18
Graph 11. Impact of distance learning during COVID 19 on students' mental health	19
Graph 12. To what extent should digital tools be used in education?	19
Graph 13. To what extent do you believe that curricula is in line with the acquisition of skills needed for the 21 st century?.....	20
Graph 14. Did the ministry noticed significant gaps in student achievement as a result of the COVID-19 pandemic?.....	22
Graph 15. Has there been an increase in the number of students who dropped out of school due to the COVID-19 pandemic?.....	23

CONSULTATION MEETING WITH THE EDUCATION AUTHORITIES



CONSULTATION MEETING WITH CSOs AND REPRESENTATIVES OF THE ACADEMIC COMMUNITY



CONSULTATION MEETING WITH YOUTH



CONSULTATION MEETING WITH CSOs AND REPRESENTATIVES OF THE ACADEMIC COMMUNITY